
Reporting student learning

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Introduction

This paper is one of six research ‘backgrounders’ to support the 2018–20 review of the New South Wales (NSW) curriculum. It focuses on reporting student learning, which has been identified as an area of interest in the review. The Terms of Reference emphasise the inextricable link between curriculum, teaching, learning, assessment and reporting, and requires the review to *identify the implications of any new approach to curriculum design for assessment and reporting*. This paper seeks to present an evidence base, based on a rapid review of relevant research literature, to inform considerations related to student reporting practice reform.

The paper begins with a note on the scope of this review and some observations regarding the use of reporting terminology. Drawing on the authors’ recent *Review of Student Reporting in Australia* (Hollingsworth, Heard, & Weldon, 2019), the contention is made that there is inconsistent understanding and use of terminology associated with student reporting, and this has implications for reporting policy and practice.

Next, an overview of student reporting in NSW is provided, setting the context for this review and highlighting elements of current policy and practice. In NSW, as in many locations, satisfaction with student reporting practices among stakeholders has been vexed for some time. An understanding of the recent history of student reporting in NSW is anticipated to inform consideration of policies and practices currently in place as well as possible alternatives that might align with a reformed NSW curriculum.

Following the overview of student reporting in NSW, a summary of relevant perspectives from the research literature is presented. Although student reporting has a long tradition of being an activity that all schools across NSW and other locations engage in each year, research about it is limited. There have been few studies in Australia and internationally that have explicitly examined the effectiveness of different reporting approaches; however, findings from the studies available provide useful insights. Particular foci of the research review include: traditional student reports, standards-based reporting, reporting learning progress, and studies of impact.

An overview of some selected examples of reporting practice internationally is presented next, to identify system-level lessons that may guide any reform of student reporting design and implementation. Descriptions are provided of reporting policies and practices in Australia (with a particular focus on NSW), Canada (including Ontario and British Columbia), New Zealand, and Scotland. Insights from these examples and previous sections of the paper are then drawn together to describe considerations for the NSW curriculum review with respect to student reporting, and the final section of the paper presents a conclusion. It is hoped that this rapid review will provide a policy-relevant foundation for stimulating further discussion about student reporting in NSW.

Scope and terminology

A note on scope

This paper is intentionally focussed on student reporting that takes place at the school-level: it does not include a review of system-level or national-level student reporting.

At the school-level, student reports are typically designed to communicate information about student learning to students and their parents and carers: on some occasions they might also be used for communicating information about students to other stakeholders such as new schools, scholarship/award organisations, and prospective employers.

Various formats are used to communicate information about student learning. These include written reports, online (continuous) reports, interviews, and portfolios. This review preferences an examination of written reports, as these are widely used in Australian schools to meet legislative requirements related to student reporting (details of these legislative requirements are provided in the section of this paper titled, *Selected examples of reporting practice internationally*). The distinct roles that other forms of communication play (such as interviews and portfolios), and the ways that these are intended to work together in the process of student reporting is acknowledged (see, Hollingsworth, et al., 2019); however, a detailed examination of these is outside of the scope of this review.

A note on terminology

In Australia, school-based student reporting practices tended, for a long period, to be largely inherited from traditional approaches. However, in recent years, emerging trends in curriculum, teaching, learning, and assessment are being reflected in changes to established reporting formats and practices, and some 'new' terms associated with student reporting are emerging. It appears that some of these 'new' terms, as well as some terms considered to be fairly well established, are not clearly understood and are interpreted and embraced in various ways (Hollingsworth et al., 2019).

Terms such as those displayed in Table 1, for example, appear to be used in different ways across the education community. Some terms have meanings specific to particular times or particular initiatives, some terms appear to have multiple meanings, and some terms appear to be used interchangeably.

Table 1 Terms associated with reporting and communicating about student learning (Hollingsworth et al., 2019)

<i>achievement</i>	<i>attainment</i>	<i>continuous reporting</i>
<i>formative assessment</i>	<i>gain</i>	<i>grades</i>
<i>grading</i>	<i>growth</i>	<i>improvement</i>
<i>indicator</i>	<i>level</i>	<i>normative</i>
<i>outcome</i>	<i>performance</i>	<i>progress</i>
<i>progress task</i>	<i>progressive reporting</i>	<i>report card</i>
<i>standard</i>	<i>student report</i>	<i>summative assessment</i>

One potential outcome of this is the possibility of misrepresenting or misinterpreting statements made about reporting or communicating student learning – including statements made in research papers, policy documents, and student reports themselves. Shared understanding of the terms used in discourse is key to effective communication. As noted by Hollingsworth et al. (2019),

To facilitate communication about student learning, terms associated with the ways that learning is described and measured need to be clearly explained and used with consistency to enable accurate and meaningful interpretation among stakeholders. (p. 67)

Examples of key concepts for which a shared understanding is important for students, parents/carers, teachers, and school leaders in the context of reporting, are what is meant by a student's 'performance' on learning and assessment tasks, their learning 'attainment' and their learning 'progress'. The following is one example of how such concepts might be distinguished.

