

ACT AUDITOR–GENERAL’S REPORT

**PERFORMANCE INFORMATION
IN ACT PUBLIC SCHOOLS**

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The Speaker
ACT Legislative Assembly
Civic Square, London Circuit
CANBERRA ACT 2601

Dear Madam Speaker

I am pleased to forward to you a Performance Audit Report titled 'Performance information in ACT public schools' for tabling in the Legislative Assembly pursuant to Subsection 17(5) of the *Auditor-General Act 1996*.

Yours sincerely



Dr Maxine Cooper
Auditor-General
31 May 2017

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SUMMARY

Overall conclusion

ACT public schools are performing below similar schools in other jurisdictions despite expenditure on a per student basis for public schools being one of the highest in the country.* Since 2014 reviews of ACT public schools have consistently identified shortcomings in their analysis of student performance information and their use of data to inform educational practice. These shortcomings indicate a systemic problem.

In recognition of this problem the Education Directorate has commenced initiatives to improve governance and administrative arrangements for the use of student performance information in schools. These include developing sound principles for school improvement, identifying better ways to manage and use student performance information and developing systems and tools to support student performance information collection and analysis.

Under the ACT model of public education considerable autonomy and responsibility is given to schools. This appears to have resulted in a high level of variability in the use of student performance information and management information systems and a wide range of school-based assessment tools used across ACT Public Schools; for a small jurisdiction such as the ACT this is excessive. A better balance between school autonomy and consistency across schools in how performance information is analysed and used is needed.

(* The high expenditure is attributed to capital related expenditure (ACT building and equipment values per FTE student are the highest in the country) and high employee related expenditure (low student to teacher ratios, higher than average teacher salaries and grandfathered Commonwealth superannuation schemes and payroll tax)).

Chapter conclusions

ACT PUBLIC SCHOOLS' PERFORMANCE

The Education Directorate publicly reports ACT public schools' NAPLAN performance using mean NAPLAN scale scores, which represents performance at a point in time, and compares these results against the Australian average. On this basis ACT public schools tend to perform higher than the Australian average on most NAPLAN tests. However, this does not provide a full picture of the performance of ACT public schools, as it does not take account of the relatively higher socio-educational advantage of the ACT and it does not measure performance over time.

Students at ACT public schools generally have higher socio-educational advantages, as measured by the Index of Community and Socio-educational Advantage (ICSEA). A comparison of ACT public schools with other Australian schools with similar ICSEA values shows that the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. Furthermore, a

comparison of ACT public school students' learning progress, as measured by comparing students' NAPLAN results across different years and cycles of assessment with expected measures of predicted growth, shows considerable variation in performance across ACT public schools.

Although the influences on, and reasons for, student performance may be varied, the effective use of student performance information is an important mechanism by which student (and school) performance can be improved.

GOVERNANCE ARRANGEMENTS FOR STUDENT PERFORMANCE INFORMATION

The Education Directorate has established sound governance arrangements for the assessment of student performance and the use of student performance information to inform students' teaching and learning and school improvement.

The Education Directorate has embraced the National School Improvement Tool (NSIT) as a mechanism for driving school improvement and has reflected this in key policy documents. Key policy documents discuss the importance of evidence-based practice and an evaluative culture that includes an explicit improvement and analysis and discussion of performance information. All schools are subject to five-yearly strategic external reviews, whereby the schools' performance against the principles of the National School Improvement Tool is assessed. Schools' use of performance information is considered as part of these reviews, as is the schools' use of performance information to drive differentiated teaching and learning (i.e. tailored instruction) to students.

The Education Directorate has established strategic indicators based on mean NAPLAN scale scores and compares these with the Australian average. Most schools considered as part of the audit have developed performance measures and associated indicators based on growth in NAPLAN scores and report on these as part of their annual reporting process. This represents an attempt to better measure the performance of schools.

AVAILABILITY OF STUDENT PERFORMANCE INFORMATION

A range of student performance information is collected to inform decision-makers at all levels, from teachers through to senior executives. Key performance information that is available includes NAPLAN data, PIPS data (for students in Kindergarten), A to E reporting and other school-specific student performance information.

By virtue of nationally-driven timeframes NAPLAN data is received up to four months after testing and its usefulness in informing teaching practices is limited, although it may be used in conjunction with other information to inform school improvement. A key issue for ACT public schools is comparatively low participation rates in some schools and for Year 9 testing generally, which may distort the accuracy of the ACT's NAPLAN results. The accuracy of A to E grading and reporting is also questionable, given that across schools there is significant variability in grading

and a lack of moderation of assessment results.

The Education Support Office has increased and improved its support for schools for the analysis and use of student performance information. Schools have access to the SMART tool (which facilitates analysis of NAPLAN scores) and the School Data Tool (which facilitates analysis of a range of demographic and student performance information). However, to date the School Data Tool has not been widely accessed by school-based staff. Recent upgrades to the School Data Tool in March 2017 have improved its useability and usefulness.

ANALYSIS AND USE OF STUDENT PERFORMANCE INFORMATION

It is evident that schools are using student performance information to inform differentiated teaching and learning approaches and targeted intervention for students. These approaches reflect the guidance and principles identified in the Education Directorate's policy documents. However, the extent to which schools achieve this varies considerably. ACT public schools have consistently identified variability in their skills and capabilities to use performance information to drive improved student outcomes and school improvement.

Annual external reviews of ACT public schools have consistently identified shortcomings in ACT public schools' analysis of student performance information and the use of this data to inform specific and tailored educational instruction. Improving the performance of schools in the targeted use of data needs special attention by the Education Directorate.

Key findings

ACT PUBLIC SCHOOLS' PERFORMANCE

Paragraph

As part of its 2015-16 Annual Report, the Education Directorate reported the Education Directorate's targets and actual results for mean NAPLAN achievement score for Reading for Year 5 and Year 9 public school students between 2013 and 2015. The Education Directorate reported the results of ACT public school students' performance against the Australian average and reported that ACT public schools' results between 2013 and 2015 consistently exceeded the Australian average. This reporting does not take account of socio-educational factors, which would provide greater information on the relative performance of ACT public schools.

2.9

As part of its 2015-16 Annual Report, the Education Directorate reported the Education Directorate's targets and actual results for mean NAPLAN achievement score for Numeracy for Year 5 and Year 9 public school students between 2013 and 2015. The Education Directorate reported the results of ACT public school students' performance against the Australian average and reported that ACT public schools' results between 2013 and 2015 almost always exceeded the Australian average (one exception was for Year 9 Numeracy in 2014). This reporting does not take account of socio-educational factors, which would provide greater information on the relative performance of ACT public schools.

2.12

In 2016 ACT public schools' ICSEA values ranged from 742 to 1184, with an average of 1068. The lower value of 742 was an outlier, however, with the next lowest value being 924. The significant majority of ACT public schools had ICSEA values above the national average, which shows, on balance, that ACT public schools have high community socio-educational advantage. The comparatively high socio-educational advantage of ACT public schools needs to be taken into account when comparing ACT public schools' NAPLAN results with other states and territories.

2.18

A comparison of ACT public schools' NAPLAN results in 2015 with similar schools in Australia (based on their relative socio-educational advantage, as measured by their ICSEA value) shows that for all NAPLAN tests across all year levels the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. The analysis also shows that, for Year 5, Year 7 and Year 9 results across most tests the gap is more pronounced for ACT public schools with a lower ICSEA value than it is for ACT public schools with a higher ICSEA value.

2.22

A comparison of ACT public schools' NAPLAN results in 2016 with similar schools in Australia (based on their relative socio-educational advantage, as measured by their ICSEA value) shows that for all NAPLAN tests across all year levels the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. The analysis also shows that, for Year 9 results across all tests the gap is more pronounced for ACT public schools with a lower ICSEA value than it is for ACT public schools with a higher ICSEA value.

2.24

An analysis of ACT public schools' proportional gain for Year 3 to Year 5 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 shows that some schools have performed well, by achieving an actual 'school gain' that has exceeded the predicted school gain, while other schools have performed poorly, by achieving an actual 'school gain' that has not achieved the predicted school gain.

2.30

Analysis of ACT public schools' proportional gain for Year 5 to Year 7 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 is only available for a limited number of schools (eight), i.e. those schools that have a cohort of students moving between primary and high school. The analysis shows that between 2014 and 2016, for most of these schools the actual 'school gain' did not meet the predicted school gain across the three assessment areas (Reading, Writing and Numeracy). The results of this analysis are most pronounced in Numeracy, where it is apparent that between 2014 and 2016 only one school's actual 'school gain' exceeded the predicted school gain (this was in 2015).

2.32

An analysis of ACT public schools' proportional gain for Year 7 to Year 9 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 shows that some schools have performed well, by achieving an actual 'school gain' that has exceeded the predicted school gain, while other schools have performed poorly, by achieving an actual 'school gain' that has not achieved the predicted school gain.

2.33

Analysis shows that, between 2014 and 2016, in the assessment areas of Writing and Numeracy for most ACT public schools, actual 'school gain' did not meet the predicted school gain. With respect to Reading however, the number of ACT public schools whose actual 'school gain' exceeded the predicted school gain in 2014 was 8 (rising to 11 in 2016), while the number of ACT public schools whose actual 'school gain' did not meet the predicted school gain in 2014 was 11 (falling to 8 in 2016).

2.34

A 2016 report commissioned by the Education Directorate from the Centre for International Research on Education Systems at Victoria University closely examined ACT public schools' educational performance, as measured by NAPLAN, with reference to socio-educational advantages. The *Government school performance in the ACT* report sought to compare ACT public schools with other state and territory schools, focusing on other state and territory 'government city schools' and removing other state and territory selective schools from comparison. The report found 'after taking account of intake and context differences, ACT government schools on average achieve negative results on every measure'. The Education Directorate advised that this analysis shows that ACT public schools have a comparatively less mean gain than other jurisdictions.

2.40

The report also identified that 'ACT schools have higher ICSEA values as a group' and that 'this equates to higher mean scores for NAPLAN compared to schools in other states and territories where the tails of performance reduce raw mean scores'. Accordingly 'the effect is to conceal the real levels of performance in the ACT which is lower than expected (predicted) based on the student population and weaker than schools serving similar populations in other states'.

2.41

GOVERNANCE ARRANGEMENTS FOR STUDENT PERFORMANCE INFORMATION

Paragraph

The *Education Act 2004* identifies school principals as having responsibility for 'educational outcomes for students at the school'. The responsibility of school principals is exercised within the overarching guidance and responsibility of the Director-General of the Education Directorate and the support provided by the Education Directorate's Education Support Office.

3.8

Principals are responsible for developing and implementing school strategies and programs to improve school performance and in so doing implement Directorate policies. The Education Support Office is responsible for overseeing 'Directorate policy management' and assisting with 'school policy management'. Although these shared responsibilities and accountabilities are articulated, there is flexibility in how they are practically implemented.

3.9

The Education Directorate's People, Practice and Performance Framework provides further guidance to Education Directorate staff on the roles and responsibilities of the Education Support Office, Directors, School Improvement, school principals (and other leaders) and teachers with respect to system improvement. With respect to the use of student performance information, the People, Practice and

3.15

Performance Framework identifies that the Education Support Office has a clear responsibility to 'provide consistent data sets to schools', demonstrating a commitment to support schools' use and analysis of performance information.

The Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* identifies a range of overarching objectives and supporting priorities and key strategies. Two key overarching objectives are to 'increase the number of high performing students' and 'reduce the number of students who are not achieving'. Each of these objectives is supported by two performance indicators, but there is no guidance on how the indicators are to be measured nor are there quantitative targets associated with the indicators. 3.29

In support of the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation*, the Directorate has prepared the *Education Capital 2017* Action Plan. This plan identifies the importance of performance information for strategic management purposes and identifies a key activity with respect to Business Innovation and Improvement is to 'improve provision and strategic use of data to inform school performance' and 'implement new School Administration System'. This demonstrates the Education Directorate's intention to improving the provision of information to improve student outcomes. 3.32

The Education Directorate has identified a range of Strategic Objectives and associated Strategic Indicators (including quantitative targets) as part of the 2016-17 annual Budget process. Strategic Indicators (and associated quantitative targets) of relevance to student performance are based on mean NAPLAN scale scores. These scores do not present a full picture of the quality and effectiveness of educational support and teaching provided by the Education Directorate, nor do they facilitate an assessment of the Education Directorate's performance. Such scores do not recognise the value of developing measures associated with student progress, which provide more relevant information on the effectiveness of each school's activities in teaching the students. 3.43

Schools' Strategic Plans and Annual Action Plans reviewed by the Audit Office varied considerably in quality and detail. Some schools' Strategic Plans were very brief, consisting of one page with little or no explanation or supporting statements for the performance objectives or associated measures, while other schools' Strategic Plans were more comprehensive and articulated a range of objectives and associated performance measures. This shows that there is considerable variability in practice with respect to accountability mechanisms and oversight of school performance. 3.50

Schools' Strategic Plans varied considerably in their recognition and articulation of objectives and strategies in relation to student performance information and its use. Ten of the 16 schools' Strategic Plans articulated clear objectives or strategies for the use of performance information through their Strategic Plans, although the quality and extent to which this was done varied considerably in the Strategic Plans. This demonstrates considerable variability in schools' recognition of student performance information for the purpose of setting school objectives and strategies. The Education Directorate has advised that it has recognised this 3.55

variability and that it has conducted National School Improvement Tool training master classes in strategic planning and reviews have been completed on 17 schools in 2016 and are planned to be completed for 20 schools in 2017.

Schools' Annual Action Plans varied considerably in their recognition and articulation of objectives and strategies in relation to student performance information and its use. Of the total of 59 performance measures in relation to academic achievement identified across the 16 Annual Action Plans of the schools considered as part of the audit, 35 (59 per cent) were expressed as measures of growth in NAPLAN scale scores. The inclusion of performance measures based on growth in NAPLAN scale scores reflects an attempt by schools to better monitor students' progress and is in contrast to the Education Directorate's overarching Strategic Indicators, which are based on mean NAPLAN scale scores.

3.60

The Education Directorate's People, Practice and Performance Framework was released in April 2016. It provides sound principles for the management and use of student performance information for school improvement. It identifies the importance of different data sets to assist schools to use evidence to support school improvement and the need for systems to collect and analyse school level data. The People, Practice and Performance framework also identifies the need to provide 'accurate, accessible and consistent information about students' achievement at school to their parents/carers'.

3.67

The Education Directorate's *Great Teaching by Design*, released in 2016, identifies the importance of evidence-based practice and an evaluative culture that includes an explicit improvement agenda and analysis and discussion of data. It describes better practices in areas such as responding to individual needs, use of explicit teaching approaches, embedding formative assessment, providing students with quality feedback, setting high expectations for student achievement and engaging students, but does not provide explicit guidance for embedding these key principles. The Education Directorate has advised that explicit guidance will be provided through ongoing school improvement activities.

3.73

The Education Directorate's *Great Teachers by Design*, released in 2016, identifies 'the importance of systematically collecting and analysing student outcome data to support instructional improvement in each school, differentiation in classrooms and improved student achievement'. It also identifies the importance of using 'multiple sources of evidence to profile students' learning, including information derived from system assessments, standardised tests, classroom-based rich assessment asks, individualised assessments, student self-assessments and attendance and behaviour data'. *Great Teachers by Design* does not articulate prescriptive statements, but provides better practice in areas such as collaboration, use of data and evidence, engagement in professional learning, engagement in research and seeking and responding to feedback and engagement of parents.

3.80

Twenty-four percent of school Principals agreed with the statement 'the Directorate's guidance and training to schools about using assessment data to drive improvement is sufficient', while 52 percent disagreed or strongly disagreed. However, forty-four percent of school Principals agreed or strongly agreed with the

3.90

statement ‘guidance and support from the Directorate to help my school analyse student assessment data has been useful’, while 30 percent disagreed or strongly disagreed. Strong and consistent feedback was received from school Principals that they would appreciate further professional learning or training in these areas. The Education Directorate has advised that it has developed a baseline assessment of need and that it intends to shortly release a Request for Quotation to the market for the delivery of professional learning services from August 2017.

School Principals have advised that they would appreciate further guidance and assistance from the Education Support Office with respect to the use and analysis of student performance information. School Principals have also advised that they do not have good access to assistance in data analysis and interpretation when required. While further guidance and support from the Education Support Office may assist School Principals, it may be that a more fundamental examination of the use and analysis of performance information is warranted, including whether some of this is better undertaken centrally by the Education Support Office which may be able to secure the services of specialists when needed.

3.94

The Education Directorate has implemented a rolling program of reviews, whereby every ACT public school is reviewed by an external panel every five years. The rolling program of review provides a comprehensive and rigorous assessment of schools’ performance in a number of areas, including schools’ ‘analysis and discussion of data’ and its input into ‘differentiated teaching and learning’.

3.103

AVAILABILITY OF STUDENT PERFORMANCE INFORMATION

Paragraph

Analysis of ACT public schools’ participation rates in NAPLAN in 2015 shows:

4.10

- participation rates for ACT public schools were lower for all year levels than the participation rates for all ACT schools (public and private) and schools Australia-wide (public and private); and
- participation rates for ACT public schools in Year 9 (85.3 percent) were significantly lower than ACT public schools’ participation rates in Year 7 (93.2 percent) and the Year 9 participation rate for schools Australia-wide (public and private) (91.6 percent).

In 2015 average Year 9 NAPLAN participation rates for ACT public schools’ were 85.3 percent. This compares with 90.2 percent for ACT private schools and an Australian average of 91.6 percent for both public and private schools. Low participation may lead to lack of validity of NAPLAN results.

4.12

Seventy-seven percent of school Principals agreed with the statement ‘the NAPLAN data I receive are useful in supporting my school’s decision making’, while nine percent of respondents neither agreed nor disagreed. Ten percent of respondents disagreed. With respect to the usefulness of NAPLAN data in supporting decision-making at the classroom level the majority of Principals and teachers saw the value in NAPLAN, although it is noted that some did not. Concerns were raised about:

4.19

- the delay in receiving NAPLAN results (meaning it was more of a reflective tool for whole school planning than for day to day decisions);

and

- the amount of effort needed by classroom teachers to analyse NAPLAN data (if they were not provided with administrative support). In some cases, the ability for teachers to undertake their own NAPLAN data analysis was limited as they did not have access to SMART. In some schools, there was no analysis of NAPLAN for classroom decisions, or it was limited to part of the school.

Eighty-two percent of Principals of schools where PIPS was used strongly agreed or agreed with the statement 'the PIPS data I receive are useful in supporting my school's decision making', while five percent of respondents neither agreed nor disagreed and 12 percent of respondents disagreed or strongly disagreed. With respect to the usefulness of PIPS data in supporting decision-making at the classroom level, feedback was received that PIPS is suitable and useful for assessing Kindergarten students' abilities at the start of the year, assessing growth during the year, and (for some schools) providing a baseline for Year 1 teachers to consider. 4.25

A to E reporting is a nationally mandated mechanism for reporting student progress to parents and carers. Most school Principals and teachers interviewed as part of the audit did not find A to E reporting useful for making decisions regarding how to teach individual students and advised of concerns with respect to the reliability of A to E reporting data and its inconsistency between schools (and also within schools). Directors, School Improvement also advised of concerns with respect to the consistency of its application across schools. A February 2017 *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* report identified that there was a significant difference in schools' A to E grades (as measured by the proportion of A and B grades) and the report noted that these results 'may be an accurate reflection of student performance against the Australian Curriculum Achievement Standards'. However, the report also identified that while there was a correlation between schools' NAPLAN results and A to E grades 'it was not a strong correlation and there were numerous outliers (schools that had significant differentials between their NAPLAN rankings and A-E grade distribution rankings)'. There is no Education Support Office-driven approach to moderating results across schools. The inconsistency in moderation across schools diminishes the value of A to E reporting as a mechanism for informing teaching practices and informing parents and carers. 4.40

Schools reported using a large number (around 38) of school-specific assessment tools to assess students, together with programs to assist them to improve. The most common tests were the Progressive Achievement Tests (PAT) provided by the Australian Council for Educational Research (ACER). Six different PAT tests were used, as well as a total of 32 others. Ninety-four percent of respondents to the school Principal survey either agreed or strongly agreed with the statement 'school based assessment data are useful in supporting my school's decision making'. There is a high satisfaction rate with school-specific assessment tools that are within the discretion of schools to use and apply. 4.47

School Principals overwhelmingly agreed with the statement 'school based assessment data are useful in supporting my school's decision making', with 47 percent strongly agreeing and 47 percent agreeing with the statement. The survey 4.56

also identified a widespread use of commercial testing products, with six different PAT tests and 32 others reported as being used by school Principals. Decision-making associated with the use of commercial testing products resides very much with schools and school Principals, and at present there is very little advice from the Education Support Office on which tools to select for which purpose, which ones are considered to offer the best value for money and how best to employ the tools.

The ACT Education Directorate has provided schools with access to the School Measurement, Assessment and Reporting Toolkit (SMART) resource. SMART is an online comprehensive diagnostic tool, sourced from the New South Wales Department of Education, which provides school leaders and teachers with a resource to help better understand performance on NAPLAN literacy and numeracy measures. SMART goes beyond the data publicly available to the broader community on the My School website and provides ACT Education Directorate users with the ability to provide results at the school level and for individual students and use New South Wales results as a comparator. SMART is a useful resource to facilitate the production and reporting of student performance information at the individual and school level. 4.70

The School Data Tool was introduced in August 2015. It is a web-based tool that provides schools with comprehensive data in a range of categories including school context (e.g. enrolments); student engagement (e.g. student attendance, satisfaction survey results); and student performance, including A to E grades, and NAPLAN scores and participation rates. There has been low usage of the School Data Tool across ACT public schools to date and some negative feedback from schools regarding the usefulness and timeliness of data produced. A significant upgrade of the School Data Tool occurred in late March 2017 in which the 'look and feel' and the information that was capable of being generated from the tool was improved. The introduction of the 'School Snapshot' is expected to make information from the School Data Tool more accessible to users. 4.78

The Education Directorate is in the initial stages of implementing a new School Administration System that is 'designed to consolidate a variety of existing disparate Territory systems with a single centralised authoritative System for all students, staff and School activities'. The School Administration System is intended to fully replace, or in some instances integrate through manual processes, a range of management information systems that currently provide information in relation to student performance information. If implemented as planned, the School Administration System should provide a consistent and accessible source of student performance information for schools and Education Support Office personnel. 4.84

However, while the School Administration System is expected to provide a consistent and accessible source of student performance information in the future, it will still need to be supported by business intelligence (or business analysis) software that provides users with timely, relevant and user-friendly information and analysis on student performance, similar to what is being provided by SMART and the School Data Tool. At the time of audit fieldwork, how the School Administration System was to be supported by business intelligence (or business 4.85

analysis) software was still being determined.

ANALYSIS AND USE OF STUDENT PERFORMANCE INFORMATION

Paragraph

Since at least 2014, external reviews of ACT public schools have consistently identified that ACT public schools' have underperformed with respect to National School Improvement Tool Domain 2 (Analysis and discussion of data) and Domain 7 (Differentiated teaching and learning). Annual external school reviews have identified shortcomings in these key areas over a number of years and made recommendations for improvement.

5.22

With respect to Domain 2, the *ACT External System Review Report 2016* stated 'in the absence of a whole-school assessment strategy or a reliable central data storage system, the capacity of teaching staff to engage with and use a range of data is affected' and 'an area for improvement is the building of staff skills in the analysis, interpretation and use of classroom data'. With respect to Domain 7, the *ACT External System Review Report 2016* stated 'in schools where student learning and wellbeing data is systematically collected, analysed and made easily accessible, teachers can readily draw on data to monitor progress, strengths and weaknesses, make judgements about individual needs and personalise teaching and learning activities. Data was not always readily available for classroom teachers in some schools or not frequently accessed by teachers. Some teachers would benefit from professional learning to develop their capacity to routinely use data to inform their planning and personalise the learning'.

5.23

In order to supplement the Education Directorate-supplied SMART system and School Data Tool, schools have developed their own school-based systems for maintaining student performance information. Schools use a variety of systems, including commercial products and locally developed and designed databases. The use of multiple school-based systems for managing student performance information is inefficient and impairs the ability to generate consistent and comparable performance information across schools. The implementation of the School Administration System is expected to mitigate the risks of multiple and inefficient systems for managing student performance information.

5.34

Sixty-eight percent of school Principals agreed with the statement 'My school has sufficient skilled staff, able to analyse student assessment data for the purpose of improving student learning outcomes', while 10 percent of respondents neither agreed or disagreed and 22 percent of respondents disagreed or strongly disagreed. With respect to the capability of teaching staff, 56 percent of school Principals agreed with the statement 'at the classroom level, teachers have sufficient skills to analyse student assessment data for the purpose of improving student learning outcomes', while 14 percent of respondents neither agreed or disagreed and 30 percent of respondents disagreed or strong disagreed. A number of responses were also received from school Principals highlighting the variability of skills and capabilities across the teaching faculty.

5.43

An October 2015 report produced by KPMG for the Education Directorate identified that, for the purpose of identifying and measuring current gaps in

5.48

capabilities, the ability to analyse data relating to student outcomes was an area of need for professional development and learning. The October 2015 report advised that 'specific consideration should be given to training on data analysis and developing strategies to utilise data to support the implementation of the school curriculum to provide targeted support for students'. Such training would be expected to improve schools' capability to use student performance information to inform improvements to student teaching and learning and overall school improvement. The Education Directorate has advised that a public tender is 'due to be released shortly for a provider to design, pilot and evaluate a training and development program to support implementation of the Student Resource Allocation in ACT public schools' and that this is to be delivered 'under the National Partnership Agreement on Empowering Local Decision Making and is aligned to the KPMG report'.

School Principals overwhelmingly advised that school-specific assessment information is used primarily for the purpose of informing differentiated teaching and learning (i.e. tailored teaching and instruction) for school students (91 percent), followed by curriculum planning / delivery (71 percent) and strategic direction-setting for the school (63 percent). School-specific assessment information was also used for monitoring progress against the annual Action Plan (56 percent) and staff professional development (56 percent). This demonstrates the value that school principals place on school-based assessment processes to drive teaching practices.

5.57

School Principals advised that NAPLAN and PIPS data is used primarily for monitoring progress against the school's annual Action Plan (66 percent) and strategic direction-setting for the school (63 percent). They also identified the need for 'triangulation' of NAPLAN and PIPS data with other sources of information to inform decision-making. In contrast to the use of school-specific assessment data, only 56 percent of school Principals advised that NAPLAN and PIPS data was used to inform the development of differentiated teaching and learning for students.

5.62

Some examples of better practice were identified during the audit of schools' use of student performance information to inform differentiated teaching and learning for students and targeted intervention for students. These approaches reflect the guidance and principles associated with the Response to Intervention framework, which is identified in the Education Directorate's *Great Teaching by Design* document. The Response to Intervention framework recognises a scale of support and intervention for students, ranging from normal classroom teaching for Tier 1 students through to more one on one support with individualised instruction through plans for Tier 3 students.

5.79

Recommendations

RECOMMENDATION 1 STRATEGIC PLAN PERFORMANCE OBJECTIVES AND INDICATORS

The Education Directorate should provide guidance on how performance indicators in its Strategic Planning cycle 2018-2020 are to be measured as well as associated quantitative targets associated with the indicators.

RECOMMENDATION 2 EDUCATION DIRECTORATE NAPLAN INDICATORS

The Education Directorate should develop new Strategic Indicators which are based on measuring student progress over time.

RECOMMENDATION 3 SCHOOL STRATEGIC PLANS AND ANNUAL ACTION PLANS

The Education Directorate should improve the quality and comprehensiveness of schools' Strategic Plans and Annual Action Plans by requiring:

- a) explicit objectives and strategies in relation to student performance information and its use in driving school improvement; and
- b) performance measures based on students' educational progress.

RECOMMENDATION 4 GUIDANCE AND SUPPORT FOR SCHOOLS

The Education Directorate should examine what may be the appropriate level of support for school Principals with respect to the use of student performance information to drive school improvement and determine how this is to be provided. This should recognise the balance between school autonomy and accountability and central oversight and support from the Education Support Office.

RECOMMENDATION 5 NAPLAN PARTICIPATION RATES

The Education Directorate should develop strategies to address the low participation rates in NAPLAN testing in some ACT public schools, specifically with respect to Year 9 participation.

RECOMMENDATION 6 A TO E REPORTING

The Education Directorate should implement a standards-based moderation process across schools and school networks in order to achieve consistency in A to E grading and reporting.

RECOMMENDATION 7 PROFESSIONAL LEARNING FOR USE AND ANALYSIS OF DATA

The Education Directorate should develop a comprehensive professional learning program for school Principals and teachers on the use of student performance information and how it can be used to inform differentiated teaching and learning to students and overall school improvement.

Agency response

In accordance with subsection 18(2) of the *Auditor-General Act 1996*, the Education Directorate was provided with:

- a draft proposed report for comment. All comments were considered and required changes were reflected in the final proposed report; and
- a final proposed report for further comments. As part of this process, the Education Directorate was offered the opportunity to provide a statement for inclusion in the Summary chapter.

Education Directorate response:

The Education Directorate appreciates the efforts of the ACT Auditor-General and her team in acknowledging and recognising the extensive measures and mechanisms that the Directorate has implemented and will continue to implement to make improvements to student educational outcomes in ACT public schools.

It is important to note that over the past few years, national and international assessments of student achievement in Australia have shown little improvement, and in some areas have declined, despite an overall per student increase in expenditure. The ACT is not immune from this trend. Even though we remain a high achieving system our key focus is on student gain across years of schooling. The Education Directorate is investing in the better use of data by teachers, school leaders and as a system.

The ACT Government has recently launched its Future of Education Strategy and has invited the community to comment on how we can further improve our education system overall.

1 INTRODUCTION

The ACT public school system

- 1.1 There are 134 independent private schools, Catholic schools and public schools in the ACT. In 2017, 87 ACT public schools have enrolled 46,557 students from Preschool through to Year 12. The number of ACT public school students has been increasing over time, between 2.9 percent and 3.9 percent in recent years.
- 1.2 The different types of ACT public schools are organised into four geographic networks: Belconnen, North/Gungahlin, South/Weston and Tuggeranong. Table 1-1 shows the type and number of ACT public schools.

Table 1-1 Type and number of ACT public schools in 2015-16

School type	Schooling years covered	Number
Early Childhood	Preschool to Year 2	5
Primary [^]	Preschool to Year 6	53
P-10	Preschool to Year 10	8
Secondary School	Year 7 to Year 12	1
High [^]	Year 7 to Year 10	12
College	Year 11 to Year 12	8
Total		87

Source: ACT Audit Office based on Education Directorate listing of schools

[^] The ACT has four specialist schools for children with intellectual disabilities, which are counted here with the primary or high schools as appropriate.

- 1.3 In 2015-16, a total of \$712.9 million was spent by the Education Directorate on public school education. ACT Government expenditure on public school students is proportionally among the highest in Australia. In 2014-15 (the latest year for which comparative data is available) ACT government recurrent expenditure per student for public schools was \$20,532. This was second to the Northern Territory (\$24,394) and significantly above the Australian average of \$16,670. The Education Directorate has advised this is primarily due to:
- high capital related expenditure, whereby ACT building and equipment values per FTE student are the highest in the country; and
 - high employee related expenditure, which is due to low student to teacher ratios, higher than average teacher salaries, grandfathered Commonwealth superannuation schemes and payroll tax.

Performance information in ACT schools

1.4 For the purpose of this audit, performance information in ACT public schools refers to any information or data that helps school leaders and teachers in ACT public schools to better understand the educational performance of their students for the purpose of using that information to achieve better educational outcomes.

1.5 Performance information is obtained through assessment. Assessment is defined in the *Teacher's Guide to Assessment* (a document produced for ACT teachers by the Education Directorate, Catholic Education Office and Association of Independent Schools of the ACT) as follows:

Assessment is the process of gathering and interpreting evidence to make judgements about student learning. It is the crucial link between learning outcomes, content and teaching and learning activities. Assessment is used by learners and their teachers to decide where the learners are at in their learning, where they need to go, and how best to get there. The purpose of assessment is to improve learning, inform teaching, help students achieve the highest standards they can and provide meaningful reports on students' achievement.

1.6 There are two main types of assessment; formative assessment and summative assessment.

Formative assessment

1.7 According to the *Teacher's Guide to Assessment* 'formative assessment is used to provide feedback to students and teachers to promote further learning':

It is used at the beginning of an instructional period and during the process of instruction as teachers check for student understanding. Diagnostic tools determine what students already know and where there are gaps and misconceptions. Formative assessment also includes assessment as learning, where students reflect on and monitor their own progress. The information gained guides teachers' decisions in how to enhance teaching and learning. Formative assessment enables students to learn through the process of feedback and opportunities to practise and improve. As students reflect on and monitor their progress this process effectively becomes assessment as learning and contributes to students future learning goals.

Summative assessment

1.8 According to the *Teacher's Guide to Assessment* 'summative assessment contributes to the judgement of student learning for reporting and certification purposes':

It is used towards and at the end of the instruction period. Teachers document the culmination of students' learning achievements through tasks that invite students to demonstrate their mastery and knowledge of the course content. Summative assessment data provides teachers with information about how effective teaching strategies have been, time needed for instruction and how to improve teaching for future students.

Sources of student performance information

1.9 Key sources of student performance information in ACT public schools, which were the primary focus of the audit are:

- NAPLAN;
- Performance Indicators in Primary Schools (PIPS); and
- school-specific assessments, which may be summarised in A to E reporting.

NAPLAN

1.10 NAPLAN is an annual national assessment for all students in Years 3, 5, 7 and 9. All eligible students in these year levels are expected to participate, in May, in tests in reading, writing, language conventions (spelling, grammar and punctuation) and numeracy. The National Assessment Program also includes three-yearly sample assessments in Science Literacy, Civics and Citizenship, and Information and Communication Technology (ICT) literacy. Student from a non-English speaking background may be exempted, students that are sick longer than a week are exempted and students may be withdrawn from the testing by their parents/carers. Thirteen schools in the ACT (9 colleges and four specialist schools) do not participate in NAPLAN.