Descriptions of key concepts

Performance: a measure of 'how well' a child has done; sometimes in comparative terms, for example against a teacher's expectations as outlined in assessment criteria or rubric, others in the class or cohort, etc.; may be communicated as a letter grade, a ranking, a test score, or a total mark for a project or assignment, etc.

Attainment: where a child 'is at' now; a summative, descriptive indication of what a child has newly achieved, not simply what they can do, but what they can now do; may be communicated via indicators of progress such as standards reached, outcomes demonstrated, etc.

Progress (gain or growth): a measure or other indication of the 'learning made'; the difference between previous and current attainment along a continuum of learning as measured over time; may be indicated in terms of a visual shift in position along a progression, an increased score in standardised assessment, or (if an expected level of growth can be feasibly determined) descriptions such as 'below', 'at' or 'above' expected growth. (Hollingsworth et al., 2019, p. 67)

A consideration of the distinction between terms such as these is anticipated to be central to any refinement or reform of student reporting policies and practices.

To minimise possible misrepresentations of reporting terminology, statements from research papers, policy documents, and student reports that are included in this paper are presented using the precise terms that were used originally. And for clarity, throughout this paper we use the language 'student reports' when referring to the documents schools produce to communicate about student learning (to account for all terms used to describe these, e.g. 'school reports', 'report cards'), and 'parents' when referring to the adults responsible for the care of students (to account for all those who have responsibility for the care of students, e.g. 'parent-carers', 'carers', 'guardians').

An overview of student reporting in NSW

In NSW, as in many locations, satisfaction with student reporting practices among stakeholders has been vexed for some time. In the 1990s, the introduction of outcomes-based curriculum in Australia had significant implications for the ways in which students were taught and assessed, and subsequently how schools reported on student achievement (Griffin, 1998). Curriculum 'profiles' consisted of sequenced learning outcomes intended to describe a typical progression of learning within a subject, and focused teacher assessment on measuring individual student attainment of these outcomes (Eltis, 1995, p. 3-4). Outcomes-based assessment and reporting

thus sought to positively identify what each individual child could demonstrate. This appears to have resulted in a reduced emphasis in some student reports on comparative forms of assessment and traditional performance-based indicators, such as letter grades and marks.

The introduction of this new form of curriculum in NSW was reviewed in 1995, and later the impacts on assessment and reporting evaluated in 2003, for the NSW Minister for Education and Training by panels both chaired by Ken Eltis. It was noted in the review that the new emphasis on positively reporting what a child could do failed to communicate other information considered valuable to parents, such as how well their child had achieved a particular outcome, what their child could not yet do, how they compared to other students in the class and how parents might be able to help (Eltis, 1995). The panel noted an additional concern about the language used in outcomes reporting: “when outcomes statements themselves have been incorporated into reports...the language of the outcome has not been readily understandable by parents” (p. 72).

In the 2003 evaluation, the panel found that despite the hard work of schools in engaging their communities in approaches to outcomes-based reporting, both teachers and parents were disappointed with these new systems. The “nub of the reporting problem”, according to the panel, was that such reports were found to be overly-complex, too detailed and in some ways uninformative; parents really only wanted a final grade, and an indication of where their child sat in relation to others (Eltis, 2003, p. 89). Parent confusion about outcomes-based styles of reporting, among several other issues regarding reporting practices generally, was found in a 2000 national report prepared for the Commonwealth Department of Education, Training and Youth Affairs (Cuttance & Stokes, 2000). Following the Federal Government’s introduction of conditions on state education funding, including the mandated use of an A to E (or equivalent) grade scale and the requirement that reports be written in ‘plain language’, a 2006 consultation with NSW parents revealed significant satisfaction with these new style of reports (Ridgway & NSW DET, 2006). Parents variously referred to the A to E system as honest, factual and definitive, providing them a clear picture of how their child is performing at school, allowing them to identify more readily when to seek or provide additional support.