1.11 NAPLAN was introduced nationally in 2008. The Australian Curriculum and Reporting Authority (ACARA), which administers the NAPLAN testing, states:

The National Assessment Program (NAP) is the measure through which governments, education authorities, and schools can determine whether young Australians are meeting key educational outcomes.

1.12 NAPLAN data provides the basis for the Australian Curriculum and Reporting Authority (ACARA) My School website. The My School website was launched in 2010, with the intention to provide educators, parents and the community with information about each of Australia's schools in a readily accessible format. The My School website contains a range of information about schools including NAPLAN results, financial information and attendance rates. The My School website includes tools that allow users to explore a school's NAPLAN results, including results over time and results for each school against national averages. The MySchool website allows individuals, and schools, to view academic growth at the school level. Results may be compared with other schools serving students from statistically similar backgrounds, known as 'like' schools.

Performance Indicators in Primary Schools (PIPS)

1.13 Performance Indicators in Primary Schools (PIPS) is a test used in ACT public schools' for assessment and reporting of early reading, phonics and numeracy skills of students in their first year of school (Kindergarten). It is also an indicator of 'school-readiness'. It is administered twice; once at the beginning of the year to establish an individual baseline for each student and once at the end of the year to measure progress against each

student's starting point. It is an online test, where a teacher sits with the student to guide them through the test, and also takes notes. PIPS results are provided to parents.

- 1.14 The provider of the test, the University of Western Australia, advises that it is based on international research, and all assessment items are correlated with future literacy and numeracy; and that PIPS can help to assess students entering primary school by:
- assessing the progress of students in literacy, numeracy and phonological awareness;
 - diagnosing individual student work and providing data to indicate what areas students are achieving or underachieving; and
 - predicting future performance for identifying individuals who might benefit from early intervention.

School-specific assessment

- 1.15 In addition to NAPLAN and PIPS, there are a number of other assessment strategies and assessment tools that may be used and applied by schools, primarily for formative assessment. The assessment tools are typically developed by commercial firms or by non-government organisations such as the Australian Council for Educational Research. The tools may focus on the progress of students in specific fields such as spelling, mathematics or reading.
- 1.16 In addition to these assessment tools, which are typically applied at a whole-of-school level, teachers use a wide range of assessment strategies as part of their day-to-day classroom practice. These assessment strategies are important for qualitatively monitoring the progress of students, but are less amenable to the collection of comparative data. These assessment strategies may include:
- anecdotal records: objective narrative records of student performances, strengths, needs, progress and negative/positive behaviour;
 - portfolios: collections of student work that exhibit the students' efforts, progress and achievements in one or more areas; and
 - teacher observations: regular, first-hand observations of students, documented by the teacher.

A to E reporting

- 1.17 A to E reporting was introduced in ACT schools as an outcome of the *National Agreement Performance Information 2010: National Education Agreement*, which requires all schools to provide parents and carers with plain-language reports twice a year. The intention is to give an accurate and objective assessment of a student's progress and achievement for each learning area, clearly defined against specific learning standards that are based on the nationally agreed Australian Curriculum. The Australian Curriculum, the first version of which was released in December 2010, has been progressively implemented in ACT public schools.

- 1.18 All ACT public school student reports for students in Year 1 to Year 10 include English, Mathematics, Science and History and refer to the Australian Curriculum Achievement Standard for each year level. For the purpose of reporting against the Australian Curriculum Achievement Standard, a student's progress and achievement is reported on a five-point scale: A, B, C, D or E. Kindergarten students do not receive reports that use an A to E grade scale. Instead, parents receive information about the Kindergarten Achievement Standard attached to their school report.

Audit objective and scope

Audit objective

- 1.19 The objective of this audit is to provide an independent opinion to the Legislative Assembly on the extent to which the Education Directorate and ACT public schools use performance information to improve schools' and students' performance.

Audit scope

- 1.20 The audit focused on performance information relevant to ACT public schools' and students' educational achievement. Other management and organisational performance information not directly relevant to educational achievement was not considered for the purpose of the audit.
- 1.21 The audit focused on performance information relevant to ACT public schools' and students' from Kindergarten to Year 10 and focused on performance information collected, managed and reported over 2015 and 2016. ACT public colleges were not considered as part of the audit.

Audit criteria and method

- 1.22 Audit criteria established for the audit are:
- Criterion 1: Has the Education Directorate set out appropriate governance arrangements for the assessment of student performance in ACT public schools?
 - Criterion 2: Are the data collected to support student performance assessment fit for purpose?
 - Criterion 3: Do decision-makers have adequate access to data and the ability to perform relevant analyses?
 - Criterion 4: How have analyses of student performance been used to make changes?
- 1.23 The audit was conducted in compliance with the *Auditor-General Act 1996* and relevant professional standards (including ASAE 3500 – Performance Engagements).

1.24 The audit method consisted of:

- initial discussions with Education Directorate executives, including receiving a briefing on relevant issues;
- interviews with key personnel in the central office (known as the Education Support Office) of the Education Directorate, and collection of relevant documents;
- fieldwork in schools; and
- a survey of school Principals.

1.25 The Audit Office used the services of Numerical Advantage for the conduct of the audit, which included advice and support from a former School Network Leader (now known as Directors, School Improvement) of the Education Directorate.

School-based fieldwork

1.26 Fieldwork at schools was based on a selection of 16 schools (out of a total of 80 Early Childhood Schools, primary schools, high schools and combined schools) encompassing all geographical networks in the ACT, each type of school in scope (primary schools, high schools etc) and a balance of schools of different sizes. At each school selected, there were interviews with the Principal (who sometimes chose to be accompanied by one or more executive teachers) and a focus group with three to four teachers. Each school was also requested to provide a set of documents including plans, five-yearly review reports, annual reports, documentation on school-based systems for capturing and analysing data and school-specific assessments and information on performance assessment-related training.

Survey of school Principals

1.27 The survey process included drafting a set of questions based on the audit criteria, piloting the survey with Directors, School Improvement (who are all recent Principals), inviting a technical review of the survey by Education Directorate staff and distributing the survey to all Principals of schools within the audit scope. The survey was sent to 80 Principals of schools within the scope of the audit (i.e. a survey was not sent to college principals) and 72 responded; a 90 per cent response rate.¹ Responses were evenly distributed across the four networks.

¹ A survey was sent to the principals of 79 Early Childhood Schools, primary schools, high schools and combined schools within the scope of the audit (refer to Table 1-1) as well as the Murrumbidgee Education and Training Centre, which is located at the Bimberi Youth Justice Centre.

2 ACT PUBLIC SCHOOLS' PERFORMANCE

- 2.1 This chapter discusses the educational performance of ACT public school students and schools. It discusses ACT public school performance with reference to NAPLAN and compares ACT public schools' performance against similar schools in other states and territories.

Summary

Conclusion

The Education Directorate publicly reports ACT public schools' NAPLAN performance using mean NAPLAN scale scores, which represents performance at a point in time, and compares these results against the Australian average. On this basis ACT public schools tend to perform higher than the Australian average on most NAPLAN tests. However, this does not provide a full picture of the performance of ACT public schools, as it does not take account of the relatively higher socio-educational advantage of the ACT and it does not measure performance over time.

Students at ACT public schools generally have higher socio-educational advantages, as measured by the Index of Community and Socio-educational Advantage (ICSEA). A comparison of ACT public schools with other Australian schools with similar ICSEA values shows that the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. Furthermore, a comparison of ACT public school students' learning progress, as measured by comparing students' NAPLAN results across different years and cycles of assessment with expected measures of predicted growth, shows considerable variation in performance across ACT public schools.

Although the influences on, and reasons for, student performance may be varied, the effective use of student performance information is an important mechanism by which student (and school) performance can be improved.

Key findings

Paragraph

As part of its 2015-16 Annual Report, the Education Directorate reported the Education Directorate's targets and actual results for mean NAPLAN achievement score for Reading for Year 5 and Year 9 public school students between 2013 and 2015. The Education Directorate reported the results of ACT public school students' performance against the Australian average and reported that ACT public schools' results between 2013 and 2015 consistently exceeded the Australian average. This reporting does not take account of socio-educational factors, which would provide greater information on the relative performance of ACT public schools.

2.9

As part of its 2015-16 Annual Report, the Education Directorate reported the Education Directorate's targets and actual results for mean NAPLAN achievement score for Numeracy for Year 5 and Year 9 public school students between 2013 and 2015. The Education Directorate reported the results of ACT public school students' performance against the Australian average and reported that ACT public schools' results between 2013 and 2015 almost always exceeded the Australian average (one exception was for Year 9 Numeracy in 2014). This reporting does not take account of socio-educational factors, which would provide greater information on the relative performance of ACT public schools.

2.12

In 2016 ACT public schools' ICSEA values ranged from 742 to 1184, with an average of 1068. The lower value of 742 was an outlier, however, with the next lowest value being 924. The significant majority of ACT public schools had ICSEA values above the national average, which shows, on balance, that ACT public schools have high community socio-educational advantage. The comparatively high socio-educational advantage of ACT public schools needs to be taken into account when comparing ACT public schools' NAPLAN results with other states and territories.

2.18

A comparison of ACT public schools' NAPLAN results in 2015 with similar schools in Australia (based on their relative socio-educational advantage, as measured by their ICSEA value) shows that for all NAPLAN tests across all year levels the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. The analysis also shows that, for Year 5, Year 7 and Year 9 results across most tests the gap is more pronounced for ACT public schools with a lower ICSEA value than it is for ACT public schools with a higher ICSEA value.

2.22

A comparison of ACT public schools' NAPLAN results in 2016 with similar schools in Australia (based on their relative socio-educational advantage, as measured by their ICSEA value) shows that for all NAPLAN tests across all year levels the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. The analysis also shows that, for Year 9 results across all tests the gap is more pronounced for ACT public schools with a lower ICSEA value than it is for ACT public schools with a higher ICSEA value.

2.24

An analysis of ACT public schools' proportional gain for Year 3 to Year 5 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 shows that some schools have performed well, by achieving an actual 'school gain' that has exceeded the predicted school gain, while other schools have performed poorly, by achieving an actual 'school gain' that has not achieved the predicted school gain.

2.30

Analysis of ACT public schools' proportional gain for Year 5 to Year 7 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain)

2.32

between 2014 and 2016 is only available for a limited number of schools (eight), i.e. those schools that have a cohort of students moving between primary and high school. The analysis shows that between 2014 and 2016, for most of these schools the actual 'school gain' did not meet the predicted school gain across the three assessment areas (Reading, Writing and Numeracy). The results of this analysis are most pronounced in Numeracy, where it is apparent that between 2014 and 2016 only one school's actual 'school gain' exceeded the predicted school gain (this was in 2015).

An analysis of ACT public schools' proportional gain for Year 7 to Year 9 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 shows that some schools have performed well, by achieving an actual 'school gain' that has exceeded the predicted school gain, while other schools have performed poorly, by achieving an actual 'school gain' that has not achieved the predicted school gain. 2.33

Analysis shows that, between 2014 and 2016, in the assessment areas of Writing and Numeracy for most ACT public schools, actual 'school gain' did not meet the predicted school gain. With respect to Reading however, the number of ACT public schools whose actual 'school gain' exceeded the predicted school gain in 2014 was 8 (rising to 11 in 2016), while the number of ACT public schools whose actual 'school gain' did not meet the predicted school gain in 2014 was 11 (falling to 8 in 2016). 2.34

A 2016 report commissioned by the Education Directorate from the Centre for International Research on Education Systems at Victoria University closely examined ACT public schools' educational performance, as measured by NAPLAN, with reference to socio-educational advantages. The *Government school performance in the ACT* report sought to compare ACT public schools with other state and territory schools, focusing on other state and territory 'government city schools' and removing other state and territory selective schools from comparison. The report found 'after taking account of intake and context differences, ACT government schools on average achieve negative results on every measure'. The Education Directorate advised that this analysis shows that ACT public schools have a comparatively less mean gain than other jurisdictions. 2.40

The report also identified that 'ACT schools have higher ICSEA values as a group' and that 'this equates to higher mean scores for NAPLAN compared to schools in other states and territories where the tails of performance reduce raw mean scores'. Accordingly 'the effect is to conceal the real levels of performance in the ACT which is lower than expected (predicted) based on the student population and weaker than schools serving similar populations in other states'. 2.41

ACT schools' educational achievement

- 2.2 In Australia the educational achievement of students is typically reported with reference to results from National Assessment Program for Literacy and Numeracy (NAPLAN) testing. According to the Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016):

NAPLAN - Australia's first national test of literacy and numeracy - is a powerful tool. It allows policy makers to measure students' achievement in core literacy and numeracy skills. It provides data on the progress students make as they move through school.

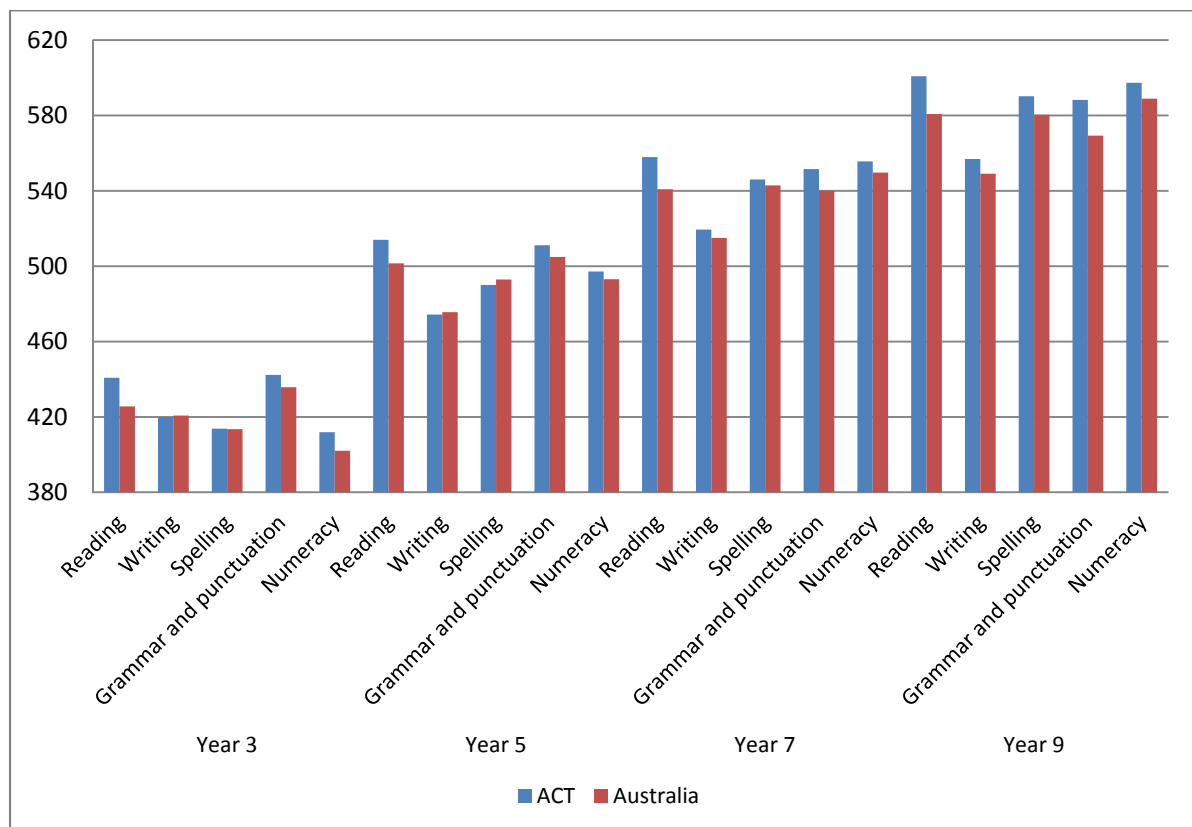
- 2.3 The Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016) further states:

NAPLAN does not test everything, but the things it does test matter. A study by the ABS shows that NAPLAN scores in Year 9 are a strong predictor of high school completion as well as success after school in study and work. This means NAPLAN data can now be used to identify certain groups of students who are struggling early on in school, before low performance becomes entrenched.

- 2.4 The results from NAPLAN testing represent a reliable measure of educational achievement that is consistent across Australia. NAPLAN results are also used by the Education Directorate as a performance measure in its annual report.

Mean NAPLAN results

- 2.5 Figure 2-1 shows the mean NAPLAN results in the ACT for 2016 for all four year levels in which testing is undertaken (Year 3, Year 5, Year 7 and Year 9) across all five assessment areas (reading, writing, spelling, grammar and punctuation and numeracy). The figure shows mean results for all ACT students (public school and other).

Figure 2-1 Mean 2016 ACT and national NAPLAN scores

Source: ACARA, NAPLAN National Report for 2016.

2.6 Figure 2-1 shows that mean NAPLAN scores in the ACT are typically higher than the national average. Across all four year levels and all five assessment areas the mean ACT scores for the ACT in 2016 exceeded the national average in all but three instances (Year 3 Writing, Year 5 Writing and Year 5 Spelling).

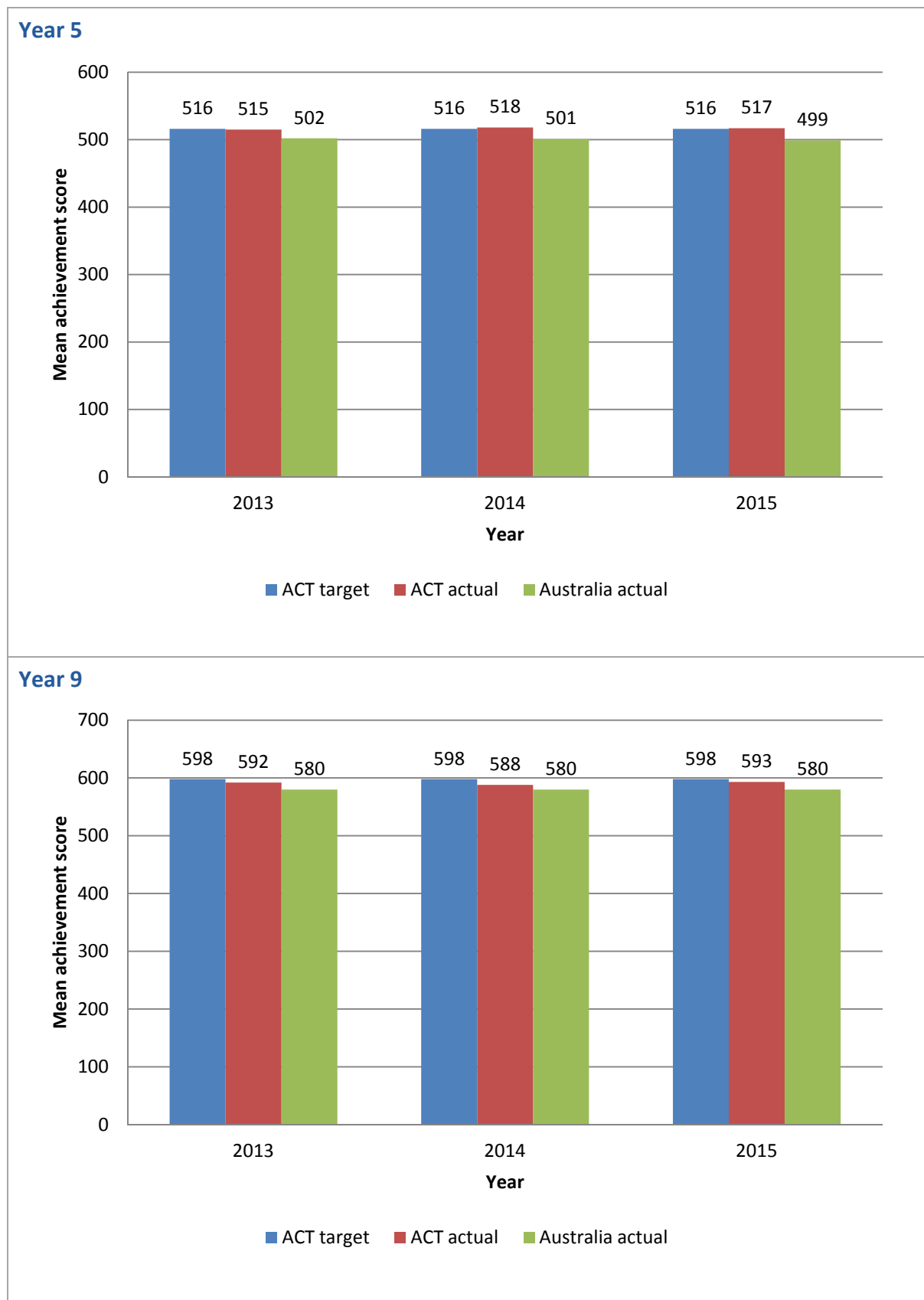
ACT public school reported results

2.7 The Education Directorate reports ACT public school results as part of its annual report. The Education Directorate's 2015-16 Annual Report reported ACT public school results with reference to four key strategic indicators:

- Mean NAPLAN achievement score for reading of all year 5 public school students;
- Mean NAPLAN achievement score for reading of all year 9 public school students;
- Mean NAPLAN achievement score for numeracy of all year 5 public school students; and
- Mean NAPLAN achievement score for numeracy for all year 9 public school students.

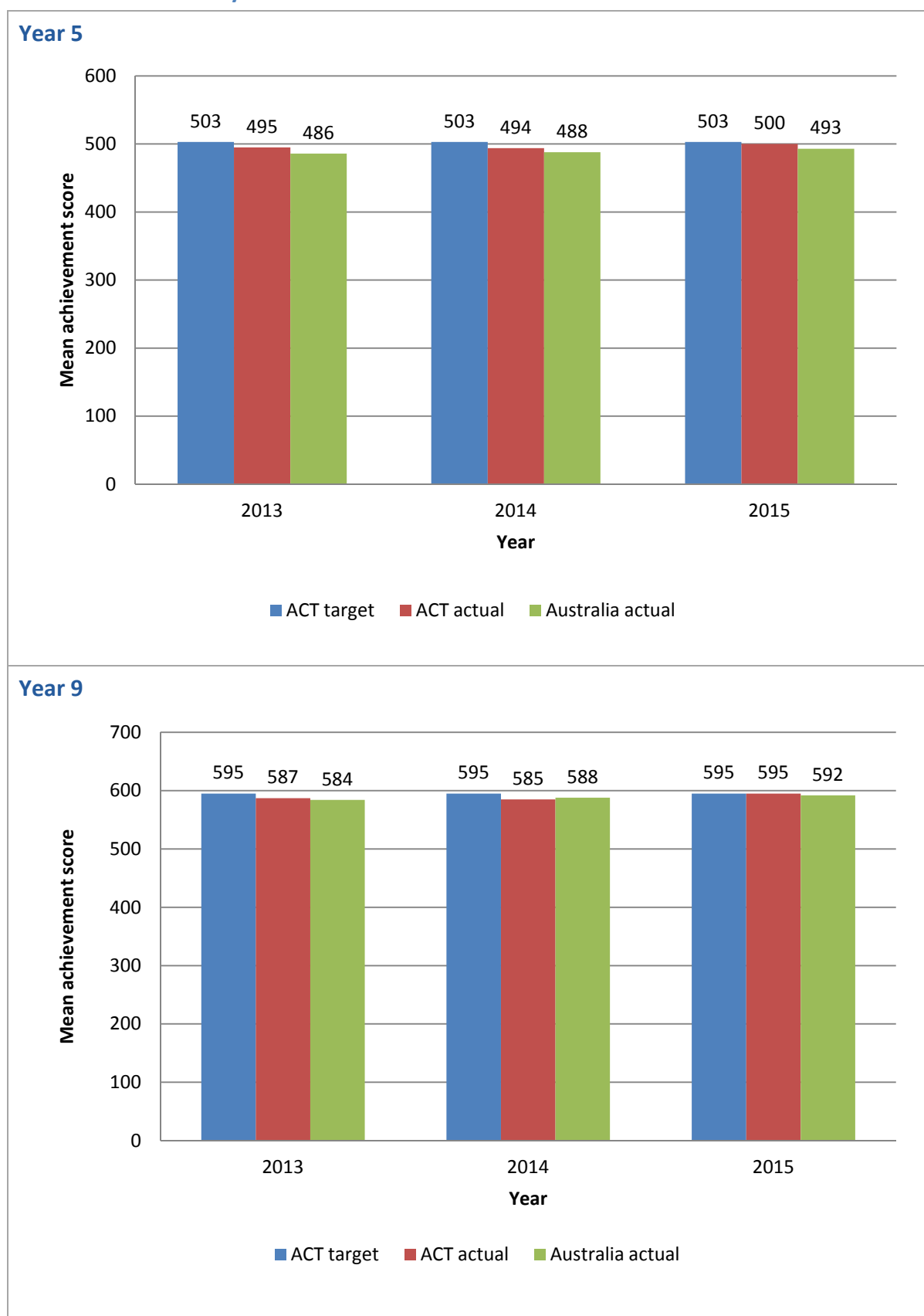
2.8 Figure 2-2 shows the Education Directorate's targets and actual results for mean NAPLAN achievement score for reading for Year 5 and 9 public school students between 2013 and 2015 (as reported in the Education Directorate's 2015-16 Annual Report). The figure also compares ACT public schools' results with the average result for all Australian schools.

Figure 2-2 Mean achievement score for all Year 5 and Year 9 public school students in reading in NAPLAN



- 2.9 As part of its 2015-16 Annual Report, the Education Directorate reported the Education Directorate's targets and actual results for mean NAPLAN achievement score for Reading for Year 5 and Year 9 public school students between 2013 and 2015. The Education Directorate reported the results of ACT public school students' performance against the Australian average and reported that ACT public schools' results between 2013 and 2015 consistently exceeded the Australian average. This reporting does not take account of socio-educational factors, which would provide greater information on the relative performance of ACT public schools.
- 2.10 The Education Directorate has advised that the targets contained in the 2015-2016 Annual Report reflect the Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation*, and that subsequent strategic plans will contain targets that provide greater information on the relative performance of ACT public schools.
- 2.11 Figure 2-3 shows the Education Directorate's targets and actual results for mean NAPLAN achievement score for Numeracy for Year 5 and Year 9 public school students between 2013 and 2015 (as reported in the Education Directorate's 2015-16 Annual Report). The figure also compares ACT public schools' results with the average result for all Australian schools.

Figure 2-3 Mean achievement score for all Year 5 and Year 9 public school students in numeracy in NAPLAN



Source: ACT Audit Office, based on NAPLAN data

- 2.12 As part of its 2015-16 Annual Report, the Education Directorate reported the Education Directorate's targets and actual results for mean NAPLAN achievement score for Numeracy for Year 5 and Year 9 public school students between 2013 and 2015. The Education Directorate reported the results of ACT public school students' performance against the Australian average and reported that ACT public schools' results between 2013 and 2015 almost always exceeded the Australian average (one exception was for Year 9 Numeracy in 2014). This reporting does not take account of socio-educational factors, which would provide greater information on the relative performance of ACT public schools.

NAPLAN results accounting for ICSEA values

- 2.13 Reporting of educational achievement with reference only to mean NAPLAN results does not provide a full picture of educational achievement. It is important to recognise and understand school contextual matters. Research shows that there is a strong relationship between the educational advantage a student has, as measured by contextual factors, and their educational achievement. This was recognised by the *National Assessment Program—Literacy and Numeracy: Achievement in Reading, Writing, Language Conventions and Numeracy: National Report for 2016*, which has increased its reporting of contextual factors when describing student learning outcomes across Australian states and territories, including:
- Indigenous status;
 - LBOTE (Language Background Other Than English) status;
 - parental education; and
 - parental occupation.
- 2.14 Contextual factors in the ACT include the highest average earnings in Australia, educational levels well in advance of any other Australian jurisdiction, less extreme poverty and fewer disadvantaged students. For example, average weekly earnings in November 2016 were \$1,747 in the ACT compared to a national average of \$1,533 and 21 percent of the population in the ACT had a Bachelor Degree at the time of the 2011 Census compared to 13.5 per cent of the Australian population. The Education Directorate has also advised that an additional contextual factor is that only 18.4 percent of students in the ACT have a mother who has not completed Year 12.

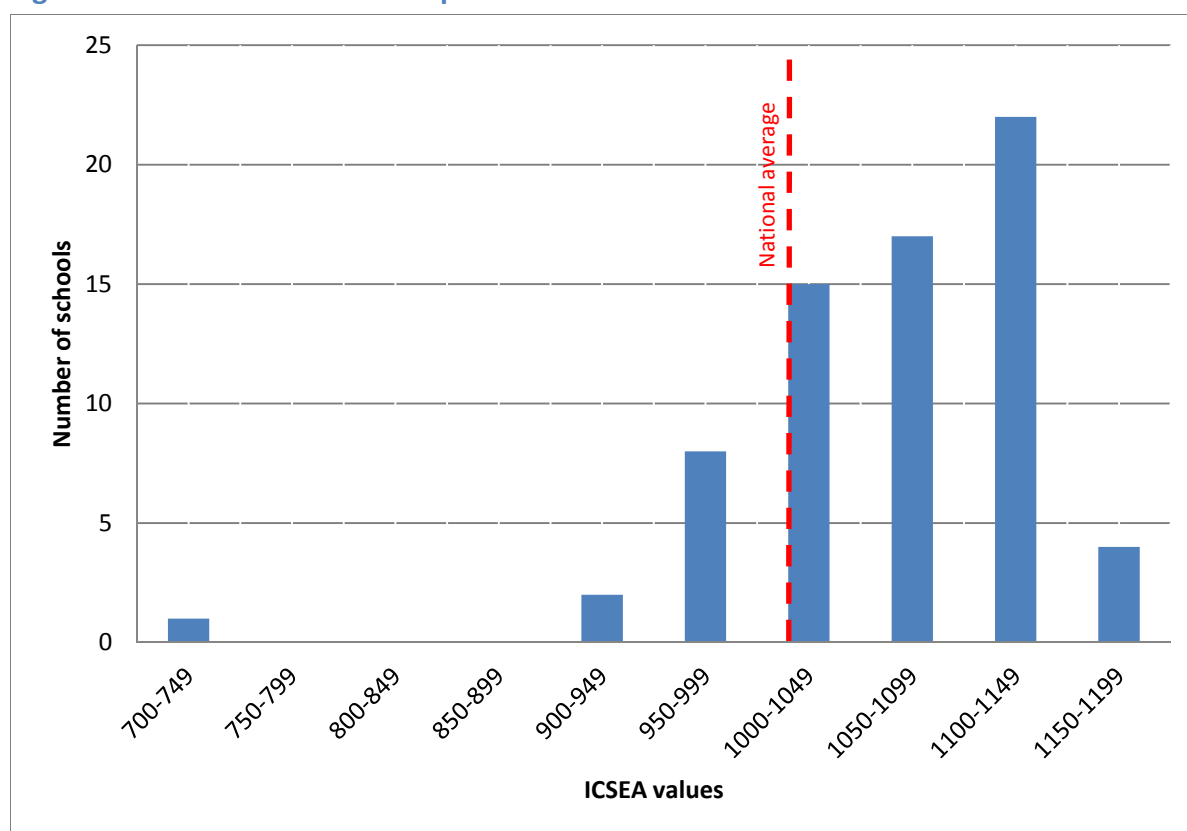
Index of Community Socio-educational Advantage (ICSEA)

- 2.15 The Index of Community Socio-educational Advantage (ICSEA) represents one mechanism by which contextual factors for educational achievement can be quantified and explained. ICSEA was developed by the Australian Curriculum, Assessment and Reporting Authority (ACARA), specifically to enable meaningful comparisons of NAPLAN test achievement by students in schools across Australia. It uses proxies to measure the level of educational advantage of a school's students.

2.16 According to the Australian Curriculum, Assessment and Reporting Authority (ACARA):

The Index of Community Socio-Educational Advantage (ICSEA) is the level of educational advantage of a school's students, calculated using information about parents' occupation and education, school geographical location and the proportion of Indigenous students a school caters for. A school's ICSEA value represents the average educational advantage of the school's students.

2.17 The average Australia-wide ICSEA value is 1000. A higher ICSEA value represents greater community socio-educational advantage. Figure 2-4 shows the distribution of ACT public schools' ICSEA values in 2016.

Figure 2-4 Distribution of ACT public schools' 2016 ICSEA values

Source: ACT Audit Office, based on MySchool website.

2.18 In 2016 ACT public schools' ICSEA values ranged from 742 to 1184, with an average of 1068. The lower value of 742 was an outlier, however, with the next lowest value being 924. The significant majority of ACT public schools had ICSEA values above the national average, which shows, on balance, that ACT public schools have high community socio-educational advantage. The comparatively high socio-educational advantage of ACT public schools needs to be taken into account when comparing ACT public schools' NAPLAN results with other states and territories.

2.19 The Education Directorate has advised 'there is some evidence to suggest that ICSEA values in the ACT are skewed relative to other states and territories. ACARA has been commissioned to review ICSEA values in the ACT to ensure that they deliver the same

value as in other jurisdictions'. The Audit Office notes this statement, but notes the extensive use of ICSEA by the Australian Curriculum and Reporting Authority (ACARA) and on the My School website. In the absence of alternative mechanisms for better measuring comparative performance across schools, the Audit Office has used ICSEA values as the basis for comparison.

ACT public school comparison with similar schools

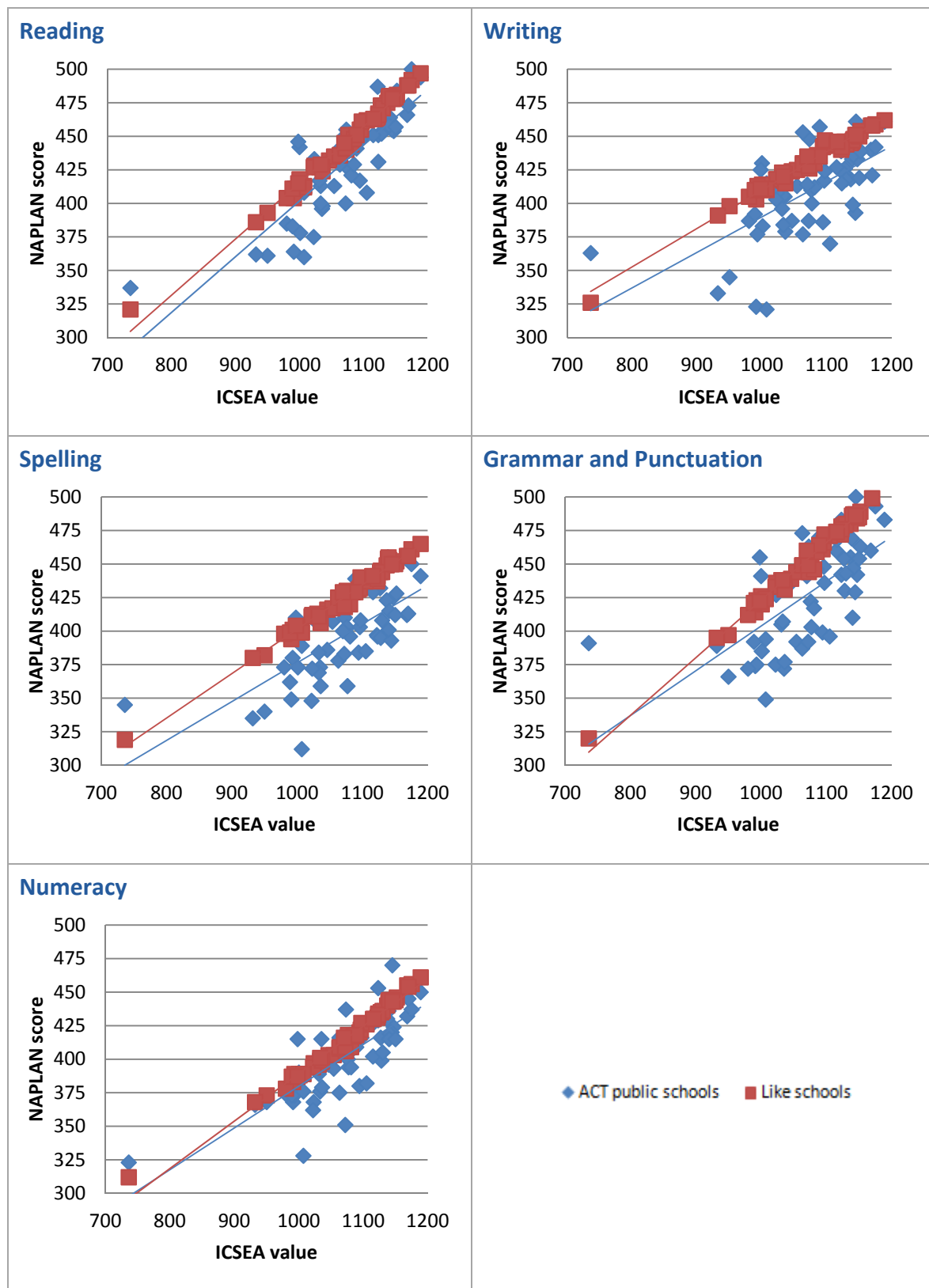
- 2.20 The Education Directorate has collated data with respect to ACT public schools' NAPLAN performance with other similar schools in Australia. The data is publicly available through the Australian Curriculum, Assessment and Reporting Authority (ACARA) MySchool website. The data compares individual ACT public schools' NAPLAN results in all five assessment areas across all four years (where appropriate) with other schools in Australia with similar ICSEA values.² The data for other schools in Australia with similar ICSEA values is based on Australian Curriculum, Assessment and Reporting Authority (ACARA) data analysis, which compares individual schools' NAPLAN results with the NAPLAN results of a total of sixty other schools in Australia with similar ICSEA values. (The sixty schools used for comparative purposes may be a mixture of public and non-government schools). The Audit Office has used this data to compare ACT schools' performance against similar schools in Australia. The following graphs show the results of this analysis for 2015 and 2016.

Comparison of ACT public schools' 2015 NAPLAN results with similar schools

- 2.21 Figures 2-5 to 2-8 shows the results of a comparison of ACT public schools' 2015 NAPLAN scores with similar schools. The figures show NAPLAN results in all five assessment areas (reading, writing, spelling, grammar and punctuation and numeracy) across all four years (where appropriate) with other schools in Australia with similar ICSEA values.

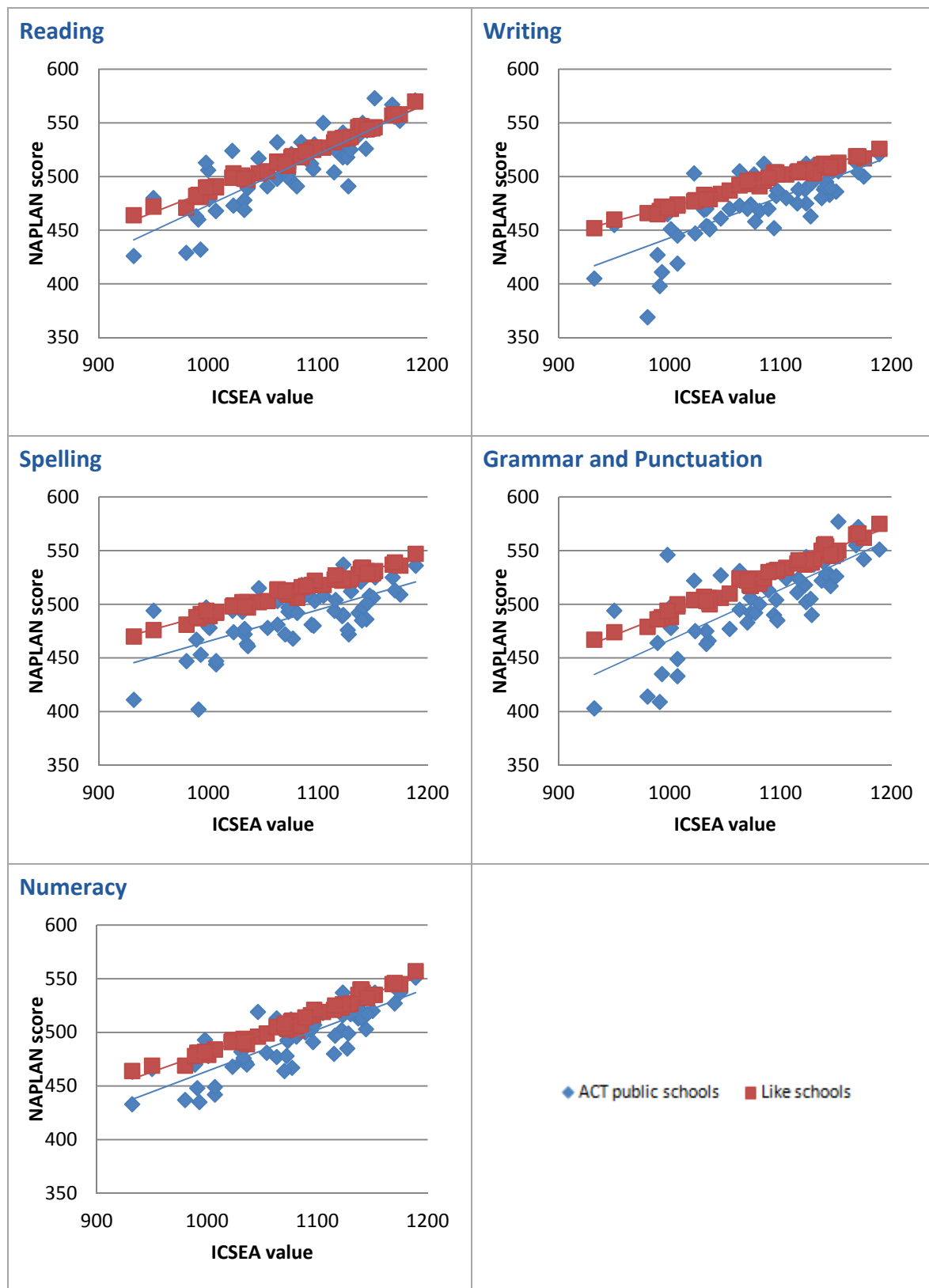
² Assessment area refers to the type of NAPLAN test conducted, i.e. reading, writing, spelling, grammar and punctuation and numeracy.

Figure 2-5 ACT public schools' Year 3 NAPLAN results compared with similar schools in Australia (2015)



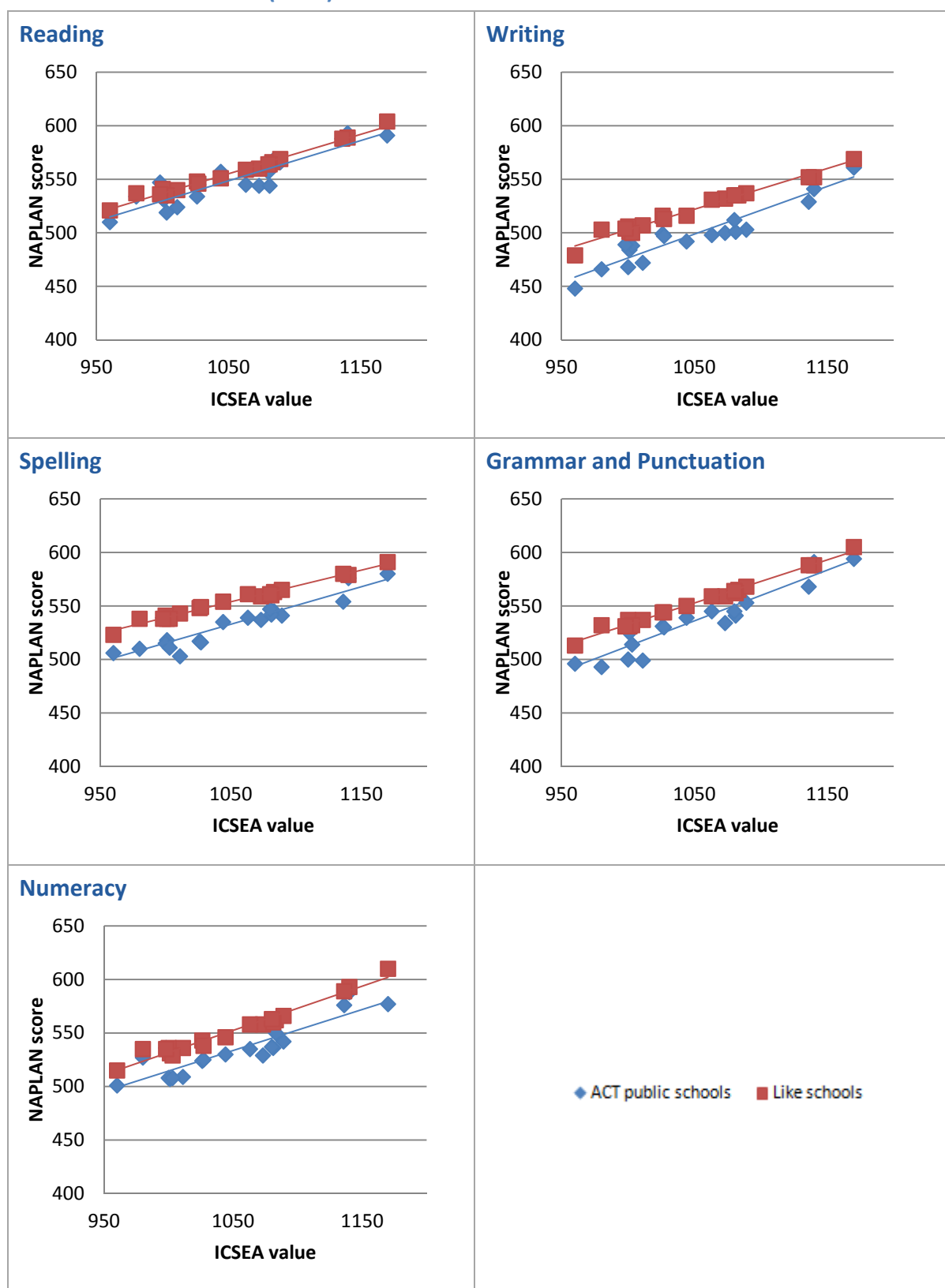
Source: ACT Audit Office, based on NAPLAN and ICSEA data

Figure 2-6 ACT public schools' Year 5 NAPLAN results compared with similar schools in Australia (2015)



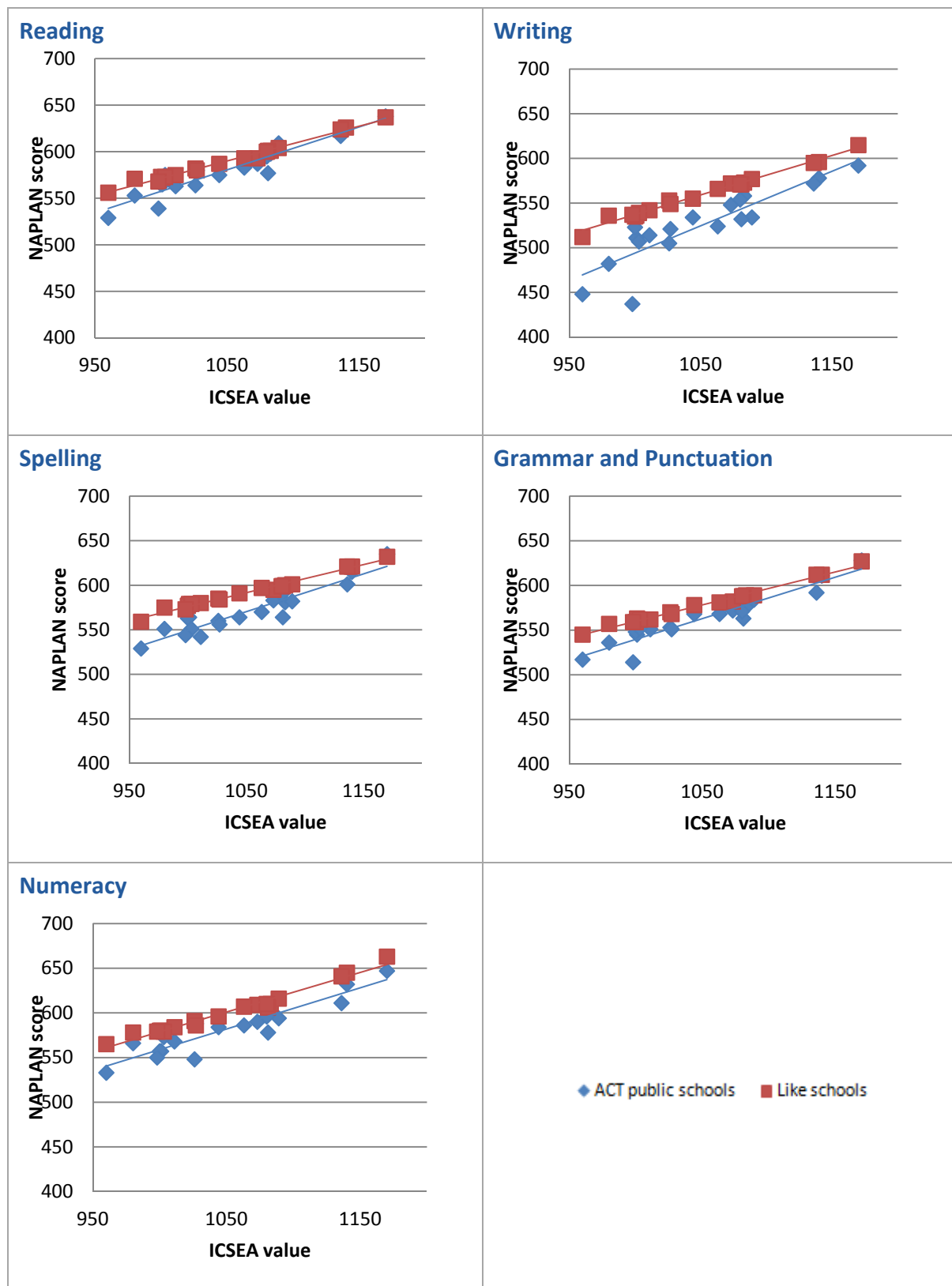
Source: ACT Audit Office, based on NAPLAN and ICSEA data

Figure 2-7 ACT public schools' Year 7 NAPLAN results compared with similar schools in Australia (2015)



Source: ACT Audit Office, based on NAPLAN and ICSEA data

Figure 2-8 ACT public schools' Year 9 NAPLAN results compared with similar schools in Australia (2015)



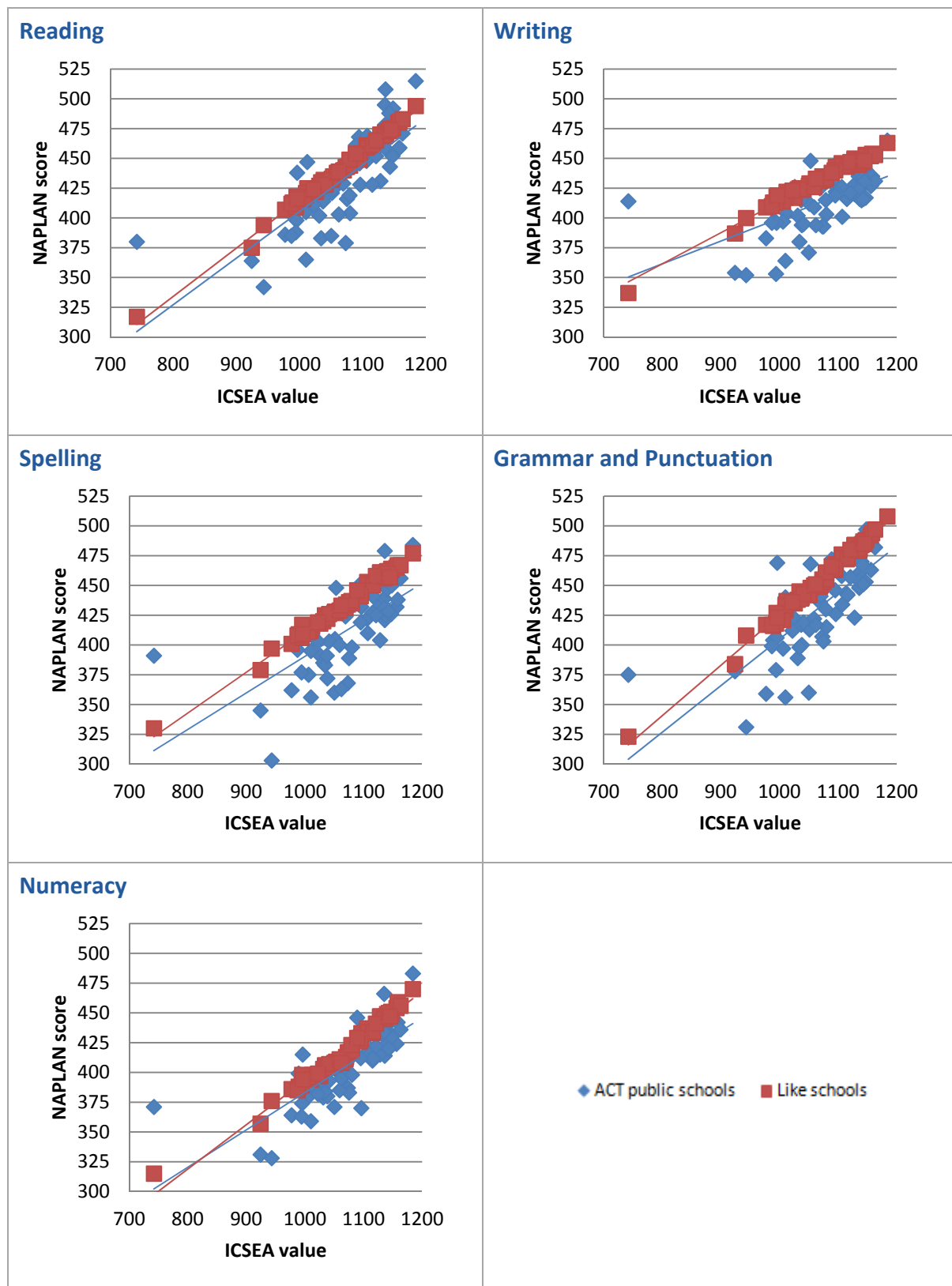
Source: ACT Audit Office, based on NAPLAN and ICSEA data

- 2.22 A comparison of ACT public schools' NAPLAN results in 2015 with similar schools in Australia (based on their relative socio-educational advantage, as measured by their ICSEA value) shows that for all NAPLAN tests across all year levels the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. The analysis also shows that, for Year 5, Year 7 and Year 9 results across most tests the gap is more pronounced for ACT public schools with a lower ICSEA value than it is for ACT public schools with a higher ICSEA value.

Comparison of ACT public schools' 2016 NAPLAN results with similar schools

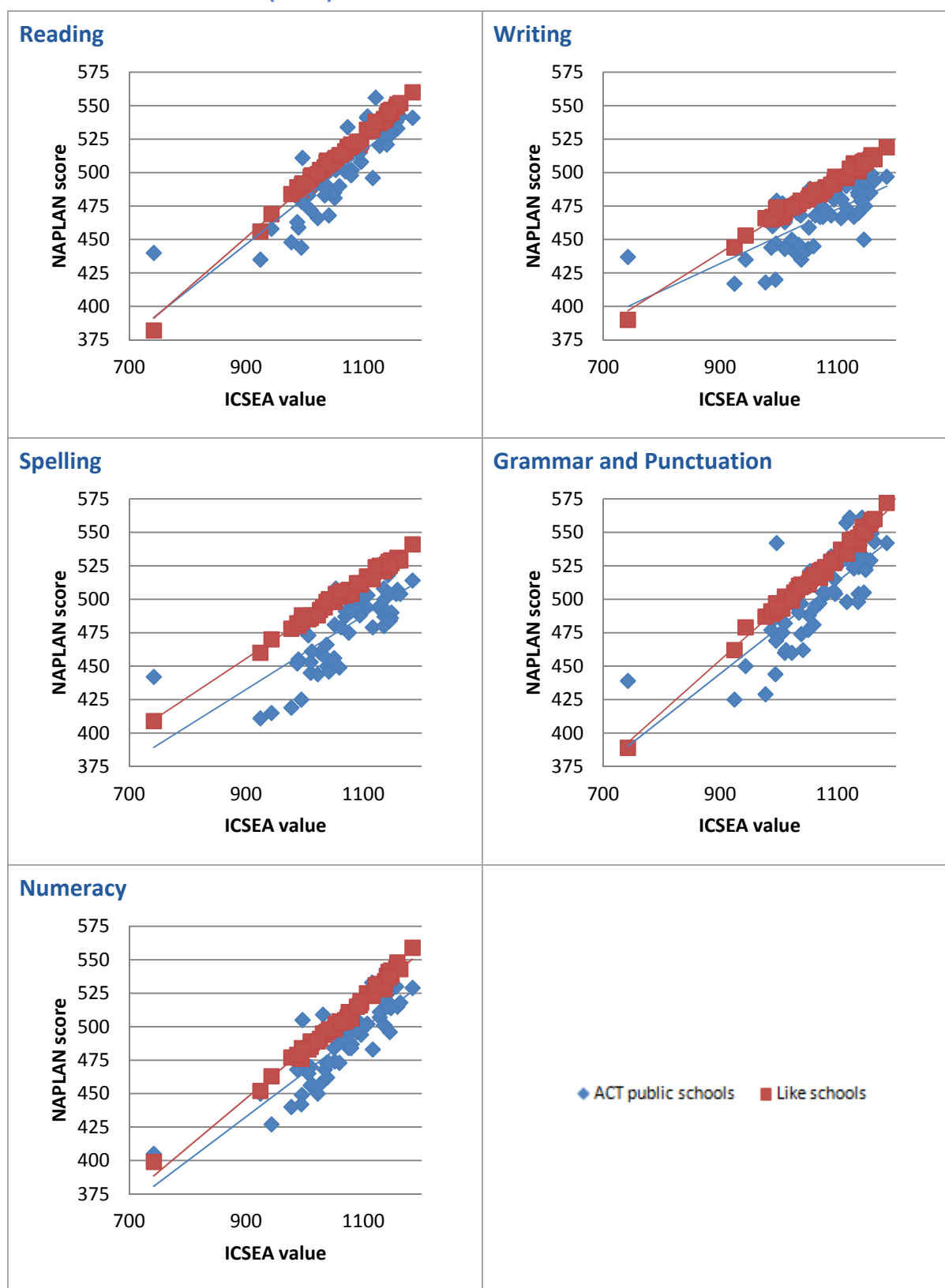
- 2.23 Figures 2-9 to 2-12 shows the results of analysis of ACT public schools' 2016 NAPLAN results with similar schools. The figures show NAPLAN results in all five assessment areas (reading, writing, spelling, grammar and punctuation and numeracy) across all four years (where appropriate) with other schools in Australia with similar ICSEA values.

Figure 2-9 ACT public schools' Year 3 NAPLAN results compared with similar schools in Australia (2016)



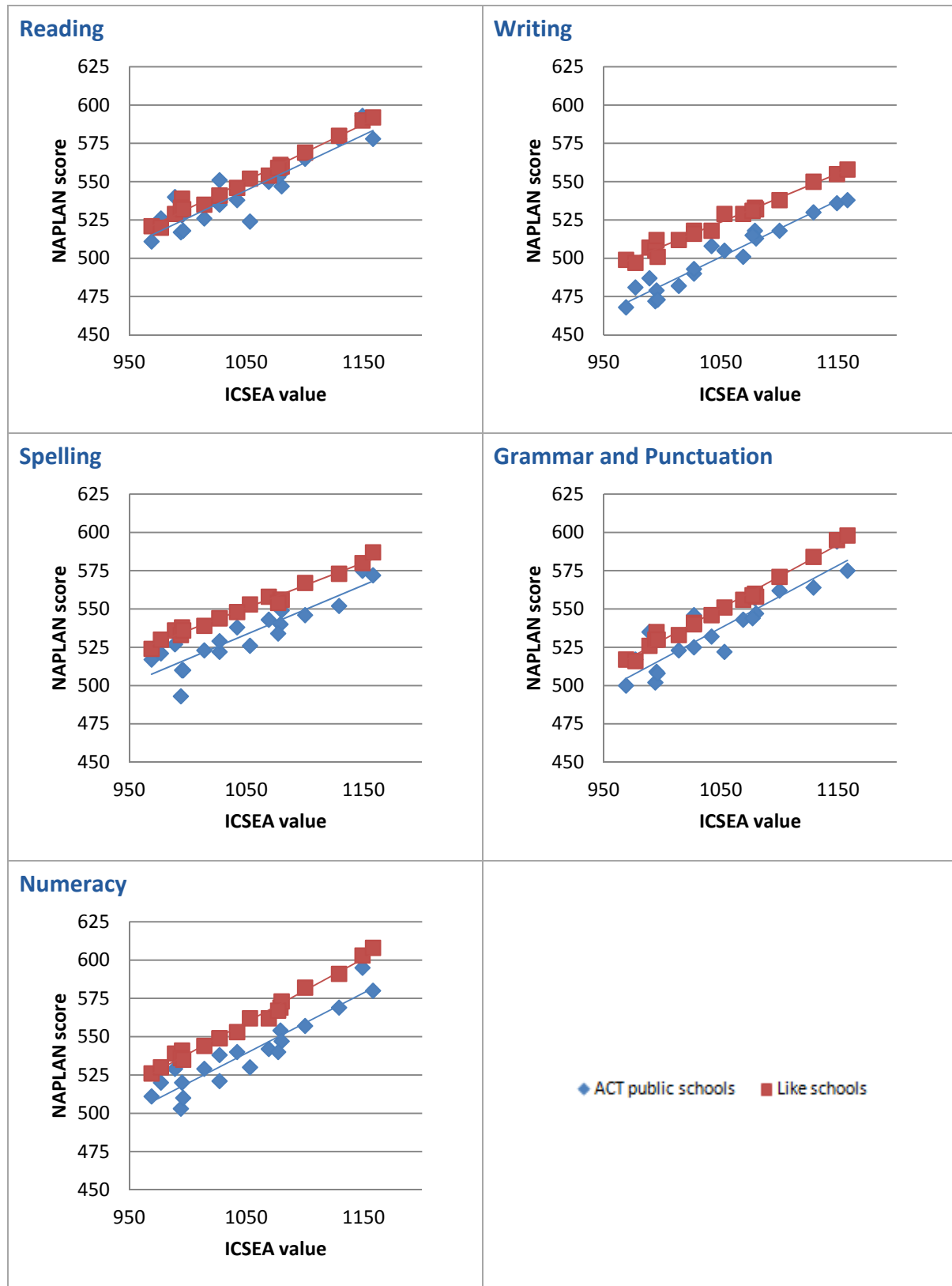
Source: ACT Audit Office, based on NAPLAN and ICSEA data

Figure 2-10 ACT public schools' Year 5 NAPLAN results compared with similar schools in Australia (2016)



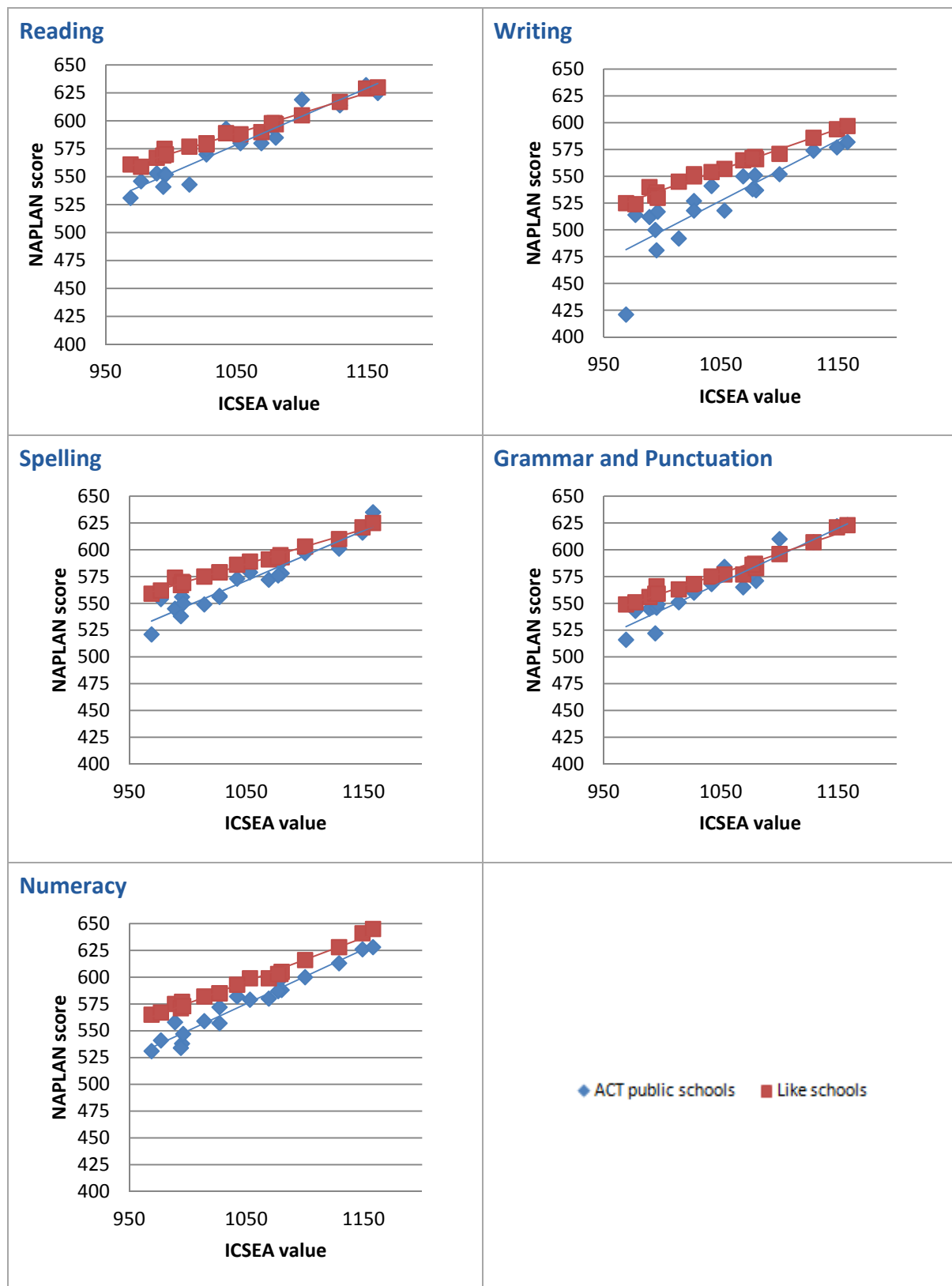
Source: ACT Audit Office, based on NAPLAN and ICSEA data

Figure 2-11 ACT public schools' Year 7 NAPLAN results compared with similar schools in Australia (2016)



Source: ACT Audit Office, based on NAPLAN and ICSEA data

Figure 2-12 ACT public schools' Year 9 NAPLAN results compared with similar schools in Australia (2016)

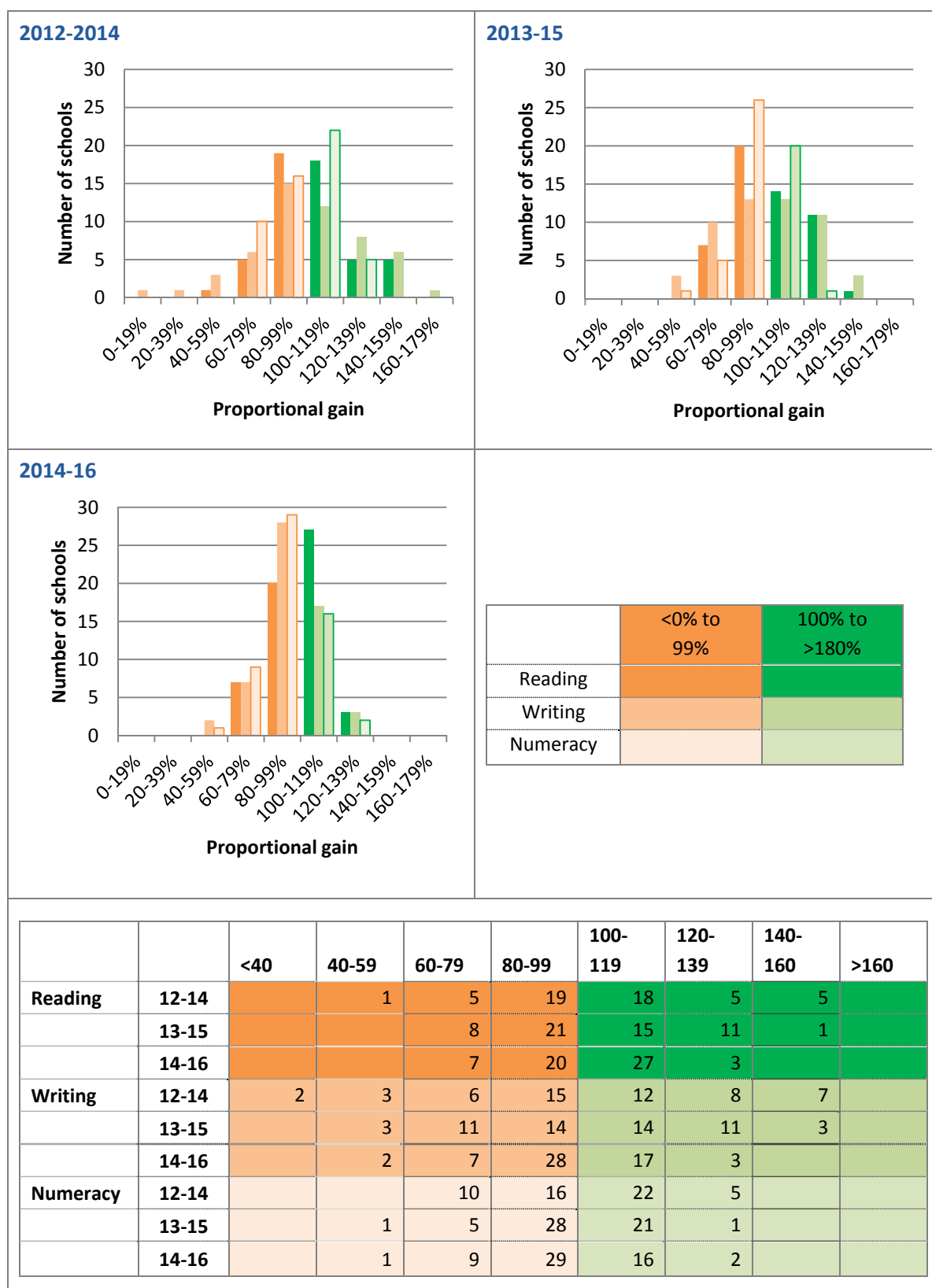


Source: ACT Audit Office, based on NAPLAN and ICSEA data

- 2.24 A comparison of ACT public schools' NAPLAN results in 2016 with similar schools in Australia (based on their relative socio-educational advantage, as measured by their ICSEA value) shows that for all NAPLAN tests across all year levels the majority of ACT public schools' NAPLAN results are lower than similar schools in Australia. The analysis also shows that, for Year 9 results across all tests the gap is more pronounced for ACT public schools with a lower ICSEA value than it is for ACT public schools with a higher ICSEA value.