However, among educators and education researchers, the focus on letter grades was less well-received. While letter grades satisfied parent demand to know about their child’s performance in a subject, it may also have worked against parents’ own desire to know whether their child was making sufficient progress in learning. As Masters and Forster (2005) pointed out at the time, and as has been repeated, “letter grades do not provide useful long-term pictures of student progress because they relate only to short-term success on defined bodies of taught content” (Masters, 2013). The NSW Education Minister has recently agreed to review the use of A to E grades in primary school reports, under a recommendation by the NSW Primary Principals’ Association. The Association’s president, Phil Seymour, said that primary school principals are advocating for a reporting system based upon ‘an individual growth model that focuses on (a student’s) cumulative progress’ (McDougall, 2018).

In a recent research project conducted by the authors, evidence from various stakeholders across Australia, including a significant contingent from NSW schools, questions the purpose and value of current reporting practices. Stakeholders expressed concerns about student reports including their predominant focus on achievement (rather than both achievement and progress), and a lack of clarity, timeliness, and cohesion across communication forms (Hollingsworth et al., 2019). Recommendations made in the research report are anticipated to provoke an agenda for discussion, debate, and a reimagining of the purpose and design of student reporting in Australia, and beyond.

Research related to reporting student learning

While there is an abundance of research related to grades, including the grading practices of teachers and how grades are interpreted by parents as they appear in student reports, there is much less research focussed on investigating the effectiveness of reporting itself. The bulk of this research has been undertaken via focus groups, surveys and conversations with parents and teachers, or else via analysis of the content of sample reports. There is an apparent dearth of empirical research into the effectiveness of different forms and means of written reporting.

Traditional student reports

Despite the many potential applications for student reports, communication with the child's parent-carer is most often seen as their primary intended purpose (Friedman & Frisbie, 1995; Guskey, 2002; Guskey, 2009). Parents often place significant importance in formal written reports (Power & Clark, 2000), yet they are also a source of significant confusion. In one survey of parents of elementary school students in Quebec, for example, 75% of parents stated that they did not fully understand the information contained within report cards (Deslandes, Rivard, Joyal, Trudeau, & Laurencelle, 2009). As such, a large section of the research into reporting focuses on the extent to which existing – or traditional – reports successfully communicate with parents about their child's learning. In general, the research tends to suggest significant deficiencies in established reporting practices.

Grades

Reports are successful to the extent that the symbols and representations used in them convey explicit meaning, and that they communicate clearly what learner traits are being described in the report (Friedman & Frisbie, 1995; Kunnath, 2017). By far, the main focus of the research in this area is the use of A to F letter grades in reports. This may be due to report grades being so ubiquitous and historically prevalent as a feature of student reports: part of an assumed universally understood reporting system traditionally accepted by parents (London, 2012).

“Hodgepodge” grading

Research consistently finds that while grades are ostensibly measures of student academic achievement, in reality grades act as multidimensional measures of a range of cognitive and non-cognitive factors (Brookhart, Guskey, Bowers, McMillan, Smith, Smith, Steven & Welsh et al., 2016). As such, their meaning can often be misunderstood by parents. Grades are therefore widely regarded in the research literature as being “so imprecise that they are almost meaningless” (Marzano, 2000, p. 1) and “impossible to interpret accurately” (Muñoz & Guskey, 2015, p. 64).

The practice of “hodgepodge” grading (Brookhart, 1991, p. 36), in which teachers arrive at a single grade by synthesising academic achievement with factors such as effort, behaviour, improvement, participation and attitude is likely the product of restrictive reporting practices (Guskey, 2006) and has been the topic of much research (Bowers, 2011). Teachers deliberately aggregate a child's academic performance with measures of academic “enabling” behaviours and school “compliance” behaviours that are believed to be important and reveal the student's attitude and motivation to learn (Bonner & Chen, 2019). This has been found to be more common in ‘troubled’ schools with a more control-oriented climate than in ‘less-troubled’ schools, who tend to rely more on achievement results to form grades (Howley, Kusimo & Parrott, 2000). Some research reveals that teachers perceive good grades as a reward not only for the quality of work completed but for effort and for completion of requirements (Sun & Cheng, 2013), and they use grades to encourage effort and desirable attitudes and behaviour, even when guidelines explicitly tell them not to do this (Brookhart, 1993; McMillan, 2001; Stiggins, 2001).

Many of these studies show that the weighting individual teachers assign to non-cognitive factors, as well as the different forms of academic assessment they use, varies significantly (Brookhart, et. al., 2016) making grades an unreliable form of measurement.

While hodgepodge grading dilutes and distorts the academic meaning of grades and impinges on the clarity of what they communicate, it has also been supposed that the general public may indeed “expect and endorse” grades as multidimensional measures of a range of indicators of a student’s academic success (Cross and Frary, 1999, p. 70). Parents have even been found to rank communicating a child’s effort and work habits *ahead* of communicating a child’s achievement as the most important function of grades (Munk & Bursuck, 2001). More recent research shows that, as combinations of achievement and behavioural factors, teachers’ grades are actually more predictive of later academic success than are standardised test scores of achievement alone (Thorsen and Cliffordson, 2012; Bowers, 2019).

Nevertheless, it is commonly accepted among measurement experts that grades ought only reflect summative achievement in assessments of learning (Stiggins, Frisbie & Griswold, 1989): the use of formative assessment (Tomlinson, 2005; Kunnath, 2017), learning growth (Waltman & Frisbie, 1994) and dispositional factors such as effort and behaviour (Stiggins, 1994; Wormeli, 2006) should not be included in the formulation of a grade, but should be separately communicated in the report. However, even when these non-achievement factors are separately reported, they too are most often ill-defined, complicating how they are to be interpreted by parents (Friedman & Frisbie, 1995).

Grade distribution and standards referencing

One means of testing how successfully reports communicate has been to measure the agreement between the perceptions of parents and teachers as to the information reports contain and what it signifies. A potential area of confusion for parents in regards to the use of grades in reports is the difference between their expectations of grade distribution in a class or grade-level cohort and the actual grade distribution employed by teachers.

In separate research studies conducted by Waltman and Frisbie (1994) and Guskey (2002), parents and teachers both generally tended to agree in assuming that the report grade distribution in classes was more heavily weighted towards As and Bs than the lower grades, D, E or F. Teachers and parents in these two studies perceived that between 60 and 75 percent of students in a given class would receive As or Bs. However, specific differences in these weightings between elementary and middle/secondary teachers, and between parents and teachers generally, was also noted. In one study, senior-level teachers tended to perceive the ideal grade distribution as less skewed towards As and Bs (i.e. more normative) than elementary teachers (Guskey, 2002), while in the other study, parents assumed a more normal, ‘bell curved’ distribution of grades than teachers actually applied. As noted by the authors of that paper, the consequence of this is that parents of a child who receives a C “are likely to consider the student to be doing average or acceptable work” where in reality a C is among the lowest grades in the class (Waltman & Frisbie, 1994). A similarly positively-skewed distribution in assessment ratings was found in the reports of students from economically disadvantaged and underperforming schools in New Zealand, wherein “the lowest achievement categories were rarely used” (Timperley & Robinson, 2002), yet parents at one of the schools included in the study said they believed the school was applying a national standard.

When the reference for the standards that underpin rating or grading scales is not clearly defined in reports or consistent across schools (Friedman & Frisbie, 1995; Timperley & Robinson, 2002) they are difficult for parents to interpret accurately (Wiggins, 1994; Tuten, 2007). Grades or other achievement indicators can either be referenced to absolute, criterion-referenced standards, or a relative, norm-referenced standard, but not both. Even within each

of these, the referent for criteria or for the norm can either be local (e.g. teacher-devised criteria; the student's fellow classmates) or state-based (e.g. national curriculum standards; a state's age-group population).

Yet there is little consistency among teachers (Guskey, 2009) and between teachers and parents (Waltman & Frisbie, 1994) when asked which standard they believe is or should be applied to their own students' grades. The confusion is such that Waltman and Frisbie even found most parents reported believing that grades are referenced to both an absolute *and* a relative standard (29%), or neither (31%). Half of all teachers surveyed also reported that both or neither references are used in formulating grades. Evidence of teachers norm-referencing grades has also been noted even when they are required to use district-determined, criterion-referenced grading scales (McMillan, 2001). Timperley and Robinson found that, of the reports from eleven schools they examined, only two based their achievement descriptors explicitly on national benchmarks such as curriculum level or reading age; the other nine schools used "locally based" standards like class comparison, teacher's own standards, or even the perceived potential of the child as a reference (Timperley & Robinson, 2002) – all measures that cannot be validated. Wiggins (1994) advocates the use of both criterion-referenced and norm-referenced data in reports, clearly delineated, so that parents can discern not only whether their child is meeting expected standards, but how this achievement compares to the child's peers.