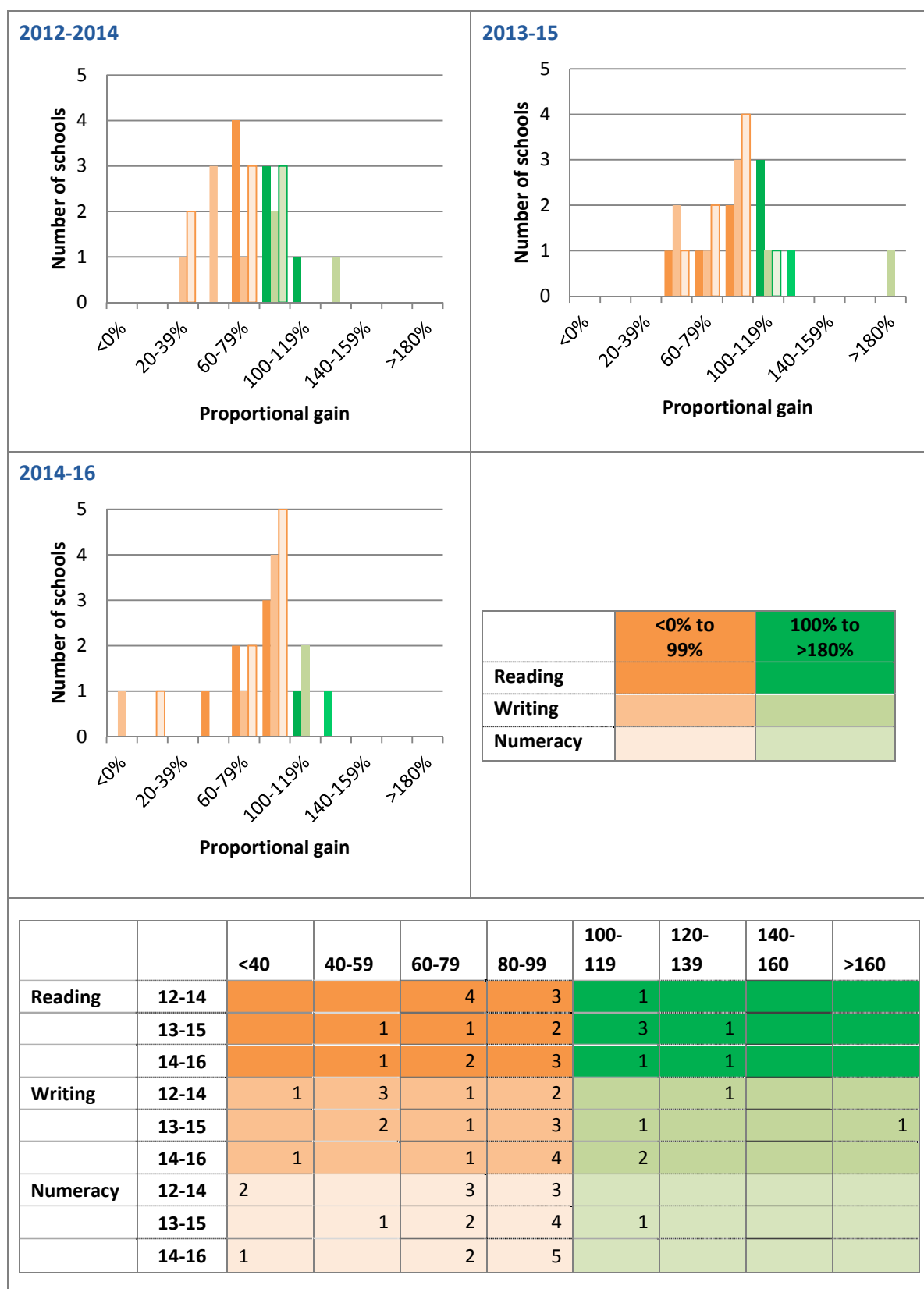
Analysis of ACT public school students' learning growth

- 2.25 The Education Directorate has undertaken analysis with respect to ACT public school students' learning progress by comparing their NAPLAN results across different years and cycles of assessment and comparing that with expected measures of predicted growth.
- 2.26 In a report which examines ACT public school students' learning progress across all schools, the Education Directorate states 'the progress in student learning, learning gain/growth over assessed periods, is an important measure of evaluating educational outcomes'. The Education Directorate's analysis compares individual students' NAPLAN results for Years 5, 7 and 9 with their results two years earlier (i.e. Years 3, 5 and 7 respectively) in Reading, Writing and Numeracy. ACT public school students' individual results are then aggregated to form a measure of 'school gain', which is the difference between the average start and end scores of students at the school (e.g. Year 3 results compared with Year 5 results). 'School gain' is only measured on the basis of students who were at the school for both assessments.
- 2.27 The Education Directorate has then compared the actual average school gain results with predicted results. Predicted results, which are calculated by the Australian Curriculum, Assessment and Reporting Authority (ACARA), represent the average end score of all students nationally with the same starting score. A comparison of actual 'school gain' with the predicted school gain 'provides a measure of the progress made by this sample of students in this school compared with all students from across Australia who started from the same achievement level'.
- 2.28 For the purpose of its analysis the Education Directorate derived a measure of 'proportional gain'. This represents the ratio of the actual 'school gain' compared to predicted school gain. A result of 100 indicates that actual 'school gain' is in line with predicted school gain. A result of more than 100 indicates that actual 'school gain' has exceeded the predicted school gain, which suggests that students are achieving results that have exceed expectations. A result of less than 100 indicates that actual 'school gain' has not achieved the predicted school gain.
- 2.29 The Audit Office has used the data and analysis prepared by the Education Directorate to produce the following graphs and analysis.

Figure 2-13 Year 3 to 5 proportional gain distribution for years 2012-14, 2013-15 and 2014-16

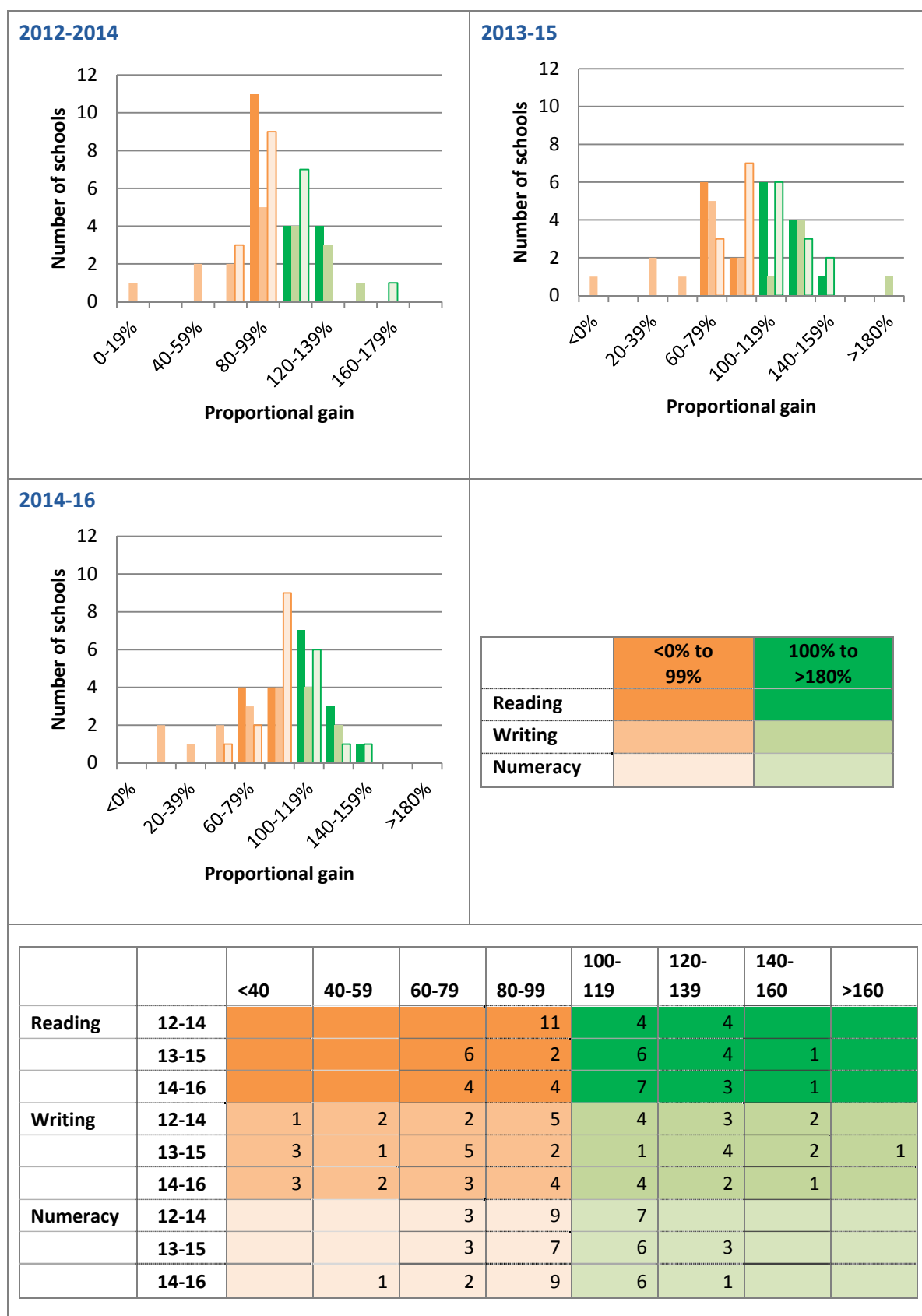
Source: ACT Audit Office, based on Education Directorate data analysis

- 2.30 An analysis of ACT public schools' proportional gain for Year 3 to Year 5 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 shows that some schools have performed well, by achieving an actual 'school gain' that has exceeded the predicted school gain, while other schools have performed poorly, by achieving an actual 'school gain' that has not achieved the predicted school gain.
- 2.31 Further analysis shows that, between 2014 and 2016, the overall performance of ACT public schools has declined in Writing and Numeracy, as measured by proportional gain for Year 3 to Year 5 NAPLAN results. For example, the number of ACT public schools whose actual 'school gain' exceeded the predicted school gain in Writing was 27 in 2014 (falling to 20 in 2016), while the number of ACT public schools whose actual 'school gain' did not meet the predicted school gain in 2014 was 26 (rising to 37 in 2016). Similarly, the number of ACT public schools whose actual 'school gain' exceeded the predicted school gain in Numeracy was 27 in 2014 (falling to 18 in 2016), while the number of ACT public schools whose actual 'school gain' did not meet the predicted school gain in 2014 was 26 (rising to 39 in 2016).

Figure 2-14 Year 5 to 7 proportional gain distribution for years 2012-14, 2013-15 and 2014-16

Source: ACT Audit Office, based on Education Directorate data analysis

- 2.32 Analysis of ACT public schools' proportional gain for Year 5 to Year 7 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 is only available for a limited number of schools (eight), i.e. those schools that have a cohort of students moving between primary and high school. The analysis shows that between 2014 and 2016, for most of these schools the actual 'school gain' did not meet the predicted school gain across the three assessment areas (Reading, Writing and Numeracy). The results of this analysis are most pronounced in Numeracy, where it is apparent that between 2014 and 2016 only one school's actual 'school gain' exceeded the predicted school gain (this was in 2015).

Figure 2-15 Year 7 to 9 proportional gain distribution for years 2012-14, 2013-15 and 2014-16

Source: ACT Audit Office, based on Education Directorate data analysis

- 2.33 An analysis of ACT public schools' proportional gain for Year 7 to Year 9 NAPLAN results (i.e. the ratio of actual 'school gain' compared with predicted school gain) between 2014 and 2016 shows that some schools have performed well, by achieving an actual 'school gain' that has exceeded the predicted school gain, while other schools have performed poorly, by achieving an actual 'school gain' that has not achieved the predicted school gain.
- 2.34 Analysis shows that, between 2014 and 2016, in the assessment areas of Writing and Numeracy for most ACT public schools, actual 'school gain' did not meet the predicted school gain. With respect to Reading however, the number of ACT public schools whose actual 'school gain' exceeded the predicted school gain in 2014 was 8 (rising to 11 in 2016), while the number of ACT public schools whose actual 'school gain' did not meet the predicted school gain in 2014 was 11 (falling to 8 in 2016).

Government school performance in the ACT report

- 2.35 In 2016 the Education Directorate commissioned a report from Professor Stephen Lamb at the Centre for International Research on Education Systems at Victoria University. The *Government school performance in the ACT* report closely examined ACT public schools' educational performance, as measured by NAPLAN, with reference to socio-educational advantages. In identifying and accounting for educational performance in the ACT, the *Government school performance in the ACT* report noted that the ACT public school system does not experience the same challenges as other states and territories:

The challenges that many other systems face in Australia and overseas - rural and remote locations, social disadvantage, larger indigenous concentrations, socially diverse populations - are not challenges that ACT schools face in anywhere near the same way.

- 2.36 Accordingly, the *Government school performance in the ACT* report sought to rigorously compare ACT public schools with other state and territory schools, focusing on other state and territory 'government city schools' and removing other state and territory selective schools from comparison:

The analysis was restricted to government city schools and excluded selective-entry schools. This was to ensure fair comparisons with ACT schools which are not selective-entry and which are city-based. It should be kept in mind in viewing the results that equivalent students to those in selective-entry schools in other jurisdictions are in the population of students in ACT schools. This may raise the performance of the ACT in the analysis. However, because the focus is on school performance, selective-entry schools have been excluded.

- 2.37 The *Government school performance in the ACT* report identified that, when comparing ACT public schools with similar schools in other jurisdictions, ACT public schools consistently achieved lower results:

State and Territory results show that after taking account of intake and context differences, ACT government schools on average achieve negative results on every measure. For example, in Year 5 Numeracy mean scores the ACT records the worst result of any jurisdiction. On average, students are performing 20 points lower than

comparable students in [another jurisdiction]. Twenty points represents almost 6 months of learning and suggests that at a school level by Year 5 students in the ACT are almost 6 months behind students in comparable schools in [another jurisdiction].

The results are worse at Year 9 where for Numeracy the deficit is almost 25 mean score points, keeping in mind that selective entry schools have been excluded.

Students performing in the top bands of performance are also lower than expected in the ACT after taking account of differences in school intakes. For numeracy the results suggest that on average the proportion of students in the top two bands of Year Numeracy achievement are 12 percentage points lower than what is achieved in [another jurisdiction], all else equal.

2.38 The *Government school performance in the ACT* report further identified:

... Numeracy is the area of greatest concern. While results are also significantly lower on all Reading performance measures, the Numeracy results are markedly below the rest of the country, compared to what would be expected based on the populations schools are serving in the ACT.

...

A striking feature is that in Numeracy the ACT schools are performing ... at the lower levels of performance for schools of similar ICSEA values.

...

ACT schools have higher ICSEA values as a group. This equates to higher mean scores for NAPLAN compared to schools in other states and territories where the tails of performance reduce raw mean scores. The effect is to conceal the real levels of performance in the ACT which is lower than expected (predicted) based on the student population and weaker than schools serving similar populations in other states.

2.39 The *Government school performance in the ACT* report also examined the extent to which 'learning gain' was achieved by ACT public schools compared to state and territory schools in other jurisdictions:

Learning gain or growth is a critical measure of student and school performance, arguably one of the most important measures. While it is essential to measure how well students have learned certain subject matter or skills at one point in time, such as by Year 3, it is even more pressing, given the goals of schooling, to measure growth or learning as students progress across stages of development. This means measuring gain over two or more points of time. The goal of a high quality system would be to ensure even rates of growth across schools and communities for students of the same starting points. This would imply that students make equivalent rates of learning gain irrespective of the school or context they are in. Learning gain should not vary across borders.

...

The results on the learning gain measures reveal gaps between students in the ACT and those in the control group. It suggests that students make less progress in Numeracy from Year 3 to Year 5, trailing by 7.9 points over the growth achieved by students in the control group, after taking account of student background differences (SES, language background, ATSI status, gender). At Year 5, this was weaker growth

than for the other jurisdictions included in the model. The learning gain was also significantly lower from Year 7 to Year 9 in Numeracy, though not as low as [another jurisdiction].

Consistent with the school-level data, the results show on mean achievement scores that students in the ACT are doing less well than equivalent students in the control jurisdiction, significantly so, trailing by almost 15 points at Year 5 in Numeracy, and 6 points at Year 9 in Numeracy.

- 2.40 A 2016 report commissioned by the Education Directorate from the Centre for International Research on Education Systems at Victoria University closely examined ACT public schools' educational performance, as measured by NAPLAN, with reference to socio-educational advantages. The *Government school performance in the ACT* report sought to compare ACT public schools with other state and territory schools, focusing on other state and territory 'government city schools' and removing other state and territory selective schools from comparison. The report found 'after taking account of intake and context differences, ACT government schools on average achieve negative results on every measure'. The Education Directorate advised that this analysis shows that ACT public schools have a comparatively less mean gain than other jurisdictions.
- 2.41 The report also identified that 'ACT schools have higher ICSEA values as a group' and that 'this equates to higher mean scores for NAPLAN compared to schools in other states and territories where the tails of performance reduce raw mean scores'. Accordingly 'the effect is to conceal the real levels of performance in the ACT which is lower than expected (predicted) based on the student population and weaker than schools serving similar populations in other states'.

Education Directorate responses to NAPLAN data

- 2.42 The Education Directorate advised that there are a number of new initiatives underway that seek to strengthen leadership and teaching and support for students in relation to literacy and numeracy. The Education Directorate advised:

The Education Directorate's Strategic Plan 2014-17 commits to comprehensive literacy and numeracy support for ACT public school students, and further strengthening of leadership and teaching in literacy and numeracy.

- 2.43 The Education Directorate identified two key initiatives as follows:

- Principals as Numeracy Leaders (PANL) Program; and
- the Writing Project.

Principals as Numeracy Leaders (PANL) Program

- 2.44 The Education Directorate advised:

In 2017, the Directorate is implementing its focus on numeracy through the Principals as Numeracy Leaders (PANL) program. PANL, developed by the Association of

Independent Schools of Western Australia (AISWA), is an approach for systemic capacity-building designed to improve ACT public school student achievement in numeracy in the primary years.

PANL will provide ACT public school principals and numeracy leaders with the knowledge and understanding of both effective leadership for learning and the content knowledge required to focus such leadership on numeracy. The aims of PANL include:

- Lifting whole-school performance in numeracy in all schools
- Enhancing school leaders' efficacy in instructional leadership and knowledge of essential numeracy content
- Supporting the design of whole-school planning for numeracy intervention and improvement, based on quality evidence gathering and analysis
- Assisting principals and school leaders to develop knowledge and skills to improve teaching and learning in numeracy.

The Writing Project

2.45 In relation to The Writing Project, the Education Directorate advised:

Through analysis of NAPLAN data, writing has been identified as an area for systemic improvement for ACT public schools. To address this need, the Directorate's Writing Project will be delivered across the four Networks in 2016 and 2017.

2.46 The Education Directorate further advised:

The Writing Project is designed to develop the capabilities of ACT public school principals as effective literacy leaders with a focus on writing. The project is focussed around the need to develop both capabilities in literacy teaching and leadership. The objectives of the Writing Project are to develop the capabilities of principals:

- To examine school and system data for the purpose of evaluating performance and developing plans and strategies for improvement and sustainability of high levels of literacy achievement with the focus on writing
- To lead the design and implementation of literacy improvement in their schools
- To build a professional learning community amongst the Networks for improving literacy in their schools
- To contribute to the literacy development from a system perspective.

2.47 In relation to these two initiatives, the Education Directorate advised:

Both PANL and the Writing Project align with the Directorate Operational Priorities, ACT School Leadership Strategy and the School Improvement Core Principles. In particular, every principal is the instructional leader in his or her school, every student will be taught by highly effective teachers, improving teacher capacity is the most effective way to improve student performance and there is strength in collaboration; as a team we will take responsibility for each other's work.

3 GOVERNANCE ARRANGEMENTS FOR STUDENT PERFORMANCE INFORMATION

- 3.1 This chapter considers the arrangements that the Education Directorate has put in place to govern the use of performance information in ACT public schools. This includes policy and principles established by the Directorate for the conduct of student performance assessment, the provision of guidance to schools for the conduct of student performance assessment and monitoring by the Education Support Office of the use of student performance information in schools.

Summary

Conclusions

The Education Directorate has established sound governance arrangements for the assessment of student performance and the use of student performance information to inform students' teaching and learning and school improvement.

The Education Directorate has embraced the National School Improvement Tool (NSIT) as a mechanism for driving school improvement and has reflected this in key policy documents. Key policy documents discuss the importance of evidence-based practice and an evaluative culture that includes an explicit improvement and analysis and discussion of performance information. All schools are subject to five-yearly strategic external reviews, whereby the schools' performance against the principles of the National School Improvement Tool is assessed. Schools' use of performance information is considered as part of these reviews, as is the schools' use of performance information to drive differentiated teaching and learning (i.e. tailored instruction) to students.

The Education Directorate has established strategic indicators based on mean NAPLAN scale scores and compares these with the Australian average. Most schools considered as part of the audit have developed performance measures and associated indicators based on growth in NAPLAN scores and report on these as part of their annual reporting process. This represents an attempt to better measure the performance of schools.

Key findings

Paragraph

The *Education Act 2004* identifies school principals as having responsibility for 'educational outcomes for students at the school'. The responsibility of school principals is exercised within the overarching guidance and responsibility of the Director-General of the Education Directorate and the support provided by the

3.8

Education Directorate's Education Support Office.

Principals are responsible for developing and implementing school strategies and programs to improve school performance and in so doing implement Directorate policies. The Education Support Office is responsible for overseeing 'Directorate policy management' and assisting with 'school policy management'. Although these shared responsibilities and accountabilities are articulated, there is flexibility in how they are practically implemented.

3.9

The Education Directorate's People, Practice and Performance Framework provides further guidance to Education Directorate staff on the roles and responsibilities of the Education Support Office, Directors, School Improvement, school principals (and other leaders) and teachers with respect to system improvement. With respect to the use of student performance information, the People, Practice and Performance Framework identifies that the Education Support Office has a clear responsibility to 'provide consistent data sets to schools', demonstrating a commitment to support schools' use and analysis of performance information.

3.15

The Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* identifies a range of overarching objectives and supporting priorities and key strategies. Two key overarching objectives are to 'increase the number of high performing students' and 'reduce the number of students who are not achieving'. Each of these objectives is supported by two performance indicators, but there is no guidance on how the indicators are to be measured nor are there quantitative targets associated with the indicators.

3.29

In support of the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation*, the Directorate has prepared the *Education Capital 2017* Action Plan. This plan identifies the importance of performance information for strategic management purposes and identifies a key activity with respect to Business Innovation and Improvement is to 'improve provision and strategic use of data to inform school performance' and 'implement new School Administration System'. This demonstrates the Education Directorate's intention to improving the provision of information to improve student outcomes.

3.32

The Education Directorate has identified a range of Strategic Objectives and associated Strategic Indicators (including quantitative targets) as part of the 2016-17 annual Budget process. Strategic Indicators (and associated quantitative targets) of relevance to student performance are based on mean NAPLAN scale scores. These scores do not present a full picture of the quality and effectiveness of educational support and teaching provided by the Education Directorate, nor do they facilitate an assessment of the Education Directorate's performance. Such scores do not recognise the value of developing measures associated with student

3.43

progress, which provide more relevant information on the effectiveness of each school's activities in teaching the students.

Schools' Strategic Plans and Annual Action Plans reviewed by the Audit Office varied considerably in quality and detail. Some schools' Strategic Plans were very brief, consisting of one page with little or no explanation or supporting statements for the performance objectives or associated measures, while other schools' Strategic Plans were more comprehensive and articulated a range of objectives and associated performance measures. This shows that there is considerable variability in practice with respect to accountability mechanisms and oversight of school performance.

3.50

Schools' Strategic Plans varied considerably in their recognition and articulation of objectives and strategies in relation to student performance information and its use. Ten of the 16 schools' Strategic Plans articulated clear objectives or strategies for the use of performance information through their Strategic Plans, although the quality and extent to which this was done varied considerably in the Strategic Plans. This demonstrates considerable variability in schools' recognition of student performance information for the purpose of setting school objectives and strategies. The Education Directorate has advised that it has recognised this variability and that it has conducted National School Improvement Tool training master classes in strategic planning and reviews have been completed on 17 schools in 2016 and are planned to be completed for 20 schools in 2017.

3.55

Schools' Annual Action Plans varied considerably in their recognition and articulation of objectives and strategies in relation to student performance information and its use. Of the total of 59 performance measures in relation to academic achievement identified across the 16 Annual Action Plans of the schools considered as part of the audit, 35 (59 per cent) were expressed as measures of growth in NAPLAN scale scores. The inclusion of performance measures based on growth in NAPLAN scale scores reflects an attempt by schools to better monitor students' progress and is in contrast to the Education Directorate's overarching Strategic Indicators, which are based on mean NAPLAN scale scores.

3.60

The Education Directorate's People, Practice and Performance Framework was released in April 2016. It provides sound principles for the management and use of student performance information for school improvement. It identifies the importance of different data sets to assist schools to use evidence to support school improvement and the need for systems to collect and analyse school level data. The People, Practice and Performance framework also identifies the need to provide 'accurate, accessible and consistent information about students' achievement at school to their parents/carers'.

3.67

The Education Directorate's *Great Teaching by Design*, released in 2016, identifies the importance of evidence-based practice and an evaluative culture that includes an explicit improvement agenda and analysis and discussion of data. It describes better practices in areas such as responding to individual needs, use of explicit teaching approaches, embedding formative assessment, providing students with quality feedback, setting high expectations for student achievement and engaging students, but does not provide explicit guidance for embedding these key principles. The Education Directorate has advised that explicit guidance will be provided through ongoing school improvement activities.

3.73

The Education Directorate's *Great Teachers by Design*, released in 2016, identifies 'the importance of systematically collecting and analysing student outcome data to support instructional improvement in each school, differentiation in classrooms and improved student achievement'. It also identifies the importance of using 'multiple sources of evidence to profile students' learning, including information derived from system assessments, standardised tests, classroom-based rich assessment asks, individualised assessments, student self-assessments and attendance and behaviour data'. *Great Teachers by Design* does not articulate prescriptive statements, but provides better practice in areas such as collaboration, use of data and evidence, engagement in professional learning, engagement in research and seeking and responding to feedback and engagement of parents.

3.80

Twenty-four percent of school Principals agreed with the statement 'the Directorate's guidance and training to schools about using assessment data to drive improvement is sufficient', while 52 percent disagreed or strongly disagreed. However, forty-four percent of school Principals agreed or strongly agreed with the statement 'guidance and support from the Directorate to help my school analyse student assessment data has been useful', while 30 percent disagreed or strongly disagreed. Strong and consistent feedback was received from school Principals that they would appreciate further professional learning or training in these areas. The Education Directorate has advised that it has developed a baseline assessment of need and that it intends to shortly release a Request for Quotation to the market for the delivery of professional learning services from August 2017.

3.90

School Principals have advised that they would appreciate further guidance and assistance from the Education Support Office with respect to the use and analysis of student performance information. School Principals have also advised that they do not have good access to assistance in data analysis and interpretation when required. While further guidance and support from the Education Support Office may assist School Principals, it may be that a more fundamental examination of the use and analysis of performance information is warranted, including whether some of this is better undertaken centrally by the Education Support Office which may be able to secure the services of specialists when needed.

3.94

The Education Directorate has implemented a rolling program of reviews, whereby every ACT public school is reviewed by an external panel every five years. The rolling program of review provides a comprehensive and rigorous assessment of schools' performance in a number of areas, including schools' 'analysis and discussion of data' and its input into 'differentiated teaching and learning'. 3.103

School autonomy and accountability

3.2 A key issue for consideration for this audit is the respective roles and responsibilities of the Education Directorate and schools' principals for the management and use of performance information that affects student educational outcomes. This encompasses a balance between:

- the autonomy (and accountability) of schools' principals for the delivery of services relevant to, and achievement of, student educational achievements; and
- the responsibility (and accountability) of the Education Directorate, through its Education Support Office, for the delivery of services relevant to, and achievement of, student educational outcomes. This relates primarily to its capacity to direct and influence the management and administration of schools.

School autonomy

3.3 Subsection 21(1) of the *Education Act 2004* provides that the Director-General is responsible to the Minister for the operation of government schools and subsection 30(1) of the Act provides that the Director-General must decide the curriculum requirements for students attending government schools.

3.4 However, section 21 of the *Education Act 2004* provides each school Principal with autonomy and responsibility for the management of the school and the achievement of educational outcomes for the students. In this respect, subsection 21(4) of the *Education Act 2004* provides that:

The Principal of a government school is responsible for:

- (a) educational leadership and management of the school; and
- (b) educational outcomes for students at the school; and
- (c) providing support to the School Board in the carrying out of its functions; and
- (d) contributing to the development and implementation of educational policies and strategies.

- 3.5 In support of the autonomy and responsibility of each ACT public school, section 38 of the *Education Act 2004* provides for the establishment of a School Board for each school. Section 39 of the Act provides:

The functions of the school board of a government school are:

- (a) to establish strategic direction and priorities for the school; and
- (b) to monitor and review school performance and to report on it to the director-general, parents of students at the school and staff; and
- (c) to develop, maintain and review curriculum for the school; and
- (d) to develop and review education policies at the school; and
- (e) to establish budgetary policies for the school and approve the school budget; and
- (f) to establish policies for the efficient and effective use of school assets and the management of financial risk; and
- (g) to develop relationships between the school and the community and between the school and community organisations; and
- (h) to make recommendations to the director-general on issues affecting the school; and
- (i) to encourage parent participation in their children's learning; and
- (j) to exercise any other function given to the board under this Act or any other Territory law.

School Board Manual

- 3.6 Some guidance on the practical implications of school autonomy may be inferred through the Education Directorate's *School Board Manual*. The School Board Manual provides that 'the school board works in partnership with the school principal and the Directorate in order to achieve the strategic objectives of the school'. The School Board Manual provides guidance on the roles and responsibilities of the Board, the Principal and the Directorate in the fields of educational planning, financial management, school performance, curriculum and school policy.
- 3.7 Table 3-1 shows the School Board Manual's guidance with respect to the respective roles of the School Board, Principal and Directorate for school performance and school policy.

Table 3-1 School Board Manual roles and responsibilities for school performance and policy

	School performance	School policy
School Board	Monitor student performance through school-decided and broader testing activities (e.g. NAPLAN).	Develop, approve, monitor and review school based education and financial policies.
Principal	Develop and implement school strategies and programs to improve school performance.	Implement Directorate policies. Develop and implement school policies.
Directorate	Oversee and assist the improvement of school performance.	Oversee Directorate policy management and assist with school policy management.

Source: ACT Audit Office, based on Education Directorate School Board Manual

- 3.8 The *Education Act 2004* identifies school principals as having responsibility for 'educational outcomes for students at the school'. The responsibility of school principals is exercised within the overarching guidance and responsibility of the Director-General of the Education Directorate and the support provided by the Education Directorate's Education Support Office.
- 3.9 Principals are responsible for developing and implementing school strategies and programs to improve school performance and in so doing implement Directorate policies. The Education Support Office is responsible for overseeing 'Directorate policy management' and assisting with 'school policy management'. Although these shared responsibilities and accountabilities are articulated, there is flexibility in how they are practically implemented.