When the basis of grading their child's performance is the teacher's own criteria or expectations of students, parents are left frustrated and confused (Power & Clark, 2000). Such confusion is compounded by the absence of clear definitions of the achievement symbols used in reports that would allow parents to understand exactly how – and by what standard or measure – their child is being assessed (Wiggins, 1994; Friedman & Frisbie, 1995; Kunnath, 2017). Similar findings were made by the authors in their recent *Review of Student Reporting in Australia* (Hollingsworth, et al., 2019). For these and other reasons, such as the way bell-curve grading communicates little about what a child has learned and is able to do, and leads to competitive rather than co-operative learning environments, it has been proposed that teacher grades should never be referenced to the class curve, but to a student's attainment of learning criteria and standards that are clearly defined (Guskey, 1994).

Narrative teacher comments

Narrative reporting refers to the practice of including typed or written teacher comments describing a student's academic achievement, behaviour, effort and other aspects of a student's learning or socio-emotional development. While narrative teacher comments frequently accompany grades or other performance indicators on student reports, and are often cited as a highly valued aspect of reports by parents (Ridgway & NSW DET, 2006; British Columbia Ministry of Education, 2017; Hollingsworth et al., 2019) a scan of the research literature on student reporting reveals that they are much less frequently the subject of study. Seminal research into the positive effect of feedback suggests that task- and learning-oriented feedback that sets high expectations, communicates a teacher's willingness to help and their belief in the ability of the student to improve, is optimal (Page, 1958; Butler, 1988; Hattie & Timperley, 2007). To the extent that teacher comments in reports are a form of feedback to the student, these principles perhaps should also apply. However, narrative teacher comments in student reports are primarily designed to communicate information about a student's achievement and progress to a parent audience, and so other considerations – about the clarity, applicability and usefulness for this audience – also come into play.

Research conducted via consultation with parents tends to reveal many similar themes related to teacher comments in reports. Teacher comments are highly valued because of their potential to provide specific, personalised detail and context that can assist parents to understand other

aspects of the report like grades (Cuttance & Stokes, 2000; Power and Clark, 2010; British Columbia Ministry of Education, 2017). They are also valued for their potential to assist parents to provide learning support at home (Dixon, Hawe and Pearson, 2015). For these same reasons, however, teacher comments are criticised when they are thought to be meaningless, cliché or formulaic, avoidant, trite or irrelevant (Cuttance & Stokes, 2000; Power & Clark, 2010). Parents are critical also of comments that replicate the technical language of curriculum outcomes (Tasmania. Reporting to Parents Taskforce, 2006; Dixon et al., 2015) and computer-generated comments (Cuttance and Stokes, 2000, Power & Clark, 2010) as both are perceived as being insufficiently personalised or informative. Where narrative comments are purely descriptive, singularly positive and are not referenced to a standard, parents feel the information is vague as they are unable to ‘locate’ their child’s performance along some measure of quality or against expectations (Meiers, 1982; Harris, 2015; Dixon et al., 2015). All of the above findings are reflected in the authors’ own recent consultations with parents in several Australian states (Hollingsworth et al., 2019). Additionally, students consulted in the authors’ research expressed a strong desire for the comments in their reports to be targeted and improvement-focused.

What limited analysis of teacher comments exists tends to support the perceptions of some parents that teacher comments often fail to give a useful account of a child’s achievement. Hattie and Peddie’s (2003) review of a sample of reports in New Zealand found that reports “emphasise what students can do, and rarely report what students cannot do” (p. 4), and teacher comments were seen as contributing to this lack of completeness in information around student achievement. Of the teacher comments they examined, only one percent were deemed to be ‘not positive’, few commented on achievement (tending instead to be person-oriented, discussing behaviour or effort), and of these few, none commented on below-average performance.

The authors’ own more recent analysis of teacher comments in Australian school reports found, by contrast, that teachers’ comments do tend to describe a student’s achievement, and in language that is relatively jargon-free. However, achievement-focused comments differed in their usefulness. In some comments, there was a tendency to describe merely what a student has done rather than what they can do. Others tended to describe what the student can do, but in such an empirical and objective manner – and without any subjective evaluation, reference to a standard, or contrast to what they could not yet do – that determining whether the student’s described achievements were ‘good’ became difficult to gauge. Comments were also found to describe student achievement at differing levels of ‘grain size’, sometimes tending towards replicating the language of curriculum outcomes when including finer levels of detail. None of the teacher comments analysed described the learning progress a student had made since the last point of reporting. While many reports contained improvement-focused comments, variations in the clarity and usefulness of these were also found, as some were specific next steps for learning, while others tended more towards general study advice (Hollingsworth, et al., 2019).

Standards-based reporting

Standards-based reports represent one of the main reforms to student reporting processes in recent years, yet few empirical studies into its efficacy have been conducted (Brookhart et. al., 2016). Standards-based reporting is based on criterion-referenced assessment to communicate a student’s level of attainment of, and progress toward achieving, curriculum-specified year-level standards. Grading student performance is therefore done in relation to explicit criteria, not relative to their peers in the class, meaning standards-based reports are seen as being fairer than other forms of grading and assessment (Swan, Guskey & Jung, 2014). As the curriculum standards are often organised by strand or domain (e.g. for English, standards for Reading, Writing, and Speaking and Listening) standards-based grading and reporting typically also differentiate a student’s level of achievement in each of the strands of a subject, even if an overall subject achievement grade is also offered. Doing so provides finer-grain

levels of detail about a student's strengths and weaknesses. Alternatively, standards-based reports may communicate a student's proficiency in either individuated learning outcomes (e.g. "multiplies two-digit numbers," "identifies author purpose") or more generalised aspects of learning (e.g. "number sense" or "comprehension") (Welsh, D'Agostino & Kaniskan, 2013. p. 26).

Standards-based reports commonly employ numerical indicators such as 1 to 4 (Tuten, 2007; Guskey, Swan & Jung, 2010) or corresponding worded descriptors (Guskey, 2004) to indicate increasing proficiency in relation to the standard. Typically, 'process' criteria such as work habits, effort and participation, and 'progress' criteria such as improvement and learning gain are reported separately to a student's achievement (Brookhart, et al., 2016; Muñoz & Guskey, 2015) allowing a more detailed picture to emerge (Guskey et al., 2010) and avoiding many of the problems associated with "hodgepodge" grading. It is also believed that if teachers must assess students on their learning of specified objectives and curriculum outcomes, they will more likely focus their instruction on them as well (Clarridge & Whitaker, 1994; Welsh, D'Agostino & Kaniskan, 2013). Research comparing the preferences of parents for traditional versus standards-based reports suggests that, when given both, parents overwhelmingly prefer the more detailed profile of their child as a learner that standards-based reports convey (Swan et al., 2014).

Despite these purported benefits, the worded descriptor scales used within standards-based reports (e.g. Beginning, Progressing, Adequate, Exemplary) can still leave room for confusion and misinterpretation. Samples of standards-based reports have revealed that a wide range of categories for worded proficiency or achievement scales are used by schools, each with slightly different meanings and denotations, and this terminology is often seen as ambiguous by both researchers and parents (Hattie & Peddie, 2003; Guskey, 2004, Dixon et al., 2015). Guskey found that this ambiguity likely causes parents to translate these labels 'back' into the traditional letter grades A-D with which they are familiar, and interpret them as denoting norm-referenced classroom comparisons rather than criterion-referenced achievement (2004). The use of positively-connoted language to describe achievement below the specified national standard is also common, and is felt by some to leave too much ambiguity for parents who would like to know in plain terms how their child's achievements compare to expectations (Hattie and Peddie, 2003). With little understanding of what the standards entail or how they are derived, and therefore what the point of comparison actually means in such worded descriptors, parents report being confused and unable to actively engage in their child's learning, and seek additional explanatory detail not supplied in reports (Dixon, et al., 2015).

By isolating a student's academic achievement in grades separate to their effort, work habits and behaviour, standards-based reports should have a much stronger relationship to state-based assessments (Muñoz & Guskey, 2015). However, according to Brookhart et al.'s (2016) review of the limited research on standards-based grading to date, standards-based grades awarded by teachers in schools are only moderately related to high-stakes standards-based assessment, which supposes that non-cognitive factors such as attendance, effort and participation may still be in effect even when teachers assign standards-based performance levels. Another explanation could be that teachers tend to set different cut points between performance levels such as 'Approaching' and 'Meeting' the standard than do the high-stakes tests, as these are ambiguous concepts (Welsh, D'Agostino & Kaniskan, 2013).