People, Practice and Performance Framework

- 3.10 Further guidance on roles and responsibilities for the management and use of performance information may be inferred from the Education Directorate's *People, Practice and Performance: School Improvement in Canberra Public Schools - A Framework for Performance and Accountability* (the People, Practice and Performance Framework).
- 3.11 The People, Practice and Performance Framework 'presents the processes and mechanisms to identify how well the ACT's public education system and individual schools are ensuring every child has the best opportunities'. The People, Practice and Performance Framework:
- ... applies to every Canberra public school. A key element of the Framework is to be able to implement intentional strategies to support schools to further improve, and importantly, the ability to capture best practice and innovation to share and scale across our system of schools.

3.12 The People, Practice and Performance Framework highlights the importance of achieving an evidence base for the purpose of achieving school improvement:

At the heart of the Directorate's school improvement agenda is a collective responsibility to work together in providing evidence our education system is achieving high standards of educational outcomes for all of our students. We will be collecting evidence that our schools are managed effectively.

Everyone involved in our schools has a clear responsibility for school improvement. We have an important role to play in improving the systems and processes for which we are responsible.

3.13 The People, Practice and Performance Framework also identifies 'responsibility and accountability in system improvement', focusing on the role of teachers, school leaders (Principals), Directors, School Improvement and the Education Support Office. This is shown in Table 3-2.

Table 3-2 Responsibilities and accountabilities in system improvement (People, Practice and Performance Framework)

Roles	Responsibilities
Teachers	<ul style="list-style-type: none"> Deliver high quality teaching that achieves the priorities and actions within school plans. Participate in teacher performance, assessment and development processes incorporating actions that contribute to the achievement of school priorities. Collaborate with peers to develop and shape pedagogical practices that raise student outcomes. Engage parents/carers as partners to advance student performance. Comply with legislative and Directorate policies and procedures.
Leaders	<ul style="list-style-type: none"> Provide transformational and inspirational leadership. Provide instructional leadership emphasising the importance of clear educational goals, planning the delivery of curriculum, and evaluating teachers and teaching. Collaboratively develop, implement and monitor school improvement plans with their school community. Effectively manage the human and financial resources of the school. Involve school community to achieve school improvement priorities. Comply with legislative and Directorate policies and procedures.
Directors, School Improvement	<ul style="list-style-type: none"> Lead, manage and support schools in the design and delivery of school improvement strategies. Develop a collective sense of efficacy within and between networks to support innovation and excellence. Manage performance and development of principals. Provide differentiated support to schools and monitor improvement progress. Facilitate communication between schools and Education Support Office.
Education	<ul style="list-style-type: none"> Set system strategies for improvement.

Roles	Responsibilities
Support Office	<ul style="list-style-type: none"> • Provide support and accountability mechanisms to achieve system goals. • Provide consistent data sets to schools. • Build skills and leadership capacity at all system levels. • Comply with legislative requirements. • Regularly evaluate and review Directorate policies and procedures.

Source: ACT Audit Office, adapted from Education Directorate's People, Practice and Performance Framework

3.14 The Education Directorate has also advised that the Education Support Office is also responsible for 'the conduct of whole of system analysis for key decision makers' although this was not explicitly identified in the People, Practice and Performance Framework.

3.15 The Education Directorate's People, Practice and Performance Framework provides further guidance to Education Directorate staff on the roles and responsibilities of the Education Support Office, Directors, School Improvement, school principals (and other leaders) and teachers with respect to system improvement. With respect to the use of student performance information, the People, Practice and Performance Framework identifies that the Education Support Office has a clear responsibility to 'provide consistent data sets to schools', demonstrating a commitment to support schools' use and analysis of performance information.

Education Support Office branches and business units

3.16 A number of Education Support Office branches have responsibility for aspects of school and student performance information including the:

- Office for Schools;
- School Review Branch;
- Student Engagement Branch;
- Planning and Analytics Branch; and
- Learning and Teaching Branch.

3.17 All of these branches, with the exception of the Planning and Analytics Branch, are located within the School Performance and Improvement Division of the Education Directorate. The Planning and Analytics Branch is part of the System Policy and Reform Division. The Planning and Analytics Branch has a key role in supporting the Education Directorate's use of student performance information for school improvement.

Planning and Analytics Branch

3.18 The Planning and Analytics Branch has a number of key responsibilities, including:

- planning - the Branch is responsible for enrolment planning and forecasting, geospatial representations, and for the consequential advice necessary to allow

future demand for enrolments to be matched with the school capacity to meet those enrolments; and

- analytics - the Branch collects, manages, and reports on and disseminates essential data related to the management of schools, including data related to student educational outcomes.

3.19 In order to meet its planning and analytical responsibilities, the Branch is responsible for a number of data collections. These collections include PIPS, enrolment data in relation to student and parent backgrounds, the school census, school satisfaction surveys, school climate surveys, post-school destination surveys, and the OECD Teaching and Learning International Survey (TALIS) for teachers and principals.

3.20 The Branch is also responsible for analysing, advising, reporting on, and disseminating school performance data to key stakeholders ranging from the Minister for Education to Education Directorate Executives, including those responsible for school improvement, and to school principals and to schools. Following an organisational restructure of the Directorate, the Branch is establishing an evaluation capability.

Directors, School Improvement

3.21 As of February 2017 there are five Directors, School Improvement. Four Directors, School Improvement (previously known as School Network Leaders) are responsible for overseeing the four geographic networks. The fifth Director, School Improvement has a focus on achieving school improvement through working across networks and providing targeted support to schools in conjunction with the other Directors, School Improvement.

3.22 The Education Directorate's People, Practice and Performance Framework states that Directors, School Improvement (known at the time of publication as School Network Leaders) are responsible for:

... leading, managing and supporting schools in the design and delivery of school improvement programs and initiatives, in alignment with the Directorate's Strategic Plan and Annual Action Plan.

... the supervision and development of principals; they are accountable for overseeing the performance and results of schools, including an annual review of the school's strategic priorities and targets in the School Strategic Plan.

Planning

3.23 Planning for the management and use of performance information relevant to student educational achievements is achieved through:

- the Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation*;
- the Directorate's Annual Action Plan, *Education Capital: Leading the Nation*; and
- schools' strategic and annual plans.

Education Directorate Strategic Plan

- 3.24 The Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* identifies an 'ambitious agenda' to:
- increase the number of high performing students;
 - reduce the number of students who are not achieving;
 - increase the number of children who benefit from early childhood education and care; and
 - increase qualification levels of the ACT community.
- 3.25 In support of these overarching objectives, the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* sets out five priorities for the Education Directorate:
- quality learning;
 - inspirational teaching and leadership;
 - high expectations, high performance;
 - connecting families and the community; and
 - business innovation and improvement.
- 3.26 Three or four key strategies are identified for each priority. For the purpose of this audit, the following strategies are identified as relevant (listed against the relevant priority):
- quality learning;
 - deliver world class curriculum, assessment and reporting;
 - improve learning outcomes in literacy, numeracy and science;
 - high expectations, high performance; and
 - close the achievement gap for Aboriginal and Torres Strait Islander students.
 - business innovation and improvement.
 - increase accountability and transparency for school performance ;
 - ensure high quality data is available to monitor and drive improvement;
- 3.27 In support of the four overarching objectives, the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* also identified a total of 13 performance indicators. Two objectives and four performance indicators are considered relevant for the purpose of this audit:
- Increase the number of high performing students; and
 - Increase the proportion of students in the top performance bands for reading, mathematics and science
 - Increase the performance of all students in reading, mathematics and science
 - Reduce the number of students who are not achieving

- Reduce the proportion of students performing at or below the national minimum standard for reading and numeracy
- Halve the gap for Aboriginal and Torres Strait Islander students in reading and numeracy

3.28 The Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* does not provide any further information or guidance with respect to the performance indicators, including:

- how they are to be measured, including what measures and reference points are to be used; or
- the quantitative targets to be associated with the indicators.

3.29 The Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* identifies a range of overarching objectives and supporting priorities and key strategies. Two key overarching objectives are to 'increase the number of high performing students' and 'reduce the number of students who are not achieving'. Each of these objectives is supported by two performance indicators, but there is no guidance on how the indicators are to be measured nor are there quantitative targets associated with the indicators.

RECOMMENDATION 1	STRATEGIC PLAN PERFORMANCE OBJECTIVES AND INDICATORS
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<p>The Education Directorate should provide guidance on how performance indicators in its Strategic Planning cycle 2018-2020 are to be measured as well as associated quantitative targets associated with the indicators.</p>

Education Directorate annual Action Plan

3.30 Supporting the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* is an annual Action Plan, the most recent of which is *Education Capital 2017*. The *Education Capital 2017* Action Plan identifies several activities under each Strategic Plan priority (refer to paragraph 3.26). Under the Business Innovation and Improvement priority a key activity is 'Improve provision and strategic use of data to inform school performance', and 'implement new School Administration System'.

3.31 The *Education Capital 2017* Action Plan also reiterates the overarching objectives and performance indicators identified in the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* (refer to paragraph 3.28). However, it is noted that the performance indicator 'halve the gap for Aboriginal and Torres Strait Islander students in reading and numeracy' has been amended to 'improve reading and numeracy skills of Aboriginal and Torres Strait Islander students'.

- 3.32 In support of the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation*, the Directorate has prepared the *Education Capital 2017* Action Plan. This plan identifies the importance of performance information for strategic management purposes and identifies a key activity with respect to Business Innovation and Improvement is to 'improve provision and strategic use of data to inform school performance' and 'implement new School Administration System'. This demonstrates the Education Directorate's intention to improving the provision of information to improve student outcomes.

Budget strategic objectives and indicators

- 3.33 For the purpose of the 2016-17 Budget process the Education Directorate has identified a range of Strategic Objectives and associated Strategic Indicators. Strategic Objective 1 Quality Learning is described as:

The Government has the objective of ensuring students succeed through quality learning that engages them and supports the development of capabilities for life. The Strategic Indicators for this objective are drawn from the National Assessment Program - Literacy and Numeracy.

- 3.34 In support of the Strategic Objective, the following eight Strategic Indicators were identified for 2016-17:

- Mean NAPLAN achievement score for reading of all year 5 public school students – 517;
- Mean NAPLAN achievement score for numeracy of all year public school students – 503;
- Mean NAPLAN achievement score for reading of all year 9 public school students – 598;
- Mean NAPLAN achievement score for numeracy for all year 9 public school students – 595;
- Mean NAPLAN achievement score for reading of Aboriginal and Torres Strait Islander year 5 public school students – 451;
- Mean NAPLAN achievement score for numeracy of Aboriginal and Torres Strait Islander year 5 public school students – 444;
- Mean NAPLAN achievement score for reading of Aboriginal and Torres Strait Islander year 9 public school students – 556; and
- Mean NAPLAN achievement score for numeracy of Aboriginal and Torres Strait Islander year 9 public school students – 552.

- 3.35 Annual NAPLAN-related targets set by the Education Directorate as part of the Budget process are based on mean NAPLAN scale scores.

- 3.36 While some reference to, and use of absolute mean NAPLAN scale scores is helpful for the purpose of reporting performance on the achievement of students' educational outcomes, this does not contribute to a full picture of the quality and effectiveness of educational support and teaching. In an attempt to address this, some ACT public schools have started to report performance with respect to NAPLAN gain scores, i.e. the difference in NAPLAN scores between two points in time. Such an approach seeks to provide more relevant and useful information on the effectiveness of the school's activities in teaching the students. This is discussed in paragraphs 3.56 to 3.60. It is also noted, however, that the Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016), has identified shortcomings in this approach and has identified an alternative approach to the use of NAPLAN gain scores.

Grattan Institute report

- 3.37 The Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016) has highlighted limitations with current uses of NAPLAN performance measures as well as opportunities for improvement. In doing so, however, the report highlights the continuing importance of measuring students' progress in relation to NAPLAN:

The best way to improve achievement is to focus on individual learning progress. Understanding student learning growth, not just achievement, is important. Student progress measures tell us how much students improve from one year to the next. Students who fall behind will never start to close the gap unless their rate of learning accelerates.

When policymakers can track student progress they can see which groups of students are thriving and which are struggling.

...

Measuring student progress is important as it enables policymakers to see how students are progressing across the system. This data should influence how priorities are set and, where resources are allocated. Those who are making the least progress, or those who are failing to reach their potential, should be the focus of our policy efforts.

- 3.38 The Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016) states:

Because growth is not linear in NAPLAN scores, gain scores cannot be directly used to compare the relative learning progress of different groups of students. This is true especially of student groups who are at different points of the growth curve.

Several mechanisms have been developed to avoid this limitation. For example, *My School* allows comparisons of school-level gain scores for students with the same starting scores, as well as comparisons to schools with similar students. The Victorian Curriculum and Assessment Authority (VCAA) created a relative growth measure that restricts gain score comparisons to students with the same starting scores.

- 3.39 The Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016) proposes the use of two new NAPLAN measures. With respect to student achievement, the report notes the current use of the *NAPLAN scale score* as a widespread indicator of NAPLAN achievement (i.e. the NAPLAN score a student receives on any given test), but proposes the use of a new measure *equivalent year level*, which is ‘the year level at which a typical student would be expected to achieve a given scale score’.
- 3.40 With respect to student progress, the report notes the use of the *NAPLAN gain score*, which is the difference in NAPLAN scores between two points in time, but proposes a new measure *years of progress*, which is ‘the difference in years and months between equivalent year levels across two points in time’. The years of progress measure benchmarks student performance in NAPLAN to typical students and ‘allows us to see if students are catching up or falling behind relative to others’.
- 3.41 The report also highlights that this new approach does not criticise NAPLAN or the NAPLAN scale, but seeks to improve its effectiveness as a means of measuring students’ progress:

Our proposed new measures should not be taken to imply that the NAPLAN scale is wrong or should be changed - indeed, our approach would not be possible without it. NAPLAN scale scores have been developed using the Rasch model, an advanced psychometric model for estimating a student’s skill level. Our measure simply builds on the existing scale to make it easier to analyse relative student progress.

Government school performance in the ACT report

- 3.42 It is also noted that the *Government school performance in the ACT* report commissioned by the Education Directorate identified other jurisdictions’ practices of identifying aspirational targets relating to the proportion of students in the top NAPLAN bands as a measure of NAPLAN performance:

The proportion of students in the top two bands of NAPLAN is being used in at least one state (Victoria) as an aspirational measure of school performance and quality. The use of such a threshold has certain advantages in school performance measurement, by enabling schools and students to be compared to a clearly defined benchmark, rather than making relative comparisons which may shift over time.

- 3.43 The Education Directorate has identified a range of Strategic Objectives and associated Strategic Indicators (including quantitative targets) as part of the 2016-17 annual Budget process. Strategic Indicators (and associated quantitative targets) of relevance to student performance are based on mean NAPLAN scale scores. These scores do not present a full picture of the quality and effectiveness of educational support and teaching provided by the Education Directorate, nor do they facilitate an assessment of the Education Directorate’s performance. Such scores do not recognise the value of developing measures associated with student progress, which provide more relevant information on the effectiveness of each school’s activities in teaching the students.

RECOMMENDATION 2

EDUCATION DIRECTORATE NAPLAN INDICATORS

The Education Directorate should develop new Strategic Indicators which are based on measuring student progress over time.

School Strategic Plans and Annual Action Plans

- 3.44 The People, Practice and Performance Framework identifies a number of key planning and reporting mechanisms that are relevant to schools. Through these mechanisms schools' performance, including their management and use of performance information, are planned for, reviewed and evaluated.
- 3.45 The People, Practice and Performance Framework requires each ACT public school to develop:
- a five-year school Strategic Plan to establish the strategic direction and priorities for the school; and
 - an annual Action Plan consistent with the Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation*.
- 3.46 Each school's Strategic and Annual Action Plan is required to be endorsed by the Chair of the School Board, the Principal and the relevant Director, School Improvement. The annual Action Plan is reported against in the school's Annual Report, which is endorsed by the Chair of the School Board and the Principal.

School Strategic Plans

- 3.47 According to the People, Practice and Performance Framework:
- The [School Strategic Plan] shows alignment with the Directorate's Strategic Plan, and has clear and relevant improvement targets for its local context.
- The plan will be readily available to the school and broader community including through the school's website. School Strategic Plans will be seen as live documents to be reviewed and amended as required.

School Annual Action Plans

- 3.48 According to the People, Practice and Performance Framework:
- The school's Annual Action Plan is the day to day guide for schools to map processes, resources and time required to deliver on the commitment in the School Strategic Plan. The Annual Action Plan will be developed taking into account the views of parents and students as appropriate. The school's Annual Action Plan will reflect the Director-General's Letter of Expectation to principals, and align efforts with both the Directorate's Strategic Plan and Annual Action Plan.

3.49 The Audit Office reviewed the Strategic Plans and Annual Action Plans for the 16 schools examined as part of the audit for:

- objectives and strategies in relation to use of student performance information; and
- performance measures in relation to academic achievement, including measures of growth in student learning.

3.50 Schools' Strategic Plans and Annual Action Plans reviewed by the Audit Office varied considerably in quality and detail. Some schools' Strategic Plans were very brief, consisting of one page with little or no explanation or supporting statements for the performance objectives or associated measures, while other schools' Strategic Plans were more comprehensive and articulated a range of objectives and associated performance measures. This shows that there is considerable variability in practice with respect to accountability mechanisms and oversight of school performance.

Objectives and strategies in relation to student performance information

3.51 Schools' Strategic Plans varied considerably with respect to their recognition and articulation of objectives and strategies in relation to student performance information.

3.52 Ten of the 16 schools' Strategic Plans articulated clear objectives or strategies for the use of performance information through their Strategic Plans. In some schools this was done briefly and with limited effectiveness. For example, in relation to a strategic priority to 'deliver an innovative education which meets the needs of our community' one school identified a desired outcome as follows 'formative assessment data is routinely and systematically collected, analysed and communicated between colleagues and to students and parents'. There was no further information on what this entailed or how this was to be achieved, although it was supported by a range of associated performance measures (albeit without specific quantitative targets).

3.53 In contrast, another primary school had effectively integrated the analysis and use of student performance information throughout its Strategic Plan. It identified 'improve student outcomes in literacy and numeracy by embedding an explicit learning agenda driven by data analysis' as one of its three priorities, which was supported in the Strategic Plan by a clear articulation of the intended outcomes as well as specific targets, key improvement strategies and key performance indicators. Targets identified in the Strategic Plan included targets based on growth in NAPLAN results over time. Another primary school similarly articulated a strong focus on the use of student performance information in its Strategic Plan. In support of its strategic priority 'improve student learning' the school:

Establish a culture of data storage, assessment schedule and collection, analysis and use of analysed data to monitor and guide decision making.

- 3.54 The Education Directorate has advised that it has recognised the variability in schools' strategic plans and that it has conducted National School Improvement Tool training master classes in strategic planning and reviews have been completed on 17 schools in 2016 and are planned to be completed for 20 schools in 2017.
- 3.55 Schools' Strategic Plans varied considerably in their recognition and articulation of objectives and strategies in relation to student performance information and its use. Ten of the 16 schools' Strategic Plans articulated clear objectives or strategies for the use of performance information through their Strategic Plans, although the quality and extent to which this was done varied considerably in the Strategic Plans. This demonstrates considerable variability in schools' recognition of student performance information for the purpose of setting school objectives and strategies. The Education Directorate has advised that it has recognised this variability and that it has conducted National School Improvement Tool training master classes in strategic planning and reviews have been completed on 17 schools in 2016 and are planned to be completed for 20 schools in 2017.

Performance measures in relation to academic achievement

- 3.56 The Education Directorate's Strategic Plan 2014-2017, *Education Capital: Leading the Nation* has overarching objectives to 'increase the number of high performing students' and 'reduce the number of students who are not achieving'. In the selection of schools examined for the purpose of this audit, these overarching objectives were expressed in different ways. For example, performance measures for Strategic Plans selected from various schools visited included:
- percentage of students performing in the top two bands of NAPLAN in Reading, Writing and Numeracy;
 - the proportion of Year 5 within school matched students achieving expected growth in NAPLAN reading, writing, spelling, grammar, punctuation and numeracy;
 - increase number of students at or above year level standard; and
 - proportion of children who achieve expected growth in literacy and numeracy components of PIPS assessment.
- 3.57 The Annual Action Plans, as for the school Strategic Plans, vary considerably between schools. They have different priorities, targets, outcomes to be achieved and improvement strategies; the priorities are those established by the school Strategic Plan. Examples of Annual Action Plan targets are:
- proportion of students achieving growth in the five NAPLAN domains to be 80%;
 - Year 3 Reading NAPLAN score to be 460 (+ or – 28); and
 - achieve Year 7 to Year 9 expected growth + or – 5.
- 3.58 For the selection of schools examined for the purpose of this audit, in all instances the performance measures for their strategic priorities included an element of academic results such as NAPLAN scores. However, the actual number of specific performance

measures in relation to academic achievement varied from one to seven. This variability likely reflects differences in the emphasis of Principals.

- 3.59 All but one of the schools' Strategic Plans included at least one performance measure in relation to growth in student learning and, of the total of 59 performance measures in relation to academic achievement, 35 (59 per cent) were expressed as measures of growth in NAPLAN scale scores. The inclusion of performance measures based on growth in NAPLAN scale scores reflects an attempt by schools to monitor students' progress. However, it is noted that the Grattan Institute report *Widening gaps: What NAPLAN tells us about student progress* (March 2016) has proposed a new performance measure *years of progress*, which is 'the difference in years and months between equivalent year levels across two points in time', which would replace the use of the *NAPLAN gain score*, which is the difference in NAPLAN scores between two points in time.
- 3.60 Schools' Annual Action Plans varied considerably in their recognition and articulation of objectives and strategies in relation to student performance information and its use. Of the total of 59 performance measures in relation to academic achievement identified across the 16 Annual Action Plans of the schools considered as part of the audit, 35 (59 per cent) were expressed as measures of growth in NAPLAN scale scores. The inclusion of performance measures based on growth in NAPLAN scale scores reflects an attempt by schools to better monitor students' progress and is in contrast to the Education Directorate's overarching Strategic Indicators, which are based on mean NAPLAN scale scores.

RECOMMENDATION 3 SCHOOL STRATEGIC PLANS AND ANNUAL ACTION PLANS

The Education Directorate should improve the quality and comprehensiveness of schools' Strategic Plans and Annual Action Plans by requiring:

- a) explicit objectives and strategies in relation to student performance information and its use in driving school improvement; and
- b) performance measures based on students' educational progress.

Guidance and support for student performance assessment

- 3.61 In April 2016, the Education Directorate released a package of three documents that together formed a framework for performance and accountability for schools. These documents are:
- *People Practice and Performance: School Improvement in Canberra Public Schools*;
 - *Great Teaching by Design*; and
 - *Great Teachers by Design*.

- 3.62 These documents collectively provide the framework for the management and use of student performance information, with a view to its use for school improvement.

People Practice and Performance Framework

- 3.63 The People, Practice and Performance Framework discusses the use of student performance information in the context of school improvement:

The [People, Practice and Performance Framework] has school improvement at its centre, with the National School Improvement Tool (NSIT) its core feature...

The NSIT provides an evidence-based framework against which schools self-evaluate to identify areas of strength and opportunities for improvement. It encompasses nine interrelated domains that research concludes impact on student outcomes.

- 3.64 The People, Practice and Performance Framework provides for the development of different data sets and systems to give schools information and data on which to achieve school improvement:

A variety of different data sets have been identified to assist schools to use evidence to support self-evaluations. The School Data Tool provides schools with a number of different data sets and will be added to over time. The school will also have systems in place to collect and analyse school level data.

- 3.65 Furthermore, the People, Practice and Performance Framework provides for the provision of student performance information to parents and carers:

It is essential that schools provide accurate, accessible and consistent information about students' achievement at school to their parents/carers. This will include information about their children's academic achievement, engagement with their learning, and personal and social development, using a common template.

- 3.66 The People, Practice and Performance Framework was launched by the Minister for Education on 1 April 2016 at the opening of the Education Directorate's biennial Leadership Summit, which is attended by school principals, deputy principals and executive teachers. The People, Practice and Performance Framework was also disseminated more broadly throughout the school network. The People, Practice and Performance Framework is regularly referenced by senior staff, in professional learning sessions to school leaders concerning school reviews and at information sessions with school principals.

- 3.67 The Education Directorate's People, Practice and Performance Framework was released in April 2016. It provides sound principles for the management and use of student performance information for school improvement. It identifies the importance of different data sets to assist schools to use evidence to support school improvement and the need for systems to collect and analyse school level data. The People, Practice and Performance framework also identifies the need to provide 'accurate, accessible and consistent information about students' achievement at school to their parents/carers'.

Great Teaching by Design

- 3.68 The Education Directorate's *Great Teaching by Design* 'outlines research-based strategies to enhance the quality and impact of teaching in our schools'. *Great Teaching by Design* states:

Aligned with the strategic plan, the Directorate's approach to school improvement and accountability will ensure a targeted, systematic and sustained change process to enable success for all students, in all settings. Our people, practice and performance are integral to this approach which will be realised through engagement with the School Improvement in Canberra public schools - A Framework for Performance and Accountability. The framework ensures we have the right processes and accountabilities in place in our schools, based on strong evidence. This work will build and strengthen a culture of self-evaluation, reflection and improvement.

- 3.69 *Great Teaching by Design* identified seven different principles, two of which are particularly relevant:

- respond to individual need; and
- embed formative assessment.

- 3.70 With respect to responding to individual children's needs, *Great Teaching by Design* states:

Some students require additional support and a range of scaffolded learning experiences and opportunities to help them learn effectively and develop the capacity for further learning.

Some of these students may need more individualised and intensive behavioural supports to engage in learning.

All students require a curriculum that is tailored to their specific intellectual and social and emotional learning needs. Curriculum differentiation is critical when designing learning programs to respond to the individual learning needs of students.

Success for all students relies on flexible delivery and curriculum adjustments, including content, processes and skills.

- 3.71 With respect to the embedding of formative assessment, *Great Teaching by Design* states:

Formative assessment is a process used before and during learning experiences, to continuously check for student understanding and progress. Formative assessment strategies also encourage students to reflect on and monitor their own learning processes through feedback and opportunities to improve and set future goals. In this way, formative assessment is *for* and *as* learning, and *for teaching*.

...

Formative assessment provides evidence to students and teachers about students learning. Explicit learning intentions and success criteria are integral to effective formative assessment practices.

3.72 *Great Teaching by Design* further states:

When teachers are provided with opportunities to use and interpret assessment data in order to become more responsive to their students' learning needs, the impact is substantive.

- 3.73 The Education Directorate's *Great Teaching by Design*, released in 2016, identifies the importance of evidence-based practice and an evaluative culture that includes an explicit improvement agenda and analysis and discussion of data. It describes better practices in areas such as responding to individual needs, use of explicit teaching approaches, embedding formative assessment, providing students with quality feedback, setting high expectations for student achievement and engaging students, but does not provide explicit guidance for embedding these key principles. The Education Directorate has advised that explicit guidance will be provided through ongoing school improvement activities.

Great Teachers by Design

- 3.74 The Education Directorate's *Great Teachers by Design* describes 'a systematic approach to ensuring highly effective teachers in Canberra public schools'. *Great Teachers by Design* states:

High performing students require extension, students who achieve in the mid-range need to be supported to perform at higher levels, and low-performing students require additional support to achieve quality outcomes. Students from less advantaged backgrounds also require additional support to reach their potential. The performance gap between Aboriginal and Torres Strait Islander students and non-Indigenous students also remains.

System-wide improvement in student outcomes requires an explicit improvement agenda grounded in evidence from research and practice and measured, in part, by improvements in student outcomes in systematic and national assessments.

In the ATC, our challenge is to improve educational achievement for all students, irrespective of their background, circumstances or the school they attend.

A systematic approach to reflection, discussion and action by principals, teachers and school leaders is aimed at ensuring that all students benefit from highly effective teaching - not by chance but by design.

- 3.75 *Great Teachers by Design* identified seven different principles, one of which is particularly relevant; great teachers use data and evidence. With respect to the use of data and evidence, *Great Teaching by Design* states:

Great teachers collaborate with colleagues, use data to find out what their students know and what they need to know, challenge and set high expectations for their students, employ evidence-based practices, monitor and evaluate learning, engage with parents and strive to improve student outcomes across all domains.

3.76 *Great Teachers by Design* states:

Top performing school systems recognise that they cannot improve what they do not measure.

The National School Improvement Tool highlights the importance of systematically collecting and analysing student outcome data to support instructional improvement in each school, differentiation in classrooms and improved student achievement.

In addition to its prominence in the AITSL standards, the model for professional practice for Australian Principals indicates that gathering and analysing data are essential components of educational leadership.

Research demonstrates that when teachers systematically engage with data, they foster the development of thriving learning communities and evidence-based school cultures.

3.77 *Great Teachers by Design* states:

In Canberra public schools, great teachers have high expectations for the achievement of all students. They know that collecting and interpreting data allows them to find out what their students know and what they need to know to make progress.

Effective teachers gather a range of qualitative and quantitative data about their students' learning. They use multiple sources of evidence to profile students' learning, including information derived from system assessments, standardised tests, classroom-based rich assessment asks, individualised assessments, student self-assessments and attendance and behaviour data.

3.78 *Great Teachers by Design* states:

Cross referencing or 'triangulating' a range of data validates teachers judgement and provides a more complete picture of student learning.

The information supports teachers to identify students' strengths and gaps in their learning, consider what success looks like and make important adjustments to their teaching to address the learning needs of all students.

3.79 *Great Teachers by Design* states:

The cycle of continuous formative assessment is at the heart of effective teaching.

Formative assessments are designed to make students' thinking visible to permit the teacher to understand students' preconceptions and design instruction accordingly.

Assessment is formative when evidence about student achievement is elicited, interpreted and used by teachers, and students, to make decisions about the next steps in instruction. These decisions are likely to be more effective and better targeted than decisions made in the absence of data collected.

Research demonstrates that strengthening the practice of formative assessment results in significant, and often substantial, improvements in student learning. This is true for students of all ages and abilities, and across a range of learning areas.

Formative assessment processes are enhanced by professional discourse about evidence, collaborative analysis and discussion of data, and engaging with colleagues to improve teaching practices.

- 3.80 The Education Directorate's *Great Teachers by Design*, released in 2016, identifies 'the importance of systematically collecting and analysing student outcome data to support instructional improvement in each school, differentiation in classrooms and improved student achievement'. It also identifies the importance of using 'multiple sources of evidence to profile students' learning, including information derived from system assessments, standardised tests, classroom-based rich assessment asks, individualised assessments, student self-assessments and attendance and behaviour data'. *Great Teachers by Design* does not articulate prescriptive statements, but provides better practice in areas such as collaboration, use of data and evidence, engagement in professional learning, engagement in research and seeking and responding to feedback and engagement of parents.

Support for Principals and teachers on the framework for school performance and accountability

- 3.81 The Audit Office sought to understand school Principals' views with respect to the guidance and support provided by the Education Support Office in relation to:
- the use of student performance information to drive school improvement; and
 - analysis of student performance information.

Guidance and support on use of student performance information to drive school improvement

- 3.82 As part of the survey of school Principals, Principals were asked to comment on whether 'The Directorate's guidance and training to schools about using assessment data to drive improvement is sufficient'. In relation to this question:
- 9 percent of survey respondents strongly disagreed;
 - 43 percent of survey respondents disagreed;
 - 24 percent of survey respondents neither agreed or disagreed; and
 - 24 percent of survey respondents agreed.
- 3.83 Some survey respondents identified a perception of a lack of systematic approach from the Directorate. For example:

No systematic requirement of what data to use, how to analyse it and relationship to driving improvement.

There seems to be no systematic approach. Principals can either opt in, to work with more experienced colleagues and gain their insights and wisdom. I would really like to see practical workshops around data to drive improvement of student outcomes. At the moment we are relying on the generosity of others to share how they collect, analyse and use data. This approach certainly does not include everyone. We simply

must get better at sharing 'best practice' and some system guidelines on this would be most helpful.

I would like to see a more formalised approach that builds the capacity of leaders to do this effectively.

- 3.84 Other survey respondents identified a need for further training professional learning support:

I believe the Directorate's focus on evidence based practice and using data has been useful however more training in this would be beneficial.

Agree and would like to attend more training.

I would like more though! Schools have new staff each year and maintaining the skills and knowledge in interpreting data is crucial. Also timing of the [professional learning] to align with setting goals and targets would be useful.

The guidance and access to world leading educational thinkers is fantastic. The training to schools, particularly at the classroom teacher level, is non-existent.

- 3.85 However some felt Directorate support received was in keeping with their expectations:

Sufficient in terms of what I expect of the Directorate's support. Our school and its leadership team recognise (and are comfortable with) our responsibility for developing data literacy across the team and community.

Guidance and support on analysis of student performance information

- 3.86 As part of the survey of school Principals, Principals were asked to comment on whether 'Guidance and support from the Directorate to help my school analyse student assessment data has been useful'. In relation to this question:

- 10 percent of survey respondents strongly agreed;
- 34 percent of survey respondents agreed;
- 26 percent of survey respondents neither agreed or disagreed;
- 23 percent of survey respondents disagreed; and
- 7 percent of survey respondents strongly disagreed.

- 3.87 A number of negative responses were provided with respect to this question including:

Unaware this has happened.

What guidance and support!

I would value that guidance but rarely get it.

Provision of guidance and support is limited.

Not sure what guidance has been given.

There hasn't really been consistent guidance. Pretty ad hoc. I have not partnered with anyone from within the Directorate to monitor and/or analyse or discuss my school regularly.