Reporting learning progress

One of the purported benefits of standards-based reports is that they enable teachers to distinguish between the quality of a student's academic achievement; their learning process traits such as work habits, effort and behaviour; and their learning progress (Guskey et al., 2010; Swan et al., 2014). However, little is mentioned in the literature as to how learning progress –

alternatively 'learning gain' or 'educational growth' over time – is communicated within, or even between consecutive, standards-based report cards.

Monitoring and communicating learning progress requires assessments that can locate where a student is along a progression of learning, such as year-level standards, and what gains they have made in their learning between assessments (Masters, 2017). While examples of standards-based reporting found in the literature tend to use worded descriptor or numbered scales to denote progress, it is not evident whether both past and current attainment appear on the scale to signify growth over time. Such scales appear also to communicate progress towards achieving the *expected* (age group) standard, however often they do not appear to describe what the expected standard 'looks like', nor clearly indicate which standard a student is operating at if they are below or above expectation. One problem with indicators referencing only the expected or end-of-year standard is that teachers can feel compelled – and in some cases coerced – to award low indicators at the start of the year for all students so that learning progress can be indicated in subsequent reports across the year, even if some students are high-achieving and operating beyond expectations to begin with (Tuten, 2007).

Wiggins (1994) proposes a different approach: longitudinal reporting, over a multi-year period, of a student's progress towards achieving an "exit-level" standard. According to this model a report card would present continua of progress that describe – like a rubric – 'Basic', 'Proficient' and 'Advanced' levels of performance in the different proficiencies of a subject. The 'Advanced' level describes the "exit-level" standard all students are working over a number of years to achieve, and their movement along these continua from one report to the next signifies their progress. Such an approach to including a described developmental continuum in their reports was adopted by elementary schools in Austin, Texas; the process of change was noted as requiring significant consultation and discussion to ensure stakeholder consensus and a report format that was at once detailed yet user-friendly (Aidman, Gates & Sims, 2000).

Research into representing learning progress in reports is not easily found in the literature. The use of described four-point rubrics, explained line graphs charting growth, and narrative teacher feedback describing growth have been trialled (Clarridge and Whitaker, 1994; Sousa, Luze & Hughes-Belding, 2014), and the research suggests positive parental response, particularly to representations such as rubrics and narrative comments as they detail the students' growth and current attainment. However this research does not yet appear to be robust.

Nevertheless, the implication of this research is that richer representations of learning progress over time that can locate students' previous and current attainment to describe what gains in learning they have made, are possible to include in reports. There is an increasing development of online tools to track and monitor student progress in skills of mathematics, reading and writing (e.g. Mackenzie & Scull, 2016) and to assess and report growth in 21st Century Skills (e.g. Woods, Mountain and Griffin, 2015), as well as new reporting technologies that enable continuous reporting to parents incorporating teacher comments, digital rubrics, curriculum standards trackers and annotated student work samples (Heard & Hollingsworth, 2018). These all portend a reporting system that could meet the demands of communicating a student's learning progress as well as their comparative performance (Masters & Forster, 2005; Forster, 2005).

Studies of impact

Very little research was found into the effect – or effectiveness – of reporting systems or different report formats. One such paper examining the effect of a new online reporting system found that even after controlling for motivation, time students spent on the online reporting system (i.e. checking their results) were positively associated with later academic performance

(Zappe, Sonak, Hunter & Suen, 2002), however aspects of the design of this study prevent a full understanding of this correlational effect.

Other studies have found strong positive relationships between more frequent teacher-family communication and student engagement in class and with school work (Kraft & Dougherty, 2012), and between more frequent grade reporting and mathematics achievement (Rogers, 2000). Other research has found that receiving poor grades in the first report of secondary school can have lasting negative effects on future school engagement (Poorthuis, Juvonen, Thomaes, Denissen, de Castro & van Aken, 2015), suggesting the need for communication about learning growth and effort in reports, in order to retain the engagement of low-performing students.

Selected examples of reporting practice internationally

While the research related to investigating student reporting is very limited, the quest to improve reporting can be seen in changes to policy and practice taking place in a number of international locations. This section first provides an overview of student reporting practices in Australia, with a particular focus on NSW, drawing on a *Review of Student Reporting in Australia* recently prepared by the authors (Hollingsworth et al., 2019a). It then presents examples of education systems that are engaging in efforts to improve their reporting practices. These examples may help to identify system-level lessons that may guide NSW in reviewing its policies and practices relating to student reporting.