- 3.88 However, other comments identified that guidance and support had been received and provided with respect to NAPLAN and that while this was useful the respondent 'would like less emphasis on NAPLAN'.
- 3.89 The Education Directorate has advised of its recognition of the professional learning and development needs of its teaching staff, including through an October 2015 KPMG report for the Education Directorate; *Capability Improvement Strategy - Principals and School Leaders*. The October 2015 KPMG report identified that, for the purpose of identifying and measuring current gaps in capabilities, the ability to analyse data relating to student outcomes was an area of need for professional development and learning. The October 2015 report advised that 'specific consideration should be given to training on data analysis and developing strategies to utilise data to support the implementation of the school curriculum to provide targeted support for students'. In response to the October 2015 KPMG report the Education Directorate has advised that it has developed a baseline assessment of need and that it intends to shortly release a Request for Quotation to the market for the delivery of professional learning services from August 2017.
- 3.90 Twenty-four percent of school Principals agreed with the statement 'the Directorate's guidance and training to schools about using assessment data to drive improvement is sufficient', while 52 percent disagreed or strongly disagreed. However, forty-four percent of school Principals agreed or strongly agreed with the statement 'guidance and support from the Directorate to help my school analyse student assessment data has been useful', while 30 percent disagreed or strongly disagreed. Strong and consistent feedback was received from school Principals that they would appreciate further professional learning or training in these areas. The Education Directorate has advised that it has developed a baseline assessment of need and that it intends to shortly release a Request for Quotation to the market for the delivery of professional learning services from August 2017.

Ongoing advice and support for Principals

- 3.91 Directors, School Improvement also assist with schools' analysis of performance information and its use for school improvement. However, the skills of the Directors, School Improvement are varied, and as senior executives, they have limited time to undertake data analysis. Directors, School Improvement commonly assist schools to communicate with each other to share better practices and resolve potential issues.
- 3.92 In relation to ongoing support and guidance, there are a number of options available to school Principals, including through seeking assistance from their Director, School Improvement, who can then either:
- assist directly with advice on interpreting data;
 - facilitate networking with other schools or the Office for Schools; or
 - approach the Education Support Office's Planning and Analytics Branch in order to better analyse and interpret data.

3.93 The Education Directorate has also advised:

[The Education Directorate] has recently re-organised the Office for Schools and has established a dedicated resource to provide analytics to Directors, School improvement and School Leaders. This role works closely with the [Planning and Analytics Branch] in providing important analytics.

3.94 School Principals have advised that they would appreciate further guidance and assistance from the Education Support Office with respect to the use and analysis of student performance information. School Principals have also advised that they do not have good access to assistance in data analysis and interpretation when required. While further guidance and support from the Education Support Office may assist School Principals, it may be that a more fundamental examination of the use and analysis of performance information is warranted, including whether some of this is better undertaken centrally by the Education Support Office which may be able to secure the services of specialists when needed.

RECOMMENDATION 4 GUIDANCE AND SUPPORT FOR SCHOOLS

The Education Directorate should examine what may be the appropriate level of support for school Principals with respect to the use of student performance information to drive school improvement and determine how this is to be provided. This should recognise the balance between school autonomy and accountability and central oversight and support from the Education Support Office.

Monitoring of schools' use of student performance assessment

3.95 Monitoring of schools' use of student performance assessment is achieved through:

- a program of five-yearly school reviews; and
- other ad hoc reviews by Directors, School Improvement and other Education Directorate executives.

Five-yearly school reviews

3.96 A key mechanism for monitoring school performance and holding schools to account is provided for by the People, Practice and Performance Framework, which provides for a five-yearly strategic external review of each ACT public school. This involves a rolling annual schedule, whereby every ACT public school is reviewed by an external panel every five years. These expert panels include ex-Principals engaged by the Australian Council for Educational Research (ACER) and a local Principal. The panel meets with the School Board, the school executive team and teachers and visits classes, and also reviews documentation prepared by the school.

- 3.97 The external school review process under the People, Practice and Performance Framework has replaced the earlier school validation process. The Education Directorate advised:

The emphasis for the conduct of external school reviews during the school visit is now on the evidence, panel observations and interviews in the school context and setting fully utilising the nine school improvement domains within the National School Improvement Tool (NSIT)... With validation the emphasis was on the quality of the preparation and documents produced as evidence before the visit. When the panel visited the school they validated the contents of the documents against the school's Strategic Plan. There was less rigour and very little moderation with this process. The new school review process incorporates contemporary best practice and is strongly evidence based.

- 3.98 The Education Directorate further advised that the external school review features 'the use of independent external reviewers on panels with experienced system principals adding integrity, rigour and moderation to the process' noting that 'previously principals and deputy principals were on panels as peers validating the work of schools'.

- 3.99 The review report for each school, which is subsequently provided on the school's website, includes the following components:

- overview of the review process;
- school context, including outline of the school's size, the nature of the leadership team and the school's overall approach;
- school performance, including selected NAPLAN statistics, overall assessments from satisfaction surveys;
- school improvement planning and implementation; this focuses on the achievements against each of the priorities in the school's strategic plan;
- an assessment against the National School Improvement Tool (see below);
- an assessment against the National Safe Schools Framework; and
- commendations and recommendations.

- 3.100 A central part of the external school review process is the National School Improvement Tool, a tool developed by the Australian Council for Educational Research (ACER) for the then Commonwealth Department of Education, Employment and Workplace Relations. (The National School Improvement Tool was first trialled as part of school validation in 2014 and was also used in 2015). This tool addresses nine domains of school performance, of which the most relevant to this audit are:

- Domain 2, Analysis and discussion of data; and
- Domain 7, Differentiated teaching and learning.

- 3.101 For each domain, the school prepares a self-assessment, and the expert panel reviews that assessment. These assessments describe how school practices compare with a pre-determined set of performance levels: low, medium, high, and outstanding. For example, the domain of 'Analysis and discussion of data' requires:
- that a high priority be given to the school-wide analysis and discussion of systematically collected data on student outcomes;
 - that data analyses consider overall school performance as well as the performances of students from identified priority groups;
 - evidence of improvement or regression over time;
 - performances in comparison with similar schools; and
 - in the case of data from standardised tests, measures of growth across the years of school.
- 3.102 The National School Improvement Tool section of the review report includes such things as school leadership on data, how data are used throughout the school, the mechanisms for storage and transmission of data, and the allocation of resources such as specialist staff or dedicated time for all teachers to discuss and review data. This element of the five-yearly review of school performance focuses on processes for analysis, understanding and responding to student performance information, rather than the actual student results.
- 3.103 The Education Directorate has implemented a rolling program of reviews, whereby every ACT public school is reviewed by an external panel every five years. The rolling program of review provides a comprehensive and rigorous assessment of schools' performance in a number of areas, including schools' 'analysis and discussion of data' and its input into 'differentiated teaching and learning'.

4 AVAILABILITY OF STUDENT PERFORMANCE INFORMATION

- 4.1 This chapter discusses access to, and the usefulness of, student performance information to decision makers at all levels, from teachers to senior executives. There are two preconditions for performance information to be useful: it must be readily available, and it must be fit for purpose, that is, of acceptable quality. The chapter also necessarily discusses the support provided to schools by the Education Support Office in making performance information available.

Summary

Conclusion

A range of student performance information is collected to inform decision-makers at all levels, from teachers through to senior executives. Key performance information that is available includes NAPLAN data, PIPS data (for students in Kindergarten), A to E reporting and other school-specific student performance information.

By virtue of nationally-driven timeframes NAPLAN data is received up to four months after testing and its usefulness in informing teaching practices is limited, although it may be used in conjunction with other information to inform school improvement. A key issue for ACT public schools is comparatively low participation rates in some schools and for Year 9 testing generally, which may distort the accuracy of the ACT's NAPLAN results. The accuracy of A to E grading and reporting is also questionable, given that across schools there is significant variability in grading and a lack of moderation of assessment results.

The Education Support Office has increased and improved its support for schools for the analysis and use of student performance information. Schools have access to the SMART tool (which facilitates analysis of NAPLAN scores) and the School Data Tool (which facilitates analysis of a range of demographic and student performance information). However, to date the School Data Tool has not been widely accessed by school-based staff. Recent upgrades to the School Data Tool in March 2017 have improved its useability and usefulness.

Key findings

Analysis of ACT public schools' participation rates in NAPLAN in 2015 shows:

- participation rates for ACT public schools were lower for all year levels than the participation rates for all ACT schools (public and private) and schools Australia-wide (public and private); and

Paragraph

4.10

- participation rates for ACT public schools in Year 9 (85.3 percent) were significantly lower than ACT public schools' participation rates in Year 7 (93.2 percent) and the Year 9 participation rate for schools Australia-wide (public and private) (91.6 percent).

In 2015 average Year 9 NAPLAN participation rates for ACT public schools' were 85.3 percent. This compares with 90.2 percent for ACT private schools and an Australian average of 91.6 percent for both public and private schools. Low participation may lead to lack of validity of NAPLAN results. 4.12

Seventy-seven percent of school Principals agreed with the statement 'the NAPLAN data I receive are useful in supporting my school's decision making', while nine percent of respondents neither agreed nor disagreed. Ten percent of respondents disagreed. With respect to the usefulness of NAPLAN data in supporting decision-making at the classroom level the majority of Principals and teachers saw the value in NAPLAN, although it is noted that some did not. Concerns were raised about: 4.19

- the delay in receiving NAPLAN results (meaning it was more of a reflective tool for whole school planning than for day to day decisions); and
- the amount of effort needed by classroom teachers to analyse NAPLAN data (if they were not provided with administrative support). In some cases, the ability for teachers to undertake their own NAPLAN data analysis was limited as they did not have access to SMART. In some schools, there was no analysis of NAPLAN for classroom decisions, or it was limited to part of the school.

Eighty-two percent of Principals of schools where PIPS was used strongly agreed or agreed with the statement 'the PIPS data I receive are useful in supporting my school's decision making', while five percent of respondents neither agreed nor disagreed and 12 percent of respondents disagreed or strongly disagreed. With respect to the usefulness of PIPS data in supporting decision-making at the classroom level, feedback was received that PIPS is suitable and useful for assessing Kindergarten students' abilities at the start of the year, assessing growth during the year, and (for some schools) providing a baseline for Year 1 teachers to consider. 4.25

A to E reporting is a nationally mandated mechanism for reporting student progress to parents and carers. Most school Principals and teachers interviewed as part of the audit did not find A to E reporting useful for making decisions regarding how to teach individual students and advised of concerns with respect to the reliability of A to E reporting data and its inconsistency between schools (and also within schools). Directors, School Improvement also advised of concerns with respect to the consistency of its application across schools. A February 2017 *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* report identified that there was a significant 4.40

difference in schools' A to E grades (as measured by the proportion of A and B grades) and the report noted that these results 'may be an accurate reflection of student performance against the Australian Curriculum Achievement Standards'. However, the report also identified that while there was a correlation between schools' NAPLAN results and A to E grades 'it was not a strong correlation and there were numerous outliers (schools that had significant differentials between their NAPLAN rankings and A-E grade distribution rankings)'. There is no Education Support Office-driven approach to moderating results across schools. The inconsistency in moderation across schools diminishes the value of A to E reporting as a mechanism for informing teaching practices and informing parents and carers.

Schools reported using a large number (around 38) of school-specific assessment tools to assess students, together with programs to assist them to improve. The most common tests were the Progressive Achievement Tests (PAT) provided by the Australian Council for Educational Research (ACER). Six different PAT tests were used, as well as a total of 32 others. Ninety-four percent of respondents to the school Principal survey either agreed or strongly agreed with the statement 'school based assessment data are useful in supporting my school's decision making'. There is a high satisfaction rate with school-specific assessment tools that are within the discretion of schools to use and apply.

4.47

School Principals overwhelmingly agreed with the statement 'school based assessment data are useful in supporting my school's decision making', with 47 percent strongly agreeing and 47 percent agreeing with the statement. The survey also identified a widespread use of commercial testing products, with six different PAT tests and 32 others reported as being used by school Principals. Decision-making associated with the use of commercial testing products resides very much with schools and school Principals, and at present there is very little advice from the Education Support Office on which tools to select for which purpose, which ones are considered to offer the best value for money and how best to employ the tools.

4.56

The ACT Education Directorate has provided schools with access to the School Measurement, Assessment and Reporting Toolkit (SMART) resource. SMART is an online comprehensive diagnostic tool, sourced from the New South Wales Department of Education, which provides school leaders and teachers with a resource to help better understand performance on NAPLAN literacy and numeracy measures. SMART goes beyond the data publicly available to the broader community on the My School website and provides ACT Education Directorate users with the ability to provide results at the school level and for individual students and use New South Wales results as a comparator. SMART is a useful resource to facilitate the production and reporting of student performance information at the individual and school level.

4.70

The School Data Tool was introduced in August 2015. It is a web-based tool that provides schools with comprehensive data in a range of categories including school context (e.g. enrolments); student engagement (e.g. student attendance, satisfaction survey results); and student performance, including A to E grades, and NAPLAN scores and participation rates. There has been low usage of the School Data Tool across ACT public schools to date and some negative feedback from schools regarding the usefulness and timeliness of data produced. A significant upgrade of the School Data Tool occurred in late March 2017 in which the 'look and feel' and the information that was capable of being generated from the tool was improved. The introduction of the 'School Snapshot' is expected to make information from the School Data Tool more accessible to users.

4.78

The Education Directorate is in the initial stages of implementing a new School Administration System that is 'designed to consolidate a variety of existing disparate Territory systems with a single centralised authoritative System for all students, staff and School activities'. The School Administration System is intended to fully replace, or in some instances integrate through manual processes, a range of management information systems that currently provide information in relation to student performance information. If implemented as planned, the School Administration System should provide a consistent and accessible source of student performance information for schools and Education Support Office personnel.

4.84

However, while the School Administration System is expected to provide a consistent and accessible source of student performance information in the future, it will still need to be supported by business intelligence (or business analysis) software that provides users with timely, relevant and user-friendly information and analysis on student performance, similar to what is being provided by SMART and the School Data Tool. At the time of audit fieldwork, how the School Administration System was to be supported by business intelligence (or business analysis) software was still being determined.

4.85

Sources of student performance information

NAPLAN

- 4.3 The main source of student performance information for Year 3 to Year 9 students is NAPLAN. NAPLAN covers the core skills of literacy, including reading, writing, spelling, grammar and punctuation, and numeracy for Years 3, 5, 7 and 9. NAPLAN is the first national assessment of student learning across literacy and numeracy in Australia and it is an important information source for educators. As outlined in *Widening gaps: what NAPLAN tells us about student progress*, a 2016 report published by the Grattan Institute:

NAPLAN data opens up unprecedented opportunities to understand student progress. It is the first national longitudinal comprehensive dataset of its kind in Australia, and one of the few in the world... A key feature of NAPLAN is that scores can be compared across tests sat in Years 3, 5, 7 and 9, and over time, through a common scale.³

- 4.4 One limitation to the comprehensiveness of NAPLAN is that it does not commence until Year 3 and information is received too late to correct any educational deficits that may be apparent in younger children. Representatives from schools and the Education Support Office advised that any educational deficit at Year 3 (when the first NAPLAN information is received) is hard to correct. The Education Directorate has advised, however, that it has recently commenced analysis of the relationship between PIPS testing results and NAPLAN results.

Timeliness of NAPLAN

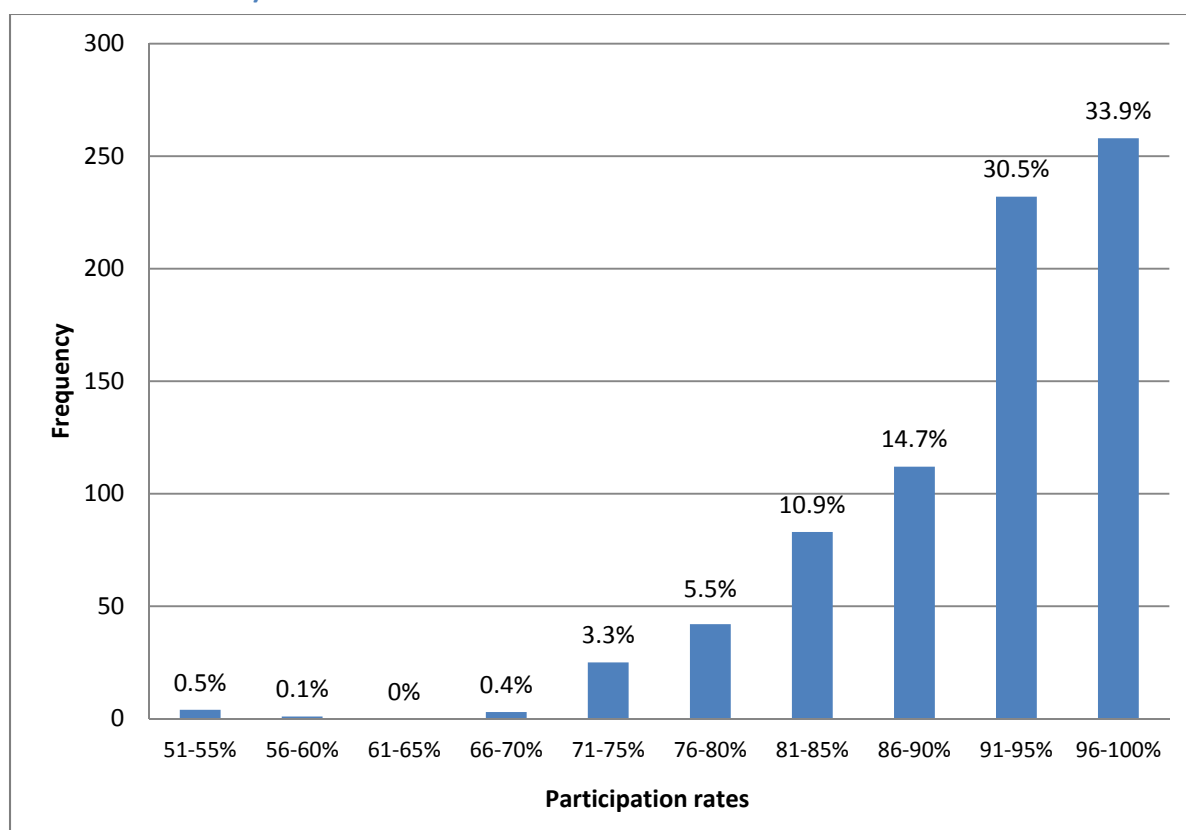
- 4.5 Currently the delay between NAPLAN tests being undertaken and the results becoming available means that the usefulness of NAPLAN information in assisting teachers to address individual student needs is diminished. In 2016, for example, students across Australia undertook NAPLAN testing between 10 and 12 May but student reports were not provided to schools until 15 August. Additionally, the report produced by the Australian Curriculum Assessment and Reporting Authority that includes state and territory and national averages and breakdowns based on demographics was not released until 13 December 2016 and information on school level performance was not uploaded on the My School website until March 2017. The timeliness of NAPLAN data is a function of the national NAPLAN testing and reporting process and is not within the Education Directorate's control.

³ Goss, P, Sonnemann, J, Chisholm, C, Nelson, L, *Widening gaps: what NAPLAN tells us about student progress*, Grattan Institute, March 2016, p. 8.

Accuracy of NAPLAN (comprehensiveness)

- 4.6 The inherent accuracy of the NAPLAN tests is not considered for the purpose of this audit as NAPLAN is a national test that is subject to validation. However, one factor that is within the influence of the Education Directorate is the rate of participation in NAPLAN. If the group of students participating in NAPLAN is different to the overall population, then the results may be skewed.
- 4.7 Figure 4-1 shows ACT public schools' aggregate participation rates in NAPLAN in 2015 across all tests and year levels (Years 3, 5, 7 and 9 for tests in reading, writing, language conventions (spelling, grammar and punctuation) and numeracy).

Figure 4-1 ACT public schools' 2015 NAPLAN participation rates (all tests and year levels)

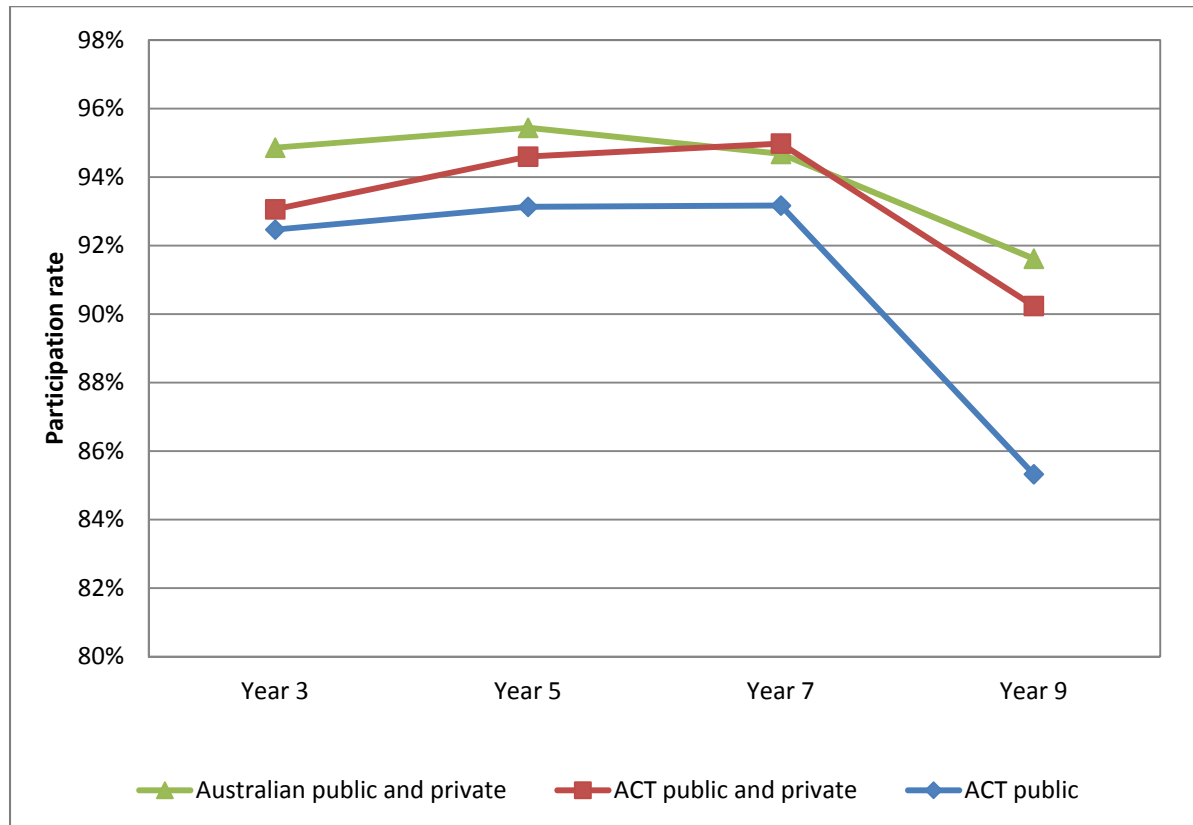


Source: ACT Audit Office, based on Education Directorate data.

- 4.8 Analysis of ACT public schools' aggregate participation rates in NAPLAN in 2015 shows that:
- for 64 per cent of all tests across all year levels NAPLAN participation in ACT public schools was over 90 per cent, which is consistent with the school attendance rate;
 - for a further 15 percent of all tests across all year levels NAPLAN participation in ACT public schools was between 86 percent and 90 percent; and
 - for a further 11 percent of all tests across all year levels NAPLAN participation in ACT public schools was between 81 percent and 85 percent.

4.9 Figure 4-2 shows the breakdown of ACT schools' NAPLAN participation rates by year level for 2015. Figure 3-2 shows average participation rates for Australian schools (public and private), average participation rates for ACT schools (public and private) and average participation rates for ACT public schools.

Figure 4-2 2015 NAPLAN participation rates in the ACT and nationally



Source: ACT Audit Office, based on Education Directorate data and NAPLAN National Report for 2015.

4.10 Analysis of ACT public schools' participation rates in NAPLAN in 2015 shows:

- participation rates for ACT public schools were lower for all year levels than the participation rates for all ACT schools (public and private) and schools Australia-wide (public and private); and
- participation rates for ACT public schools in Year 9 (85.3 percent) were significantly lower than ACT public schools' participation rates in Year 7 (93.2 percent) and the Year 9 participation rate for schools Australia-wide (public and private) (91.6 percent).

4.11 The NAPLAN participation rate in 2015 was as low as 52 per cent for Year 9 at one ACT public school and the next lowest participation rate in 2015 was 67 per cent, which is still low enough to distort the school's NAPLAN score.

4.12 In 2015 average Year 9 NAPLAN participation rates for ACT public schools' were 85.3 percent. This compares with 90.2 percent for ACT private schools and an Australian average of 91.6 percent for both public and private schools. Low participation may lead to lack of validity of NAPLAN results.

RECOMMENDATION 5

NAPLAN PARTICIPATION RATES

The Education Directorate should develop strategies to address the low participation rates in NAPLAN testing in some ACT public schools, specifically with respect to Year 9 participation.

Usefulness of NAPLAN

4.13 As part of the survey of school Principals, Principals were asked to comment on whether 'The NAPLAN data I receive are useful in supporting my school's decision making'. In relation to this question:

- 13 percent of survey respondents strongly agreed;
- 64 percent of survey respondents agreed;
- 9 percent of survey respondents neither agreed or disagreed; and
- 10 percent of survey respondents disagreed.

4.14 Four percent of survey respondents identified that the question was not applicable.

4.15 A number of survey responses identified that NAPLAN was useful in conjunction with other information:

NAPLAN is useful as long as it's taken in context (as one measure at a point in time) and used in conjunction with other assessment data.

This is triangulated with other data.

It is only one measure but provides a longitudinal view of School Improvement.

4.16 A number of survey responses highlighted the limitations of NAPLAN data including that the time lag between the conduct of the test and the receipt of results was problematic:

With data available three months after, it is limited in addressing individual student need. Used mainly as a longitudinal data set.

Limited usefulness because of time between test & receipt of data.

However, timing makes specific interventions and analysis limited.

If it was able to be processed a little quicker that would always be helpful.

4.17 The views of Principals and teachers were also sought at the schools visited as part of the audit. The majority of Principals and teachers interviewed as part of the audit saw the value in NAPLAN in supporting decisions at the classroom level, although it is noted that some did not. Excluding Early Childhood Schools (whose students do not sit NAPLAN), and those Principals and teachers who did not provide a clear view, three Principals clearly endorsed NAPLAN, two Principals clearly did not endorse NAPLAN, and five were uncertain or gave a partial endorsement of NAPLAN.

- 4.18 Teachers at schools visited gave less support than Principals to the use of NAPLAN to make decisions at the classroom level. Teachers at three schools endorsed NAPLAN, those at four schools did not, and those at six schools were uncertain or gave partial support. Some teachers praised it as a consistent and valid test and one teacher specifically praised NAPLAN as giving a good guide on the general capabilities of students. However, teachers advise that because NAPLAN reporting is not timely, it is not very useful for responding to an individual child's score for the purpose of recognising and potentially taking action in relation to an individual child's needs.
- 4.19 Seventy-seven percent of school Principals agreed with the statement 'the NAPLAN data I receive are useful in supporting my school's decision making', while nine percent of respondents neither agreed nor disagreed. Ten percent of respondents disagreed. With respect to the usefulness of NAPLAN data in supporting decision-making at the classroom level the majority of Principals and teachers saw the value in NAPLAN, although it is noted that some did not. Concerns were raised about:
- the delay in receiving NAPLAN results (meaning it was more of a reflective tool for whole school planning than for day to day decisions); and
 - the amount of effort needed by classroom teachers to analyse NAPLAN data (if they were not provided with administrative support). In some cases, the ability for teachers to undertake their own NAPLAN data analysis was limited as they did not have access to SMART. In some schools, there was no analysis of NAPLAN for classroom decisions, or it was limited to part of the school.

Performance Information in Primary Schools (PIPS)

- 4.20 PIPS provides educators with information about the early reading, phonics and numeracy skills that Kindergarten students bring with them on entry to school. PIPS testing occurs in the first and fourth terms of Kindergarten and, according to the Education Directorate's *Early Years Assessment*, PIPS testing is designed to 'identify, as early as possible, students who may need extra support or enrichment'.

Usefulness of PIPS

- 4.21 As part of the survey of school Principals, Principals were asked to comment on whether 'The PIPS data I receive are useful in supporting my school's decision making'. In relation to this question 19 percent of survey respondents identified that the question was not applicable. Of the remaining respondents:
- 25 percent of survey respondents strongly agreed;
 - 57 percent of survey respondents agreed;
 - 5 percent of survey respondents neither agreed or disagreed;
 - 7 percent of survey respondents disagreed; and
 - 5 percent of survey respondents strongly disagreed.

4.22 A number of survey responses questioned the value of PIPS data:

How reliable is the PIPS data?

The collection of PIPS data is NOT consistent. Kindergarten teachers collect class data and unfortunately sometimes the data is inaccurate (mostly low at the start of year and high at the end of year to reflect growth in schools and classes). We employ an independent assessor to carry out the start and end PIPS tests.

PIPS is perhaps at best indicative.

4.23 However, it is also noted that some survey responses identified value of PIPS data:

PIPS is useful. It shows the strength or weakness of programs and teacher pedagogy in Kindergarten. It also highlights for us the decreasing skills children are bringing to school and the need for the preschool year to support acquisition of early literacy and numeracy skills.

The beginning of year data is useful for planning. The end of year merely affirms our local assessment information rather than providing new information.

4.24 The views of Principals and teachers were also sought at the schools visited as part of the audit. Of those schools visited where an opinion was expressed, most stated that PIPS is suitable and useful for assessing Kindergarten students' abilities at the start of the year, assessing growth during the year, and (for some schools) providing a baseline for Year 1 teachers to consider. However, one Principal consulted in the course of the visits to schools expressed an opinion that PIPS was outdated, unreliable and time consuming to conduct.

4.25 Eighty-two percent of Principals of schools where PIPS was used strongly agreed or agreed with the statement 'the PIPS data I receive are useful in supporting my school's decision making', while five percent of respondents neither agreed nor disagreed and 12 percent of respondents disagreed or strongly disagreed. With respect to the usefulness of PIPS data in supporting decision-making at the classroom level, feedback was received that PIPS is suitable and useful for assessing Kindergarten students' abilities at the start of the year, assessing growth during the year, and (for some schools) providing a baseline for Year 1 teachers to consider.

A to E reporting

4.26 The People, Practice and Performance Framework identifies the *ACT Public School Student Achievement Report: Advice for Schools* document as providing relevant guidance to schools on reporting. The *ACT Public School Student Achievement Report: Advice for Schools* document states:

The Australian Curriculum achievement standards describe what students are expected to know, understand, and do at the end of a year or band of years. They are the starting point for teachers when planning teaching and learning programs.

Teachers also use the achievement standards at the end of a period of teaching to make on-balance judgments about the quality of learning demonstrated by students.

To make these judgments, teachers draw on a range of evidence including assessment data collected during the teaching period.

4.27 The *ACT Public School Student Achievement Report: Advice for Schools* document states:

Under national and ACT legislation and regulations, reports must:

- be provided to parents twice a year, and followed by an opportunity to meet with teachers to discuss aspects of the report and strategies for supporting further learning
- give an accurate and objective assessment of student achievement in years 1-10, against the Australian Curriculum Achievement Standards using A-E scale
- include, for subjects studies, the student's achievement relative to the achievement of their peers at the school.

Usefulness of A to E reporting

4.28 The views of Principals and teachers were sought at the schools visited as part of the audit. The majority of Principals and teachers did not see value in the practice of A to E reporting. Of the sixteen schools visited for the purpose of the audit, ten school Principals did not find the practice useful at all, three school Principals found the practice partially useful and three school Principals found the practice useful.

4.29 Opinions were slightly more negative for the groups of teachers that were interviewed for the purpose of the audit: only one group supported A to E reporting as useful, five groups found A to E reporting partially useful and ten groups found A to E reporting not useful. Principals and teachers interviewed for the purpose of the audit often regarded A to E grades as:

- unreliable;
- inconsistent between schools; and
- even inconsistent within the same school.

4.30 Directors, School Improvement also advised of concerns with respect to the consistency of application across schools and noted that a few schools, especially secondary schools, have moderated tests across schools to check on their A to E levels against the curriculum but that these are local moderation efforts, and are not facilitated by the Education Support Office.

Education Directorate guidance on A to E reporting

4.31 The *ACT Public School Student Achievement Report: Advice for Schools* document states:

The A-E descriptors are as follows:

A - outstanding achievement of the standard

B - high achievement of the standard

C - achievement at the standard

D - partial achievement of the standard

E - limited achievement of the standard

- 4.32 The *ACT Public School Student Achievement Report: Advice for Schools* document states 'in the ACT, a 'C' grade is awarded when a student demonstrates the knowledge, understanding and skills expected at that year level'. The *ACT Public School Student Achievement Report: Advice for Schools* document further states:

When a student receives a 'C' grade, it means that they have demonstrated the quality of learning described in the achievement standard, based on the content studies in the reporting period. If a student receives a 'C' on their next report, this indicates that the student has made progress, and learned new knowledge and skill based on the new and more challenging material studied.

Evaluation of the implementation of the Australian Curriculum

- 4.33 The Education Directorate commissioned an evaluation that 'considered the extent to which the Australian Curriculum and Achievement Standards for Phase 1 learning areas [English, Mathematics, Science and History] have been implemented in ACT Public schools'. The evaluation was conducted by a combination of onsite assessments at 20 schools and desktop analysis of performance data. A draft evaluation report was prepared in February 2017.

- 4.34 The *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017) stated:

Overall, the evaluation found *Australian Curriculum* content for the Phase 1 learning areas to be well embedded in school planning documentation and processes. All 20 of the sampled schools had a clear focus of teaching content in line with the Australian Curriculum and, on the whole, there was evidence of planning documentation being aligned with the *Australian Curriculum* and being reviewed and refined.

While Curriculum content was on the whole well implemented at the sampled schools, planning documentation was nevertheless of varying formats, detail and quality. Schools commented on limited centralised support from the Directorate in implementing the *Australian Curriculum*, with a resultant duplication of effort across schools and reduced consistency in approach.

The *Australian Curriculum* Achievement Standards were also used by all sampled schools. However, the extent to which the Standards were embedded in planning and assessment processes was variable and, on the whole, less advanced in comparison to content implementation. As schools have gained confidence in their coverage of the Curriculum content, there has been an increased use of the Achievement Standards in planning processes, including how to structure content delivery, teaching methods and assessment tasks to best allow students to demonstrate performance against the Achievement Standards.

- 4.35 In relation to the A to E grading and reporting, the *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017) stated:

Analysis of the 2015 MAZE achievement grade data for Phase 1 learning areas shows a reasonable level of consistency in A-E grade distributions across the various filters/parameters applied (e.g. school network comparisons, semester comparisons, learning area comparisons). The analysis results do not suggest any fundamentally inconsistent approaches to how the Achievement Standards and E-E achievement grades are being interpreted and applied by ACT Public schools in assessing student performance.

The evaluation identified certain differentials in A-E grade distributions at the network and school level that warrant further consideration and analysis by the Directorate in the context of ensuring every student in the ACT is provided the highest quality education irrespective of where they live, their circumstances or the school they attend.

- 4.36 In relation to A to E grading and reporting and comparison across schools, the *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017) identified 'there is a significant differential in grade distributions between the 'highest performing' and 'lowest performing' schools'. The report identified that the cumulative proportion of A and B scores was as high as 62.0 percent at one school and as low as 8.8 percent at another. Table 4-1 shows the proportion of A and B scores at the top five ranking schools and the lowest five ranking schools.

Table 4-1 Proportion of A and B scores (top five schools and lowest five schools)

School ranking (Semester 2 2015)	Proportion of A and B scores (percent)
School # 1	62.0
School # 2	59.9
School # 3	55.3
School # 4	52.6
School # 5	51.1
School # 71	19.4
School # 72	14.6
School # 73	13.5
School # 74	10.3
School # 75	8.8

Source: ACT Audit Office, adapted from *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017)

4.37 The *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017) noted:

While these performance results may be an accurate reflection of student performance against the Australian Curriculum Achievement Standards, school stakeholder consultations identified:

- minimal cross-school dialogue to assist in obtaining consistency in the interpretation and application of the Achievement Standards and A-E achievement grades, such as cross-school moderation processes or discussions in relation to how each school has implemented the Achievement Standards, and
- limited centralised/system support from the Directorate in how to implement the Achievement Standards and E-E grade descriptors.

4.38 The *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017) sought to compare schools' A to E grading and results with NAPLAN scores. The report 'identified numerous inhibitors to making a reliable and meaningful comparison between A-E grade distributions and NAPLAN results' but identified a method for undertaking an 'indicative comparison'. The report stated:

The analysis showed a correlation between these two ranking methods. However, it was not a strong correlation and there were numerous outliers (schools that had significant differentials between their NAPLAN rankings and A-E grade distribution rankings).

4.39 The *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* (February 2017) made eight recommendations, and as at May 2017 the Education Directorate was formulating its response to the report.

4.40 A to E reporting is a nationally mandated mechanism for reporting student progress to parents and carers. Most school Principals and teachers interviewed as part of the audit did not find A to E reporting useful for making decisions regarding how to teach individual students and advised of concerns with respect to the reliability of A to E reporting data and its inconsistency between schools (and also within schools). Directors, School Improvement also advised of concerns with respect to the consistency of its application across schools. A February 2017 *Evaluation of the implementation of the Australian Curriculum through analysis of student Achievement Standards Draft v4* report identified that there was a significant difference in schools' A to E grades (as measured by the proportion of A and B grades) and the report noted that these results 'may be an accurate reflection of student performance against the Australian Curriculum Achievement Standards'. However, the report also identified that while there was a correlation between schools' NAPLAN results and A to E grades 'it was not a strong correlation and there were numerous outliers (schools that had significant differentials between their NAPLAN rankings and A-E grade distribution rankings)'. There is no Education Support Office-driven approach to moderating results across schools. The inconsistency in

moderation across schools diminishes the value of A to E reporting as a mechanism for informing teaching practices and informing parents and carers.

RECOMMENDATION 6 A TO E REPORTING

The Education Directorate should implement a standards-based moderation process across schools and school networks in order to achieve consistency in A to E grading and reporting.

School-specific assessment information

- 4.41 School-specific student assessment information refers to the student performance information generated from school-specific assessment processes, often for the purpose of formative assessment. Schools also use a range of commercial assessment products which may be applied to the school as a whole, or cohorts of students or individual students.

Usefulness of school-specific assessment information

- 4.42 As part of the survey of school Principals, Principals were asked to comment on whether 'school based assessment data are useful in supporting my school's decision making'. In relation to this question:

- 47 percent of survey respondents strongly agreed;
- 47 percent of survey respondents agreed;
- 1 percent of survey respondents neither agreed or disagreed; and
- 4 percent of survey respondents disagreed.

- 4.43 A number of survey responses identified the usefulness of school-specific performance information:

Useful in making decisions in relation to faculty/individual teacher.

Teams reflect on data every two weeks to identify the students' next point of need for learning. Moderation is carried out across the year level.

We deliberately use data which is useful for formative assessment and for facilitating timely instructional decisions.

This data is more accurate and reflects the continuous learning cycle of students as opposed to snap shop data (which is useful in other regards).

- 4.44 However, a number of other survey responses identified the challenges associated with collecting and collating such information:

Collecting and utilising it in a perfect way remains problematic.

We are experiencing difficulty in collating data in a user friendly approach that will be readily used and accessed by teachers.

We need to develop more and to develop a simple, effective tracking system.

- 4.45 The views of Principals and teachers were also sought at the schools visited as part of the audit. Most of the schools visited reported using school-specific assessments to supplement the system-level assessments represented by NAPLAN and PIPS. One survey response received from a school Principal identified the use of school-based assessments, but noted that 'PAT and NAPLAN data are most useful in terms of norm reference data'.
- 4.46 Table 4-2 shows the range of school-specific assessment tools used by schools and the frequency of use, as reported through the survey of school Principals.

Table 4-2 School-specific assessment tools used by schools surveyed

Performance tool	Number of respondents	Performance tool	Number of respondents
PAT Maths	25	Ontario Writing	1
PAT Reading	12	Brightpath	1
PAT Spelling	6	BERT Reading age	1
PAT Science	4	TORCH Bee Spelling	1
DIBELS	4	Mathletics	1
OLSAT	4	Spellodrome	1
Middle Year Mental Computation	4	TOWR	1
PAT Comprehension	3	Rosner	1
AGAT	3	Love and Reilly	1
PM Reading	3	First Steps	1
Words Their Way	3	The Bridge	1
COGACT	3	Waddington	1
SA Spelling Test	2	UAELB	1
SENA 1 and 2	2	Communication	1
PAT Writing	2	Matrix	1
CMIT	2	Morrison and McCall	1
I can do Maths	1	Running Records	1
Single Word Spelling Test	1	ICAS	1
Who Am I?	1	Neale	1

Source: ACT Audit Office, based on survey of school Principals.

- 4.47 Schools reported using a large number (around 38) of school-specific assessment tools to assess students, together with programs to assist them to improve. The most common tests were the Progressive Achievement Tests (PAT) provided by the Australian Council for Educational Research (ACER). Six different PAT tests were used, as well as a total of 32 others. Ninety-four percent of respondents to the school Principal survey either agreed or

strongly agreed with the statement 'school based assessment data are useful in supporting my school's decision making'. There is a high satisfaction rate with school-specific assessment tools that are within the discretion of schools to use and apply.

Selection of school-specific assessment tools

- 4.48 The views of Principals and teachers were also sought at the schools visited as part of the audit with respect to how school-specific assessment tools were chosen for use at the school. Eight of the sixteen schools visited reported making decisions on whether to introduce, adjust or discontinue the use of school-specific assessments using a collaborative approach within the school, for example at a school executive conference or as a whole-school approach; some mentioned advice from a knowledgeable teacher. For three schools, decisions were taken by a single individual (normally the Principal), and representatives from one school advised that the selection of school-specific assessment tools was simply based on existing custom and practice. Only one school advised that it received advice from its network and no schools reported receiving advice from the Education Support Office for the purpose of selecting school-decided assessment tools.
- 4.49 At present there is very little advice from the Education Support Office on which tools to select for which purpose, which ones are considered to offer the best value for money and how best to employ the tools. One Principal advised that Directors, School Improvement are only aware of the use of school-specific assessment tools if school Principals tell them that they are using them. Nevertheless, one Director, School Improvement described three roles they had in advising on tools: facilitating sharing within the school network; professional learning on information access; and one to one discussions with Principals on their assessment objectives.
- 4.50 One Education Support Office Executive advised that, with schools' autonomy enabling them to choose their tools and analyse their data the Education Directorate was missing a 'constant data set' across schools. The Executive advised of the need for the Education Support Office to have an input, as do professional associations, on what might be the core of tools. In this respect, educational practices are influenced by different areas in the Directorate, but they are not bringing it together.
- 4.51 One view expressed by a Director, School Improvement was that there needed to be an 'audit' of what assessment tools are being used in order to determine whether the tools were the right ones and whether there was consistency in use across the schools. A compilation of tools used by schools was conducted by the Education Support Office in 2013 but this was apparently not used or kept up to date.
- 4.52 Given the disparate approaches across similar schools with respect to the use of school-specific assessment tools, including the use of commercial products, the reliance on personal knowledge in selecting tools and the lack of central guidance or even knowledge of the use of these tools, there is a risk that the optimum set is not used (recognising that because schools vary, there will be always be some necessary variation).

Quality of data from school-specific assessments

- 4.53 The primary purpose of school-specific assessments is to enable timely feedback to be given on student knowledge of specific areas of learning in order to enable teachers to adjust their teaching strategies. They can also be used for tracking over time, and for providing some information that helps to inform A to E reporting.
- 4.54 There are some limitations associated with school-specific assessment information. Some schools do not have a wide range of tests and their data may not be comprehensive. Accuracy of data from the assessments depends on the intrinsic quality of the tests and the way in which it is applied. In addition, there is little formal training on how to analyse data from these tools and there is therefore a risk that data are not fully understood or used properly.
- 4.55 Guidance on how to conduct tests is provided by the supplier of the test. There were instances where schools decided to modify how the tests were used, leading to risks to the accuracy of the tests.
- 4.56 School Principals overwhelmingly agreed with the statement ‘school based assessment data are useful in supporting my school’s decision making’, with 47 percent strongly agreeing and 47 percent agreeing with the statement. The survey also identified a widespread use of commercial testing products, with six different PAT tests and 32 others reported as being used by school Principals. Decision-making associated with the use of commercial testing products resides very much with schools and school Principals, and at present there is very little advice from the Education Support Office on which tools to select for which purpose, which ones are considered to offer the best value for money and how best to employ the tools.

Education Support Office support for schools

- 4.57 The Planning and Analytics Branch is the key Education Support Office business unit with responsibility for ‘analysing, advising, reporting on, and disseminating school performance data to key stakeholders ranging from the Minister for Education to Education Directorate Executives, including those responsible for school improvement, and to school principals and to schools’.
- 4.58 In doing so the Planning and Analytics Branch administers specific systems and tools, including:
- the SMART tool, which is used to analyse NAPLAN results; and
 - the School Data Tool, which is used to provide a range of information to schools.
- 4.59 The SMART tool is available to most ACT public schools and the School Data Tool is available to all ACT public schools and may be accessed by schools at any time. Refer to

paragraphs 4.64 to 4.70 for a discussion on the SMART tool and paragraphs 4.71 to 4.78 for a discussion on the School Data Tool.

Feedback from ACT public schools

4.60 As part of the survey of school Principals, Principals were asked to comment on whether 'analysis undertaken by the Directorate of trends in assessment data is useful to our school in knowing whether initiatives are working'. In relation to this question:

- 6 percent of survey respondents strongly agreed;
- 42 percent of survey respondents agreed;
- 33 percent of survey respondents neither agreed or disagreed;
- 17 percent of survey respondents disagreed; and
- 3 percent of respondents strongly disagreed.

4.61 Comments in relation to this question were few, but they did highlight a lack of awareness of some schools about what analysed data they could expect to receive from the Education Support Office. For example, the following responses were received as part of the survey:

I am not aware of any assessment data that has been analysed and then information provided to our school.

I can't answer this as I have never received it.

Only with respect to NAPLAN data – not aware of other analysis.

4.62 The survey of Principals also invited suggestions for improvement, and many of these suggestions referred to the desire for improved access to data, data tools and assistance from the Education Support Office, for example:

Timely data is the most important aspect to improving outcomes. Undertaking the school review this year highlighted that the School Data Tool did not reflect updated information.

More consistent data collection across schools and Directorate support in collating and analysing data.

Education Directorate generated data sets to support further analysis.

Directorate assistance in data analysis, for example, Directorate lead (or SNL lead) conversations with school staff at a staff meeting about our NAPLAN results.

Improved business systems in the Directorate that can have pre-organised data entry requirements and able to provide data each school needs in a timely and easy to read manner.

4.63 While these comments are acknowledged, it is also noted that schools (with some exceptions) have direct access to the specific systems and tools, namely the SMART tool and the School Data Tool.

SMART tool

- 4.64 To assist schools in analysing NAPLAN results, the ACT Education Directorate has provided schools with access to the School Measurement, Assessment and Reporting Toolkit (SMART) resource.
- 4.65 SMART is an online comprehensive diagnostic tool, sourced from the New South Wales Department of Education, which provides school leaders and teachers with a resource to help better understand performance on NAPLAN literacy and numeracy measures. It is intended to support schools in critically evaluating their performance and contributes diagnostic information to the school's evidence base. It was intended that teachers would use this information to plan personalised teaching for students to address identified needs.
- 4.66 The SMART tool goes beyond the data publicly available to the broader community on the My School website. As SMART is sourced from the New South Wales Department of Education, it provides ACT Education Directorate users with the ability to provide results at the school level and for individual students and use New South Wales results as a comparator. Results at the school level that may be produced through SMART include:
- mean scores and standard deviations across all tests;
 - percentages of students in the different performance bands, including those who are below the minimum national standard and those in the highest performance bands;
 - percentages of students that choose each multiple-choice answer, compared to overall results for New South Wales students;
 - non-participation rates including numbers who were absent, withdrawn or exempt; and
 - performance on specific NAPLAN questions.
- 4.67 SMART also provides detailed information at the student level, including:
- overall results for each test;
 - individual responses to each question; and
 - student growth tables that display changes from the previous testing session to the current one, compared with matched students.
- 4.68 SMART is available at all schools whose students undertake NAPLAN testing and for this reason it is not available at Early Childhood Schools. The Early Childhood Schools do not have direct access to SMART, but rely on the Planning and Analytics Branch to generate data for them as a 'virtual' school, i.e. putting together the NAPLAN Year 3 scores of those children who were at the Early Childhood School. One Early Childhood School Principal responded to the survey as follows:

Being an Early Childhood School, it is imperative that we continue to receive the NAPLAN data for the students who have left the school as it informs the quality of the

teaching and learning across the school, with particular reference to any school wide strengths or weaknesses.

- 4.69 Early Childhood Schools have also advised that they would appreciate having direct access to SMART. One Early Childhood School Principal responded to the survey as follows:

I believe it would be more powerful if we had access to the SMART tool. As we are an early childhood setting and children are not enrolled with us who complete NAPLAN we do not have access to deeply analyse results to make adjustments.

- 4.70 The ACT Education Directorate has provided schools with access to the School Measurement, Assessment and Reporting Toolkit (SMART) resource. SMART is an online comprehensive diagnostic tool, sourced from the New South Wales Department of Education, which provides school leaders and teachers with a resource to help better understand performance on NAPLAN literacy and numeracy measures. SMART goes beyond the data publicly available to the broader community on the My School website and provides ACT Education Directorate users with the ability to provide results at the school level and for individual students and use New South Wales results as a comparator. SMART is a useful resource to facilitate the production and reporting of student performance information at the individual and school level.

School Data Tool

- 4.71 The School Data Tool is a web-based tool available to all ACT public schools that provides data in the following categories:

- school context (e.g. enrolments, class sizes);
- student engagement (e.g. student attendance, satisfaction survey results);
- staff (e.g. FTE data, teacher categories and staff satisfaction); and
- student educational performance (i.e. student educational outcomes).

- 4.72 The latter category includes A to E grades, as well as NAPLAN scores and participation rates. The School data Tool has been designed to be available to Principals, Deputy Principals, Directors School Improvement and some other Education Support Office staff.

- 4.73 The School Data Tool was implemented in August 2015. According to the Education Directorate's *School Data Tool Factsheet*:

The School Data Tool is a web-based tool which provides schools with data to support decision making and school improvement. The tool is a measure to bridge the gap between previous annual data reports and a planned future business intelligence tool.

- 4.74 The School Data Tool does not replicate the SMART tool that is used for detailed NAPLAN analysis. SMART works at the individual level, and uses New South Wales results as a comparator.

- 4.75 On 27 March 2017 the School Data Tool was upgraded in order to improve its 'look and feel' and the information that was capable of being generated from the tool. As a result of the upgrade significant additional data is now available through the tool and a 'School Snapshot' is now capable of being produced. According to the Education Directorate's *School Data Tool What's New in Version 2 Factsheet*:

The purpose of the [School Snapshot] is to inform conversations between principals and directors for school improvement.

The snapshot contains multiple data items for each school, and most data items in the snapshot comprise three sections: the title, a value showing the most recent data, and a spark chart showing the trend over time.

Where possible the data is colour coded to indicate its relationship to a comparator. Colour coding uses a variation of the traffic light system (red, blue green). This provides a visual cue of performance with green being better performance than blue, and blue better than red.

- 4.76 Each element of data in the School Snapshot is linked to an underlying data set in the School Data Tool. The underlying data in the School Data Tool may be accessed directly, or by clicking on links in the School Snapshot.
- 4.77 Very few ACT public schools and Education Support Office staff have been making use of the tool. Analysis of usage as at October 2016 showed:
- 75 per cent of schools had at least one trained user and therefore had access to the tool; and
 - between August and October 2016, only 12 individual ACT public school staff members used the School Data Tool and one individual staff member within the Office for Schools.
- 4.78 The School Data Tool was introduced in August 2015. It is a web-based tool that provides schools with comprehensive data in a range of categories including school context (e.g. enrolments); student engagement (e.g. student attendance, satisfaction survey results); and student performance, including A to E grades, and NAPLAN scores and participation rates. There has been low usage of the School Data Tool across ACT public schools to date and some negative feedback from schools regarding the usefulness and timeliness of data produced. A significant upgrade of the School Data Tool occurred in late March 2017 in which the 'look and feel' and the information that was capable of being generated from the tool was improved. The introduction of the 'School Snapshot' is expected to make information from the School Data Tool more accessible to users.

School Administration System

- 4.79 The Education Directorate is in the initial stages of implementing a new School Administration System that is 'designed to consolidate a variety of existing disparate Territory systems with a single centralised authoritative System for all students, staff and School activities'. The main objective of the School Administration System is to:
- ... manage all non-curriculum aspects of School and student information. This includes, but is not limited to, student demographic information, attendance and behavioural data, collaborative timetabling facilities within and between Schools, exam scheduling, staff absence management and finance, asset and resource management.
- 4.80 The School Administration System is expected to be able to migrate, and facilitate comparison with, national performance information. The School Administration System is intended to replace a range of current management information systems, including:
- the MAZE School Administration System;
 - the Central Student Database;
 - College Reporting;
 - A to E Reporting;
 - GradeXpert; and
 - Accelerus.
- 4.81 The School Administration System is intended to integrate with PIPS Online (as opposed to replace) whereby information from PIPS Online is intended to exchange data with the School Administration System through manual user intervention, i.e. data imports and file uploads.
- 4.82 The Education Directorate plans to adopt a phased approach to the implementation of the School Administration System, with functionality introduced in three separate phases between Term 3 2017 and Term 3 2018.
- 4.83 The implementation of the School Administration System is expected to make the collection and management of information, including student performance information, more consistent across ACT public schools, through the consolidation of various sources of information into a single repository.
- 4.84 The Education Directorate is in the initial stages of implementing a new School Administration System that is 'designed to consolidate a variety of existing disparate Territory systems with a single centralised authoritative System for all students, staff and School activities'. The School Administration System is intended to fully replace, or in some instances integrate through manual processes, a range of management information systems that currently provide information in relation to student performance information. If implemented as planned, the School Administration System should provide a consistent

and accessible source of student performance information for schools and Education Support Office personnel.

- 4.85 However, while the School Administration System is expected to provide a consistent and accessible source of student performance information in the future, it will still need to be supported by business intelligence (or business analysis) software that provides users with timely, relevant and user-friendly information and analysis on student performance, similar to what is being provided by SMART and the School Data Tool. At the time of audit fieldwork, how the School Administration System was to be supported by business intelligence (or business analysis) software was still being determined.

5 ANALYSIS AND USE OF STUDENT PERFORMANCE INFORMATION

- 5.1 This chapter discusses schools' analysis and use of student performance information in order to make decisions intended to improve educational outcomes.

Summary

Conclusion

It is evident that schools are using student performance information to inform differentiated teaching and learning approaches and targeted intervention for students. These approaches reflect the guidance and principles identified in the Education Directorate's policy documents. However, the extent to which schools achieve this varies considerably. ACT public schools have consistently identified variability in their skills and capabilities to use performance information to drive improved student outcomes and school improvement.

Annual external reviews of ACT public schools have consistently identified shortcomings in ACT public schools' analysis of student performance information and the use of this data to inform specific and tailored educational instruction. Improving the performance of schools in the targeted use of data needs special attention by the Education Directorate.

Key findings

Since at least 2014, external reviews of ACT public schools have consistently identified that ACT public schools' have underperformed with respect to National School Improvement Tool Domain 2 (Analysis and discussion of data) and Domain 7 (Differentiated teaching and learning). Annual external school reviews have identified shortcomings in these key areas over a number of years and made recommendations for improvement.

Paragraph

5.22

With respect to Domain 2, the *ACT External System Review Report 2016* stated 'in the absence of a whole-school assessment strategy or a reliable central data storage system, the capacity of teaching staff to engage with and use a range of data is affected' and 'an area for improvement is the building of staff skills in the analysis, interpretation and use of classroom data'. With respect to Domain 7, the *ACT External System Review Report 2016* stated 'in schools where student learning and wellbeing data is systematically collected, analysed and made easily accessible, teachers can readily draw on data to monitor progress, strengths and weaknesses, make judgements about individual needs and personalise teaching and learning

5.23

activities. Data was not always readily available for classroom teachers in some schools or not frequently accessed by teachers. Some teachers would benefit from professional learning to develop their capacity to routinely use data to inform their planning and personalise the learning’.

In order to supplement the Education Directorate-supplied SMART system and School Data Tool, schools have developed their own school-based systems for maintaining student performance information. Schools use a variety of systems, including commercial products and locally developed and designed databases. The use of multiple school-based systems for managing student performance information is inefficient and impairs the ability to generate consistent and comparable performance information across schools. The implementation of the School Administration System is expected to mitigate the risks of multiple and inefficient systems for managing student performance information.

5.34

Sixty-eight percent of school Principals agreed with the statement ‘My school has sufficient skilled staff, able to analyse student assessment data for the purpose of improving student learning outcomes’, while 10 percent of respondents neither agreed or disagreed and 22 percent of respondents disagreed or strongly disagreed. With respect to the capability of teaching staff, 56 percent of school Principals agreed with the statement ‘at the classroom level, teachers have sufficient skills to analyse student assessment data for the purpose of improving student learning outcomes’, while 14 percent of respondents neither agreed or disagreed and 30 percent of respondents disagreed or strong disagreed. A number of responses were also received from school Principals highlighting the variability of skills and capabilities across the teaching faculty.

5.43

An October 2015 report produced by KPMG for the Education Directorate identified that, for the purpose of identifying and measuring current gaps in capabilities, the ability to analyse data relating to student outcomes was an area of need for professional development and learning. The October 2015 report advised that ‘specific consideration should be given to training on data analysis and developing strategies to utilise data to support the implementation of the school curriculum to provide targeted support for students’. Such training would be expected to improve schools’ capability to use student performance information to inform improvements to student teaching and learning and overall school improvement. The Education Directorate has advised that a public tender is ‘due to be released shortly for a provider to design, pilot and evaluate a training and development program to support implementation of the Student Resource Allocation in ACT public schools’ and that this is to be delivered ‘under the National Partnership Agreement on Empowering Local Decision Making and is aligned to the KPMG report’.

5.48

School Principals overwhelmingly advised that school-specific assessment information is used primarily for the purpose of informing differentiated teaching and learning (i.e. tailored teaching and instruction) for school students (91 percent), followed by curriculum planning / delivery (71 percent) and strategic direction-setting for the school (63 percent). School-specific assessment information was also used for monitoring progress against the annual Action Plan (56 percent) and staff professional development (56 percent). This demonstrates the value that school principals place on school-based assessment processes to drive teaching practices. 5.57

School Principals advised that NAPLAN and PIPS data is used primarily for monitoring progress against the school's annual Action Plan (66 percent) and strategic direction-setting for the school (63 percent). They also identified the need for 'triangulation' of NAPLAN and PIPS data with other sources of information to inform decision-making. In contrast to the use of school-specific assessment data, only 56 percent of school Principals advised that NAPLAN and PIPS data was used to inform the development of differentiated teaching and learning for students. 5.62

Some examples of better practice were identified during the audit of schools' use of student performance information to inform differentiated teaching and learning for students and targeted intervention for students. These approaches reflect the guidance and principles associated with the Response to Intervention framework, which is identified in the Education Directorate's *Great Teaching by Design* document. The Response to Intervention framework recognises a scale of support and intervention for students, ranging from normal classroom teaching for Tier 1 students through to more one on one support with individualised instruction through plans for Tier 3 students. 5.79

Findings from five-yearly external school reviews

5.2 Since 2016 the People, Practice and Performance Framework has provided for five-yearly external reviews of schools. Prior to this, schools were subject to a five-yearly validation review. The National School Improvement Tool (NSIT), which is a nationally agreed framework with nine domains of school practices, has been used as the primary tool to inform school reviews since 2014. The nine domains of school practices, which schools are expected to demonstrate for the purpose of the external review, are:

- Domain 1 - an explicit improvement agenda;
- Domain 2 - analysis and discussion of data;
- Domain 3 - a culture that promotes learning;
- Domain 4 - targeted use of school resources;

- Domain 5 - an expert teaching team;
- Domain 6 - systematic curriculum delivery;
- Domain 7 - differentiated teaching and learning;
- Domain 8 - effective pedagogical practices; and
- Domain 9 - school community partnerships .

5.3 ACT schools are assessed on each of the domains using four descriptors: Outstanding, High, Medium and Low.

2016 reviews

5.4 The Education Directorate's *ACT External System Review Report 2016* identified that the domains with the highest proportion of schools performing at the lower rating of Medium are:

- Domain 2 - Analysis and discussion of data;
- Domain 7 - Differentiated teaching and learning; and
- Domain 6 - Systematic curriculum delivery.

Domain 2 - Analysis and discussion of data

5.5 With respect to findings associated with Domain 2 - Analysis and discussion of data, the *ACT External System Review Report 2016* stated:

There was considerable variability in how data sets were analysed and reported in key school documentation, particularly the Summative Evaluation Reports. The review panels found that schools had not always developed and documented a plan for the systematic collection of a range of student outcome data and therefore there was not always consistent collection of data types or approaches to data analysis over time; this had an impact on the school's ability to systematically measure trends in growth or regression.

Schools use a broad range of data to develop their Summative Evaluation Report based on the achievement targets as articulated in their current School Strategic Plan. This includes national data (e.g. NAPLAN) and school based data (e.g. PIPS, Reading Benchmarks, and Progressive Achievement Tests (PAT)).

In the absence of a whole-school assessment strategy or a reliable central data storage system, the capacity of teaching staff to engage with and use a range of data is affected. The panels found that an area for improvement is the building of staff skills in the analysis, interpretation and use of classroom data.

The capacity of school leaders to effectively identify, collect and use data is fundamental to continuous improvement. The quality of school reports and subsequent discussions in schools with leadership teams provided evidence that some leaders have a very sophisticated understanding of student assessment and data concepts while others are still building their capacity.

5.6 The *ACT External System Review Report 2016* further stated:

The Directorate could continue to build on the strengths of the 2016 reviews by: Continuing to place priorities for improvement in the analysis and discussion of data to ensure all schools have the capacity to effectively monitor the progress of all students to measure the impact of teaching and other school programs which affect student learning.

5.7 As a result of the findings in relation to Domain 2 - Analysis and discussion of data, a recommendation (Recommendation 2) was made as follows:

The Directorate continues to place priorities for improvement in Domain 2: Analysis and discussion of data to ensure all schools have the capacity to effectively monitor the progress of all students to measure the impact of teaching and other school programs which affect student learning. It is recommended that all schools develop and document a school plan and timetable for the annual collection of data on student achievement and wellbeing; that school leaders are supported in building their capacity to analyse a range of data sets; and that teaching staff are supported in interpreting and using classroom data to inform their teaching. Special Schools need to be further supported in identifying alternative data collection tools.

Domain 7 - Differentiated teaching and learning

5.8 With respect to findings associated with Domain 7 - Differentiated teaching and learning, the *ACT External System Review Report 2016* noted that the 2015 External Validation System Report identified this domain as a relative system weakness but identified 'in this review, Domain 7 emerged as a strength'. Nevertheless, the *ACT External System Review Report 2016* identified the prevalence of Special Schools in the 2016 cohort of schools to be reviewed as a factor in increasing the results associated with this domain:

Panel members believe the 2016 data provides a distorted picture due to the number of Special schools reviewed. The inclusion of these schools has resulted in this Domain identified with more high performance levels than last year. Special Schools are widely regarded for their personalisation of learning. These schools expertly personalise the learning for highly complex students based on an individualised curriculum, their close observation of student performance to identify gaps/check for understanding and provide highly detailed reporting to parents on a regular basis.

In schools where student learning and wellbeing data is systematically collected, analysed and made easily accessible, teachers can readily draw on data to monitor progress, strengths and weaknesses, make judgements about individual needs and personalise teaching and learning activities. Data was not always readily available for classroom teachers in some schools or not frequently accessed by teachers. Some teachers would benefit from professional learning to develop their capacity to routinely use data to inform their planning and personalise the learning.

5.9 As a result of the findings in relation to Domain 7 - Differentiated teaching and learning, a recommendation (Recommendation 4) was made as follows:

The Directorate continues to place priorities for improvement in Domain 7: Differentiated teaching and learning to address the needs of all students including high-achieving students. In particular, it is recommended that school leadership

teams provide professional learning opportunities for teachers to develop the skills to interpret and use information from data as a tool to build their differentiated teaching strategies in order to personalise learning.

2015 reviews

- 5.10 Similar to the 2016 external reviews, the *External Validation System Report 2015* identified 'schools and colleges performed least strongly in NSIT Domain 7: Differentiated teaching and learning and Domain 2: Analysis and discussion of data'.

Domain 2 - Analysis and discussion of data

- 5.11 In relation to Domain 2 - Analysis and discussion of data, The *External Validation System Report 2015* stated:

Sixty-four percent of schools and colleges were rated low or medium in NSIT Domain 2: Analysis and discussion of data. ... Performance in this was the second weakest and generated the most recommendations ...

Across 22 schools and colleges, there were 20 recommendations relating to collection, analysis and use of data.

- 5.12 The *External Validation System Report 2015* identified that progress had been made over time to 'specify, collect and report agreed sets of data for schools and colleges' and 'these data include measures of student achievement, demographic data and stakeholder perceptions'. The *External Validation System Report 2015* stated:

Refinement of these data sets for validation and performance monitoring has evolved over four years and is now clearer than it has ever been.

There are suggestions from some colleges and panels that the data sets for colleges could be further refined, particularly with respect to value-add measures of student learning.

The new School Data Tool, which is to be deployed shortly, is a welcome development. The School Data Tool can make these data clearly visible to school and college leaders. It also holds the promise of further simplifying the validation process.

- 5.13 Accordingly, the *External Validation System Report 2015* made a specific commendation in relation to these efforts and identified the development of the School Data Tool as a positive development:

The Directorate is commended for its sustained efforts in defining and making available consistent data sets to monitor school and college performance over time. Development of the School Data Tool has the potential to make these data clearly visible to school and system leaders.

- 5.14 Nevertheless, the *External Validation System Report 2015* commented on the capacity of schools, Principals and teachers to analyse and use student performance information:

While schools and colleges have greater access to performance and other data, the capacity of school leaders and classroom leaders to select, collect, analyse and use data remains weak.

Data are essential to evaluate the effectiveness of improvement plans and implementation. Without valid and reliable data, it is impossible to determine the impact of improvement efforts. This applies to four-year School Plans, as it does to Annual Operating Plans and Improvement Strategies. Effective evaluation of improvement efforts requires careful selection of appropriate data and effective collection, analysis, display and interpretation of it. These skills are limited in most schools and colleges.

- 5.15 The *External Validation System Report 2015* further stated:

Over the past four years, there has been slow progress in the development of the capacity of school leaders and classroom teachers to select, collect, analyse and use data effectively. This opportunity for development has been the subject of recommendations in each of the past three external validation system reports. To our knowledge, no system-wide strategy is in place yet.

- 5.16 As a result of the findings in relation to Domain 2 - Analysis and discussion of data, a recommendation (Recommendation 3) was made as follows:

Capacity for the effective identification, collection and use of data is fundamental to continual improvement. It is strongly recommended the Directorate urgently develop, implement and sustain a long-term strategy to systematically develop key stakeholder knowledge and skills in the selection, collection, display, analysis and use of data. System-wide capacity building can be generated through a structure Directorate approach. This approach needs to focus upon data for evaluating the impact of improvement efforts and process data required for differentiation and evaluation of individual student learning progress.

Domain 7 - Differentiated teaching and learning

- 5.17 With respect to findings associated with Domain 7 - Differentiated teaching and learning, the *ACT External System Review Report 2015* stated:

Differentiated teaching and learning was the weakest domain in NSIT evaluations. Seventy-three percent of schools and colleges were rated medium. Only one in four were rated high in this domain. No schools or colleges were rated low or outstanding.

- 5.18 The *ACT External System Review Report 2015* further stated:

Some use is made of assessment instruments to identify individual strengths and weaknesses and starting points for teaching, but this appears to be at the initiative of individual teachers rather than a school-wide expectation. Regular assessments of student learning are undertaken, but these often are summative and disconnected (eg, relating to different topics) rather than exploring long-term progress in students' knowledge, skills and understandings over time.

- 5.19 As a result of the findings in relation to Domain 7 - Differentiated teaching and learning, a recommendation (Recommendation 2) was made as follows:

There are opportunities for schools and colleges to strengthen differentiation practices to better meet the needs of individual students. Specifically, the use of formative assessment and process measures to guide differentiation at the classroom level can be strengthened in most schools. The Directorate is encouraged to identify

and promote examples of good practice already evident within ACT schools, and consider development of a system-wide strategy of professional learning in this area.

2014 reviews

5.20 Similar to the 2016 and 2015 external reviews, the *External Validation System Report 2014* identified shortcomings in schools activities with respect to Domain 7: Differentiated teaching and learning and Domain 2: Analysis and discussion of data. The *External Validation System Report 2014* stated:

The use of data to inform improvement by schools and the system has been a feature of the *External Validation System Report* for the last two years. This cycle again provides evidence of a growing awareness and use of data by ACT schools. Indeed, over the past three years there has been a significant improvement in the reporting and use of system-provided data through the validation cycle. Action on recommendations of previous reports regarding the standardisation of data sets across the system is acknowledged and welcomed.

The use of data and the capacity to use data to inform improvement, however, was again highlighted as a significant opportunity for improvement throughout this round of school validations. This is evidence by the NSIT evaluations and the high number of recommendations in *External Validation Reports* relating to the effective analysis and use of data: 17 of 19 reports included such a recommendation. Feedback from schools, panels and SNLs also emphasised the need for increased capacity building in the use of data to inform improvement efforts.

The development of capability in the analysis and effective use of data across the system remains a challenge and is a slow and ongoing process. There continues to be dependence by schools on the expertise and provision of data by the Directorate.

As was the case in the 2012 and 2013 the following restrictive and sometimes unhelpful practices remain evident:

- A tendency to focus and draw questionable conclusions through the comparison of selected points of data, rather than exploring possible trends and/or seeking to triangulate the data from a range of available and related data sets.
- A singular focus on the 'case management' of individuals and groups, rather than whole system improvement. The capacity to use data to evaluate school or class performance systematically over time is not strong.
- Reporting is generally restricted to a limited number of measures. Typically, progress made with respect to literacy and numeracy is discussed with reference only to National Assessment Program - Literacy and Numeracy (NAPLAN) data. Achievements in other areas of the curriculum tend not to be reported. Schools typically monitor and formally report their progress using performance measures and targets based upon summative assessment mechanisms - results measures. The use of process measures (formative assessment mechanisms) was evident in the *School Summative Evaluation Reports* of only two of the 19 schools validated.

5.21 Recommendation 3 of the *External Validation System Report 2014* stated:

Capacity for the effective use of data is fundamental to the process of continual improvement. It is believed schools and the Directorate would benefit from developing and implementing a strategy to systematically develop key stakeholder knowledge and know-how in the collection, display, analysis and use of data. Whilst this will evolve over time, it is recommended that the building of capacity be accelerated through development of a structured Directorate approach.

5.22 Since at least 2014, external reviews of ACT public schools have consistently identified that ACT public schools' have underperformed with respect to National School Improvement Tool Domain 2 (Analysis and discussion of data) and Domain 7 (Differentiated teaching and learning). Annual external school reviews have identified shortcomings in these key areas over a number of years and made recommendations for improvement.

5.23 With respect to Domain 2, the *ACT External System Review Report 2016* stated 'in the absence of a whole-school assessment strategy or a reliable central data storage system, the capacity of teaching staff to engage with and use a range of data is affected' and 'an area for improvement is the building of staff skills in the analysis, interpretation and use of classroom data'. With respect to Domain 7, the *ACT External System Review Report 2016* stated 'in schools where student learning and wellbeing data is systematically collected, analysed and made easily accessible, teachers can readily draw on data to monitor progress, strengths and weaknesses, make judgements about individual needs and personalise teaching and learning activities. Data was not always readily available for classroom teachers in some schools or not frequently accessed by teachers. Some teachers would benefit from professional learning to develop their capacity to routinely use data to inform their planning and personalise the learning'.

Schools' access to student performance information

5.24 As part of the survey of school Principals, Principals were asked to comment on how their school accessed student performance information. Principals identified that they accessed student performance information as follows:

- SMART system (85 percent);
- school-based systems (61 percent);
- the School Data Tool (57 percent); and
- other products (31 percent).

- 5.25 Consistency in the use of, and access to, systems for the management of student performance information was identified as problematic by a number of Principals as part of the school Principal survey. In response to the question 'What are the key barriers to your school improving student learning outcomes based on the use of assessment data' a number of Principals responded as follows:

The need for a system wide program that enables schools to track student progress over time and gives data in a number of forms tracking.

A system wide data system ...

Data systems not good enough - too time intensive and require knowledge of spreadsheets rather than tracking impact of interventions for student learning.

An efficient way to organise and combine data ...

Central online storage space for the collection of data.

An effective data tracker that shows longitudinal data, growth graphs etc.

Lack of effective, and efficient, shared tracking tools.

- 5.26 Timely access to student performance information was also identified by a number of Principals as part of the school Principal survey. In response to the question 'What are the key barriers to your school improving student learning outcomes based on the use of assessment data' some Principals responded as follows:

Real time easy access to data sets and then being able to develop strategic actions to follow are our biggest barriers.

Timely access.

Access to data in a timely fashion; takes time for interventions to show improvement.

- 5.27 In response to the question whether their school had 'access to sufficient assessment data to analyse for the purpose of improving student learning outcomes' some Principals responded as follows:

Currently data is not in real time and this makes direct interventions difficult. Some commercial data is very expensive and can be difficult to be used by a classroom teacher for specific interventions.

It would be great if there was a data collection tool available that all directorate schools are using and accessing.

A single point of truth system that enabled all data to be aligned with each student identity - much time is wasted manipulating data when it could be spent learning and teaching with students individual tracking data.

Data itself is great - we probably need a better system for storing it.

School-based systems for managing student performance information

- 5.28 Under the Education Directorate's model of school autonomy, schools have significant autonomy to determine how they intend to store and analyse data relating to student educational achievement. Separate to the Education Directorate-supplied SMART system and School Data Tool, each school may also decide for itself what system or systems to

use for storing and analysing data, from hard copy folders to spreadsheets to in-house designed databases to commercial software. Of the 16 schools visited for the purpose of the audit:

- four schools used a commercial product, GradeXpert or Accelerus;
- six schools used an in-house database that had been developed within the school;
- four schools used multiple approaches; and
- two schools had no formal system for collecting and storing data.

5.29 The commercial systems used by some schools (GradeXpert and Accelerus) offer features such as storing results in one place with colour-coding according to performance, producing results into overall reports and assessment across classes. These systems are intended to be fully replaced by the new School Administration System.

5.30 The internally developed databases (using Microsoft Excel or Microsoft Access) were typically built using teacher or parent skills. They had different features, but broadly included the ability to access individual student data from a range of sources (e.g. NAPLAN plus in-school tests) and assess student performance against averages or expectations. All of the systems in the schools visited that had been developed in-house were unique; none had been borrowed from another school, indicating that opportunities to learn from other schools and save time in developing databases were not taken up.

5.31 As part of the school Principal survey, and in response to the question 'How does your school access student assessment data?' some Principals also identified the use of Google Docs to create web-based databases to input and store data. Similar to in-house developed databases, the use of Google Docs allows for the development of tailored school-specific databases for the maintenance of student performance information.

5.32 Other than commercial products, none of the systems had been subject to quality checks, which seek to confirm the continuing validity and effectiveness of the system in producing data. While recognising that the designers and builders of the databases produced systems that were mostly welcomed by their school communities (although some Principals and teachers commented on deficiencies), there is a danger in relying on systems that are not supported by quality checks or professional documentation.

5.33 In response to the question 'If you have any suggestions regarding how student assessment data could be better utilised in driving improvements for student and schools' one Principal advised:

Establishing a framework for schools (maybe through Google Docs) that allows schools to create student data bases grounded in the tools they use to collect and monitor students growth. Currently this is an issue across many schools as they tinker and change their approach or dabble with commercial products that in the end fail to meet the needs of the school and cost thousands of dollars. Could the Directorate scale up a framework that enables schools to house data using the tools they have

that will in turn provide a 'big picture' view of student progress for each school - as well as 'just in time' data to inform teachers and intervention teams

- 5.34 In order to supplement the Education Directorate-supplied SMART system and School Data Tool, schools have developed their own school-based systems for maintaining student performance information. Schools use a variety of systems, including commercial products and locally developed and designed databases. The use of multiple school-based systems for managing student performance information is inefficient and impairs the ability to generate consistent and comparable performance information across schools. The implementation of the School Administration System is expected to mitigate the risks of multiple and inefficient systems for managing student performance information.

Schools' capability to analyse and use student performance information

Schools' overall capability

- 5.35 As part of the survey of school Principals, Principals were asked to comment on whether 'My school has sufficient skilled staff, able to analyse student assessment data for the purpose of improving student learning outcomes'. In relation to this question:

- 19 percent of survey respondents strongly agreed;
- 49 percent of survey respondents agreed;
- 10 percent of survey respondents neither agreed or disagreed;
- 21 percent of survey respondents disagreed; and
- 1 percent of survey respondents strongly disagreed.

- 5.36 A number of responses identified the variability in skills and capability in this area. A number of responses also identified a plan to develop further skills in this area:

... will be embarking on a skilling program for 2017/18.

It is apparent to the leadership team that this needs to be a focus in 2017, building teacher capacity to collect, analyse and use to inform learning and teaching.

This is still a work in progress and further training and support is required in this area.

- 5.37 A number of responses identified a need for further professional development in this area:

More work required. Any assistance would be greatly appreciated.

This is an area where we would like more professional learning.

I feel this is an area of need at my school and across the system. We are skilled at collecting data not so good at actioning it.

System based [professional learning] is important so that all teachers and leaders develop deep understandings.

- 5.38 One survey respondent noted the importance of being able to 'track student achievement across the years of schooling in one setting' and stated:

You are at a disadvantage if you do not have someone on staff without a strong knowledge of IT programs or software to support staff with this. Not all principals are skilled in this area. It has also been a big push across the system to collect more data, use an evidence based approach and rightly so, however now maybe the next logical steps for the system is to provide support to school leaders in a systematic way so they can use the plethora of data that is collected in schools to be purposeful in their actions to improve the learning outcomes of all students.

- 5.39 Just over half of the school leadership teams consulted for the purpose of the audit (nine out of 16) were confident of their abilities to conduct relevant analyses, and a further three were mostly confident. Nevertheless, four of the 16 schools considered there was limited or partial capacity, and schools were frequently not sure of where they could go to if they did require assistance with analysis of data. In addition, the quality of the data analysis is unknown as there are no quality assurance checks on this analysis.

Teachers' capability

- 5.40 As part of the survey of school Principals, Principals were asked to comment on whether 'At the classroom level, teachers have sufficient skills to analyse student assessment data for the purpose of improving student learning outcomes'. In relation to this question:

- 6 percent of survey respondents strongly agreed;
- 50 percent of survey respondents agreed;
- 14 percent of survey respondents neither agreed or disagreed;
- 29 percent of survey respondents disagreed; and
- 1 percent of survey respondents strongly disagreed.

- 5.41 A number of responses identified the variability in skills and capability in this area:

There is variation across the school in the skill level of teachers to do this.

I don't think the whole staff possess this skills set.

High levels of variability between one teacher and the next.

- 5.42 A significant number of responses identified the need for ongoing training in this area:

Ongoing [professional learning] is essential to up-skill all teachers. There is a disparity in teacher skills.

I think this is an ongoing area of need.

An area of focus for our school, improving over time.

We are meeting this need through targeted coaching.

More training is required for some staff. With the right support, they are developing the right habits around effective documentation, assessment and planning using data.

- 5.43 Sixty-eight percent of school Principals agreed with the statement 'My school has sufficient skilled staff, able to analyse student assessment data for the purpose of improving student learning outcomes', while 10 percent of respondents neither agreed or disagreed and 22 percent of respondents disagreed or strongly disagreed. With respect to the capability of teaching staff, 56 percent of school Principals agreed with the statement 'at the classroom level, teachers have sufficient skills to analyse student assessment data for the purpose of improving student learning outcomes', while 14 percent of respondents neither agreed or disagreed and 30 percent of respondents disagreed or strong disagreed. A number of responses were also received from school Principals highlighting the variability of skills and capabilities across the teaching faculty.

KPMG report

- 5.44 In October 2015 KPMG produced a report for the Education Directorate; *Capability Improvement Strategy - Principals and School Leaders*. The *Capability Improvement Strategy - Principals and School Leaders* report (October 2015) identified:

The ability to analyse data regarding student outcomes was also seen as an area in which some schools were fortunate to have staff with the appropriate skills to undertake this, but many did not. Many Business Managers were required to undertake this by teaching themselves and felt that they did not possess the more technical data-set manipulation (sorting and identifying trends, outliers etc) and analysis skills required.

- 5.45 In order to 'identify and measure current gaps in capabilities, KPMG undertook a skills gap and training needs analysis to develop a Baseline Scan'. As part of the Baseline Scan the *Capability Improvement Strategy - Principals and School Leaders* report (October 2015) identified:

The importance of utilising data to improve student outcomes was consistently identified in all Focus Groups as well as the survey results. It was identified that it takes a specific skill set to work with large data sets, apply analysis and develop practical strategies to utilise this knowledge and achieve outcomes for students.

- 5.46 The *Capability Improvement Strategy - Principals and School Leaders* report (October 2015) identified a number of key themes for development requirements. The theme of 'utilising data to support strategic planning and improved student outcomes' was identified for Principals, School Leaders and Business Managers. The *Capability Improvement Strategy - Principals and School Leaders* report (October 2015) identified:

A consistent theme identified in the Focus Groups and survey was how to better utilise data. Data analysis will be an essential capability in the new SRA Program, which will provide schools with greater control over the school's budget, how resources are allocated and improved data about student and school performance. This area was identified as a high priority for learning and development opportunities and seen as a critical component to improve future student outcomes.

- 5.47 Accordingly, the *Capability Improvement Strategy - Principals and School Leaders* report (October 2015) identified:

Specific consideration should be given to training on data analysis and developing strategies to utilise data to support the implementation of the school curriculum to provide targeted support for students. Focus Group feedback suggested that there was high capacity to improve understanding of how to utilise data and the importance of it for future outcomes was well understood. It should also be noted that this was identified as a key area where all participants showed an interest in developing their skills.

- 5.48 An October 2015 report produced by KPMG for the Education Directorate identified that, for the purpose of identifying and measuring current gaps in capabilities, the ability to analyse data relating to student outcomes was an area of need for professional development and learning. The October 2015 report advised that 'specific consideration should be given to training on data analysis and developing strategies to utilise data to support the implementation of the school curriculum to provide targeted support for students'. Such training would be expected to improve schools' capability to use student performance information to inform improvements to student teaching and learning and overall school improvement. The Education Directorate has advised that a public tender is 'due to be released shortly for a provider to design, pilot and evaluate a training and development program to support implementation of the Student Resource Allocation in ACT public schools' and that this is to be delivered 'under the National Partnership Agreement on Empowering Local Decision Making and is aligned to the KPMG report'.

Demand for professional learning

- 5.49 Professional Standards for Principals have been established by the Australian Institute for Teaching and School Leadership. These standards emphasise leadership capabilities and briefly refer to the need to make evidence-based judgements.

- 5.50 Comments from the survey of school Principals also highlighted an interest in accessing more specific training from the Education Support Office:

I believe the Directorate's focus on evidence based practice and using data has been useful, however more training in this would be beneficial.

I would like to see a series of [professional learning] opportunities given to teachers from assessing students interpreting data, implementing learning programs and then assessing the results/outcomes. These could be over a term, with teachers from cluster schools coming together in year level groups.

- 5.51 Furthermore, in response to the question 'what are the key barriers to your school improving student learning outcomes based on the use of assessment data?' school Principals raised a number of issues associated with a lack of capability and skills:

We don't have enough staff who understand what the data is telling us. SMART data is clunky and difficult to use.

You are at a disadvantage if you do not have someone on staff with a strong knowledge of IT programs or software to support staff with this. Not all Principals are skilled in this area. It has also been a big push across the system to collect more data, use an evidence based approach and rightly so, however now may be the next logical steps for the system is to provide support to school leaders in a systematic way so they can use the plethora of data that is collected in schools to be purposeful in their actions to improve the learning outcomes of all students.

Changing teachers' use of data collection from summative to formative and driving more sophisticated classroom data analysis. Giving teachers sufficient time to analyse data and engage in collaborative data inquiry.

Having someone from the leadership team who understand how to interpret system data, driving the data analysis.

Staff knowledge of interpreting the data – particularly getting new staff up to speed with school-based practices and data collection tools each year. This is particularly applicable to new educators.

Time – we have a very new staff and this year has been all about forming a cohesive team with shared understandings and beliefs. Consistency of practice is now required but we're not there yet, 2017 should see significant improvement in this regard.

Skills by new educators.

Access to professional learning on data analysis

- 5.52 As part of its October 2015 report into the skills and capabilities across the Education Directorate, KPMG prepared a draft Capability Improvement Strategy in 2015. The analysis indicated four areas of priority for capacity building, including data analysis to support improving student outcomes; and the target audience for training and support was to include Principals and School Leaders.
- 5.53 The Leadership Development Advisory Group has been working on an induction approach for new Principals to start in Term 2 2017, but as at December 2016 it was still in draft. The intention is that any recent Principal (e.g. one to three years in their role) may participate in modules of this program as they choose. The Education Directorate is also considering a program for experienced Principals, but as at December 2016 this was only at an initial scoping phase.

RECOMMENDATION 7

PROFESSIONAL LEARNING FOR USE AND ANALYSIS OF DATA

The Education Directorate should develop a comprehensive professional learning program for school Principals and teachers on the use of student performance information and how it can be used to inform differentiated teaching and learning to students and overall school improvement.

Schools' use of student performance information

Use of school-specific assessment data

5.54 As part of the survey of school Principals, Principals were asked to identify the five most important uses of school-specific assessment information. Table 5-1 shows school Principals' responses against the pre-identified list of possible uses.

Table 5-1 Use of school-based assessment information

Potential use	Percentage
Differentiated instruction	91.43
Curriculum planning / delivery	71.43
Strategic direction setting for the school	62.86
Monitoring progress against the annual Action Plan	55.71
Staff professional development	55.71
Grouping for instruction	41.43
Resourcing	37.14
Development of school plan	35.71
School review	22.86
Identifying best practice in ACT public schools	7.14
Staffing	5.71
Funding allocation	2.86
Timetabling / scheduling	0.00
Other	5.71

Source: ACT Audit Office, based on survey of school Principals

5.55 The following responses were also received as part of the survey:

Enabling all students to achieve the essential skills and understanding of the curriculum.

Monitoring student growth overtime. Tracking progress of cohorts.

It's not explicitly stated above but surely it should be to support each individual child at their point of need.

5.56 Another survey response also identified that 'tracking student learning' should have been explicitly identified as a potential use of this data.

5.57 School Principals overwhelmingly advised that school-specific assessment information is used primarily for the purpose of informing differentiated teaching and learning (i.e. tailored teaching and instruction) for school students (91 percent), followed by curriculum planning / delivery (71 percent) and strategic direction-setting for the school (63 percent). School-specific assessment information was also used for monitoring progress against the

annual Action Plan (56 percent) and staff professional development (56 percent). This demonstrates the value that school principals place on school-based assessment processes to drive teaching practices.

Use of NAPLAN and PIPS information

5.58 As part of the survey of school Principals, Principals were asked to identify the five most important uses of NAPLAN and PIPS assessment data. Table 4-2 shows school Principals' responses against the pre-identified list of possible uses.

Table 5-2 Use of NAPLAN and PIPS information

Potential use	Percentage
Monitoring progress against the annual Action Plan	65.71
Strategic direction setting for the school	62.86
Differentiated instruction	55.71
Curriculum planning / delivery	51.43
Staff professional development	51.43
Development of school plan	45.71
Resourcing	35.71
School review	32.86
Grouping for instruction	24.29
Staffing	10.00
Identifying best practice in ACT public schools	7.14
Funding allocation	5.71
Timetabling / scheduling	1.43
Other	10.00

Source: ACT Audit Office, based on survey of school Principals

5.59 The following responses were also received as part of the survey:

Identification of students who require extension.

Enabling all students to achieve the essential skills and understanding of the curriculum.

Monitoring student growth overtime. Tracking progress of cohorts.

It's not explicitly stated above but surely it should be to support each individual child at their point of need.

Use of NAPLAN

5.60 Responses to the survey of school Principals also identified that schools do not use NAPLAN data in isolation, and that it is one data source that is 'triangulated' with other data sets to inform schools' decision making. For example, one Principal advised:

NAPLAN is useful as long as it is taken in context (as one measure at a point in time) and used in conjunction with other assessment data.

Use of PIPS

- 5.61 Similar to NAPLAN data, respondents to the survey advised that schools did not use PIPS data in isolation, but 'triangulated' the information with other data sources to inform decision making; or to confirm findings from other data sources. A range of survey responses were provided as follows:

... it is one data set which allows us to look at areas of need and acceleration, however needs to be cross referenced with other school based data.

The beginning of year data is useful for planning. The end of year merely affirms our local assessment information rather than providing new information.

Our school data systems provided a more accurate record and reflection of student learning - this information is used throughout the year to guide school decision making alongside PIPS data.

We triangulate PIPS data with the Oral Language Assessment tool and PM Benchmarks for reading and our own Place value assessment for number.

- 5.62 School Principals advised that NAPLAN and PIPS data is used primarily for monitoring progress against the school's annual Action Plan (66 percent) and strategic direction-setting for the school (63 percent). They also identified the need for 'triangulation' of NAPLAN and PIPS data with other sources of information to inform decision-making. In contrast to the use of school-specific assessment data, only 56 percent of school Principals advised that NAPLAN and PIPS data was used to inform the development of differentiated teaching and learning for students.

- 5.63 The audit also sought further information on whether and how student performance information was used to support:

- differentiated teaching and learning for students; and
- students who are in need of attention.

Differentiated teaching and learning to students

- 5.64 Differentiated teaching and learning is a key element of the National School Improvement Tool (Domain 7) and a school's use of differentiated instruction is one measure by which it is reviewed as part of the five-yearly external review.

- 5.65 According to the Australian Council for Educational Research *National School Improvement Tool* document differentiated teaching and learning is described as follows:

The school places a high priority on ensuring that, in their day-to-day teaching, classroom teachers identify and address the learning needs of individual students, including high-achieving students. Teachers are encouraged and supported to monitor closely the progress of individuals, identify learning difficulties and tailor classroom activities to levels of readiness and need.

5.66 The process of continual assessment of students in order to differentiate students so that they can be taught according to their current knowledge and capacity was mentioned by all teachers who were interviewed for the purpose of the audit. The process by which this is undertaken – through formal tests, analysis of work samples, informal teacher-based tests or considering homework, varied significantly, but it is apparent that the intent was consistent.

5.67 Several teachers described the Response to Intervention framework, which was articulated in *Great Teaching by Design*. The Response to Intervention framework states:

In every classroom, students have different:

- abilities
- learning preferences
- backgrounds
- prior knowledge
- interests
- experiences

Some students require additional support and a range of scaffolded learning experiences and opportunities to help them learn effectively and develop the capacity for further learning.

Some of these students may need more individualised and intensive behavioural supports to engage in learning.

5.68 The Response to Intervention framework identifies several tiers to facilitate working with students of different abilities:

- Tier 1 students, after assessment, are considered to require normal classroom teaching;
- Tier 2 students require more intensive small group help; and
- Tier 3 students require more 1:1 support with individualised instruction through plans for students.

5.69 In addition to this formal categorisation into tiers, teachers respond to the assessed different needs of their students by differentiating their teaching approach for different groups. Some schools divert resources to create other positions that can assist teachers with their analysis of student performance and creation of programs tailored for them.

5.70 One school used a Google Apps monitoring system that allowed teachers to track student progress and make decisions as to how best to allocate students across classes in each year level. This school advised that a similar system is used by all Victorian schools.

Support for students who are in need of attention

- 5.71 A key focus of the audit was the extent to which student performance information was used to inform intervention and/or other activity for student in need of attention.
- 5.72 School Principals and teachers interviewed for the purpose of the audit identified that support for students in need of attention primarily included additional intervention programs as well as the referral of children who may have psychological or medical needs that are interfering with learning to health professionals. School Principals and teachers also identified the need to provide 'stretch' programs to advanced children.
- 5.73 At some schools, students and student cohorts that require additional support are monitored by means such as traffic light codes on school database systems or GradeXpert, by meetings with school executive, based on A to E grades, or through learning plans for those that have them in place.
- 5.74 Schools sought to monitor vulnerable cohorts and also to identify students or student cohorts performing above or below expectations, or otherwise requiring additional support. Only some schools did so through analysing data from the school-based information systems; other key methods were through staff discussions and use of the Response to Intervention framework, discussed in more detail at paragraph 5.67 above.
- 5.75 Teachers referred to identifying gaps in learning and then addressing those gaps, for students and for cohorts; and also for improving classroom practices. But some schools considered that too many tests were not done well; or pointed to inconsistency in the tools used, or to lack of an overall approach to testing.
- 5.76 All schools visited undertook analysis to identify students in need of attention. Comments varied on the depth and frequency of the analysis, but all undertook such work. In one case, the degree or quality of the analysis was uncertain.
- 5.77 The following Case Study shows an example of good practice at a primary school where the Principal and the rest of the school team work together to analyse student performance.

Table 5-3 Case study: good use of student performance information at a primary school

Case Study: good use of student performance information at a primary school
<p>At this primary school the Principal works closely with the leadership team, teachers and community to use student performance information to enhance student outcomes and overall school performance.</p> <p>The capacity of the leadership team to effectively analyse and use data was described by the Principal as ‘very good’, with the Principal having a strong leadership role in this work. The school culture has evolved to ensuring a high priority is given to the school-wide analysis and discussion of systematically collected data on a range of academic and non-academic student outcomes. ‘The data has to be quantifiable and measurable to look at growth’, with student performance captured on a school-developed comprehensive data base. The database enables tracking of students’ progress and growth: ‘The joy of this is that I can get out all 2015 and 2016 results’. The data base also holds other non-academic well-being information related to the student.</p> <p>The school uses a set of key school-specific assessment tools, in addition to NAPLAN and PIPS, to track student progress and make teaching adjustments. The Principal said assessment tools were selected based on ‘trial and error and previous experience, and if ACER are behind them’. The school Principal also advised ‘they had to be scalable and have a recognised research base. We also have NAPLAN and PIPS and they correlate beautifully to enable us to talk about growth’.</p> <p>In analysing NAPLAN data, the school Principal advised ‘I do it first, then I do it with the Deputy Principal, then we do it as a whole leadership team, then we present it to staff’. The data analysis considers overall school performance as well as individual students and students from identified priority groups.</p> <p>Measures of growth across the years of school are also viewed with importance. ‘For kids who haven’t made expected growth we do further analysis. But analysis has to be done with a clinical eye, to understand the test conditions that might affect the results’.</p> <p>A key feature of the school’s culture is the approach to supporting and building teachers skills in analysing and interpreting data. Central to embedding this approach are the regular in-depth discussions held between a member of the leadership team and an individual teacher. The teachers’ class data are brought up on the data base, with the discussion then focussing on the achievement data and possible teaching strategies for continuous improvement of student outcomes. These one-on-one meetings are conducted every school term in week 3, aiming for at least four comprehensive discussions a year.</p> <p>The Principal advised that ‘all of the executive are on the coal face with the teachers...we tried the formal classroom observations used in some schools but we didn’t get much out of it. Every term in week three we have programming conversations with teachers where we look at ‘what is working for you?’</p>

Case Study: good use of student performance information at a primary school

Teachers at this school advised:

'I type up my student assessment results and enter them electronically and then send this to the Principal. We talk about what its saying and about where to go from here. Learning about data is huge. Unless I know what I should be looking for, it's useless, a big learning curve but what we are doing I have found really useful.'

'I look for improved growth over time, you can see clearly from the data. After looking at the data we piloted Readers Workshop, we wanted to know 'well, are we making a difference to student learning?'

The school aims to drive a strong improvement agenda. The school leadership ensures high priority is given to teacher's data literacy skills through regular quality discussion of student achievement and possible strategies for improvement.

Source: ACT Audit Office, based on audit fieldwork.

- 5.78 The following Case Study shows good performance at a high school that used a variety of methods to store and present student information to teachers, executives and the student themselves.

Table 5-4 Case study: good use of student performance information at a high school

Case study: good use of student performance information at a high school

At this medium-sized high school the Principal describes the capacity of the leadership team to effectively analyse and use data for student improvement as 'huge', and clearly articulates how data use contributes to the building of a school culture based on self-evaluation and reflection. The school has a data analysis team and school leaders regularly work with their faculty teams to review achievement data relating to their areas, going through each student's results 'to make sure they are each reaching their potential'. If school-decided and system level test results show inconsistencies, the school leaders consult the classroom teacher or the previous teacher.

The leadership team has proactively focused on data over the last few years, and formed a school wide expectation that teachers will use the data to identify appropriate starting points for teaching and to personalise teaching and learning activities. To support teachers in their analysis and use of data all staff have access to, as required, assistance and guidance from the school leadership and data analysis teams.

The school places a high priority on meeting the learning needs of individual students, including high-achieving students. School leadership and teachers work at understanding where students are in their learning and differentiation (tailoring instruction to meet individual student learning needs using ongoing assessment and flexible grouping) is a school focus. Over the last four years the school has refined the database from essentially a spreadsheet to a quality data base, with the expectation that teachers will use the database to inform differentiation.

To support students in their learning the school has also developed a unique 'living' database that all teachers and students in the school can view and input to, at any time. The database includes fields such as the student's intended future, strengths, and preferred learning styles. This document database, combined with other student learning outcomes databases, ensures all

Case study: good use of student performance information at a high school

teachers have access to a broad range of student achievement and wellbeing data.

The school captures and provides a broad range of relevant data which is used routinely by school leadership, teachers and students in a range of ways... while maintaining a focus on identifying individual student growth for all students and where improvements are needed. School leadership have moved from simple accessing of data to integrate data in decision making about strategies to improve learning.

Source: ACT Audit Office, based on audit fieldwork.

- 5.79 Some examples of better practice were identified during the audit of schools' use of student performance information to inform differentiated teaching and learning for students and targeted intervention for students. These approaches reflect the guidance and principles associated with the Response to Intervention framework, which is identified in the Education Directorate's *Great Teaching by Design* document. The Response to Intervention framework recognises a scale of support and intervention for students, ranging from normal classroom teaching for Tier 1 students through to more one on one support with individualised instruction through plans for Tier 3 students.

APPENDIX A: NATIONAL SCHOOL IMPROVEMENT TOOL

Domain 2 - Analysis and discussion of data

A high priority is given to the school-wide analysis and discussion of systematically collected data on student outcomes, including academic, attendance and behavioural outcomes, and student wellbeing. Data analyses considered overall school performance as well as the performances of students from identified priority groups; evidence of improvements/regression over time; performances in comparison with similar schools; and, in the case of data from standardised tests, measures of growth across the years of school.

Outstanding	High	Medium	Low
<p>The principal and other school leaders clearly articulate their belief that reliable data on student outcomes are crucial to the school's improvement agenda. The school has established and is implementing a systematic plan for the collection, analysis and use of student achievement data. Test data in literacy, numeracy and science are key elements of this plan.</p> <p>Data are used throughout the school to identify gaps in student learning, to monitor improvement over time and to monitor growth across the years of school. A high priority has been given to professional development aimed at building teachers' and leaders' data literacy skills. Staff conversations and language reflect a sophisticated understanding of data</p>	<p>There is evidence that the principal and other school leaders view reliable and timely student data as essential to their effective leadership of the school. There is a documented school plan and timetable for the annual collection of data on student achievement and wellbeing.</p> <p>One or more members of staff have been assigned responsibility for implementing the annual plan, analysing the full range of school data and summarising, displaying and communicating student outcome data for the school. The school has ensured that appropriate software is available and that at least these assigned staff has been trained to undertake data analyses.</p> <p>Time is set aside (eg. on pupil free days and in staff meetings) for the discussion of data and</p>	<p>School leaders pay close attention to data provide to them about the performance of the school (eg. NAPLAN results; Year 12 results) and identify areas in which the school is performing relatively poorly or well.</p> <p>Tests (eg. commercially available reading tests) may be used by some teachers, but generally are not used as part of a whole-school assessment strategy.</p> <p>An ad hoc approach exists to building staff skills in the analysis, interpretation and use of classroom data.</p> <p>Software may be used for the analysis of school results including the performance of priority groups by analyses generally do not extend to studies of improvement of growth.</p> <p>School data are presented to staff in</p>	<p>There is very little evidence of school leaders' practical use of school-wide student outcome data. There is either no annual data collection plan for the school or the plan is being implemented in a minimalist fashion. The school makes little or no use of tests beyond those the school is required to use.</p> <p>Teachers do not systematically analyse test and other data for their classes and teachers make little use of data to reflect on their teaching. The school is unable to demonstrate how data have been used in meeting or with parents to analyse and discuss current achievement levels and strategies for improvement.</p>

Outstanding	High	Medium	Low
<p>concepts (eg. value-added; growth; improvement; statistical significance).</p> <p>Teachers routinely use objective data on student achievement as evidence of successful teaching.</p>	<p>the implementation of data for school policies and classroom practices. These discussions occur at whole-school and team levels. The school can illustrate through case studies, meeting minutes and project plans how data have been used to identify priorities, take action and monitor progress.</p>	<p>meetings, but presentations tend to be 'for information' rather than trigger for in-depth discussions of teaching practices and school processes. Information about the school's performance is communicated to the school community, but may lack explanation or analysis. There is limited engagement with parents and families around school data.</p>	

Audit reports

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Report No. 02 – 2017	2016 ACT Election
Report No. 01 – 2017	WorkSafe ACT's management of its regulatory responsibilities for the demolition of loose-fill asbestos contaminated houses
Report No. 11 – 2016	2015-16 Financial Audits – Financial Results and Audit Findings
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Report No. 09 – 2016	Commissioner for International Engagement – Position Creation and Appointment Process
Report No. 08 – 2016	Annual Report 2015-16
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Reports Published in 2015-16	
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