Australia

Student reporting in Australia, at least recently, appears to be characterised by a contest between competing opinions about the purpose of student reports (and perhaps also competing philosophies about the role of curriculum and assessment more broadly). Are student reports intended to communicate how a child has performed in tasks (for instance, relative to their classmates, their cohort, a teacher's own standards, or year-level standards)? Or, are reports intended to communicate what achievements and progress a child has made in their learning (what new skills, knowledge and understandings they have acquired) as they develop towards mastery in each subject? This is somewhat of a false dichotomy to draw, as parents have consistently expressed a desire for both, and indeed current Australian policy mandates that schools communicate both in student reports.

The Australian Education Regulation 2013, a separate or subsidiary legislation to the Australian Education Act (2013), provides guidelines dictating how the provisions of the Act are applied. The Regulations document has been updated numerous times since 2013, including January, August, October and December 2018, and January 2019. The current document has not changed its 2013 stipulations regarding student reports and reads as follows:

- (1) For paragraph 77(2)(f) of the Act, an approved authority for a school must provide a report to each person responsible for each student at the school in accordance with this section.*
- (2) A report must be readily understandable to a person responsible for a student at the school.*
- (3) A report must be given to each person responsible for the student at least twice a year.*
- (4) For a student who is in any of years 1 to 10, the report must:*
 - (a) give an accurate and objective assessment of the student's progress and achievement, including an assessment of the student's achievement:*

- (i) against any available national standards; and
 - (ii) relative to the performance of the student's peer group; and
 - (iii) reported as A, B, C, D or E (or on an equivalent 5 point scale) for each subject studied, clearly defined against specific learning standards; or
- (b) contain the information that the Minister determines is equivalent to the information in paragraph (a).

Note: An approved authority for a school may have obligations under the Privacy Act 1988 in providing information.

(5) For paragraph (4)(b), the Minister may, in writing, determine information that the Minister considers is equivalent to the information in paragraph (4)(a). (Australian Education Regulation, 2013, Part 5, Division 3, Subdivision G, 59 Student reports)

The legislation requires that schools provide reports for each student in two ways – showing progress and achievement. Although an assessment of progress is mandated, the legislation does not indicate how progress should be reported. The assessment of achievement is more prominent, and requires three measures: learning standards for each subject, a comparison against any national standards and a comparison against the student's peers.

It is worth noting that although the 2013 (and earlier 2009) legislation specifically indicates a requirement for the use of a five-point scale, this only appears to be required for subjects studied where "specific learning standards" are clearly defined. Such a scale is not required for reporting progress, reporting against national standards (e.g. NAPLAN) or reporting relative to the performance of a peer group. There is also scope to use an alternative to a five-point scale, although this would need to be approved by the minister in charge of the national education portfolio.

The recent review prepared for the Australian Government, *Through Growth to Achievement: Report of the Review to Achieve Educational Excellence in Australian Schools* (2018), which involved consultation with a broad range of stakeholders and experts, and which has identified a set of practical reforms to be put in place in Australia, recommends that new reporting arrangements with a focus on both learning attainment and learning gain are introduced. Recommendation 4 states:

Introduce new reporting arrangements with a focus on both learning attainment and learning gain, to provide meaningful information to students and their parents and carers about individual achievement and learning growth. (Gonski et al., 2018, p.31)

Details regarding implementation of the practical reforms recommended in the Review are anticipated to be forthcoming.

New South Wales

In NSW requirements related to the reporting of student learning in public schools are articulated in policy standards aligned with federal legislative requirements (NSW Department of Education, 2018). Schools are required to report to parents of students in Years 1-10 using a specified five-point achievement scale (A-E) for all key learning areas (KLAs) or subjects studied at their level. The scale, displayed in Table 2, provides performance descriptions for each of the five grades, and achievement is judged in relation to syllabus standards. In Years 11 and 12 schools use a numerical score (1-100) or A-E (or equivalent) achievement grades to convey what students know and can do in relation to syllabus standards in each course, and in VET courses schools report on competency achievement.

Table 2 NSW Common Grade Scale performance descriptions (NESA, n.d.-a)

Grade	Description
A	<i>The student has an extensive knowledge and understanding of the content and can readily apply this knowledge. In addition, the student has achieved a very high level of competence in the processes and skills and can apply these skills to new situations.</i>
B	<i>The student has a thorough knowledge and understanding of the content and a high level of competence in the processes and skills. In addition, the student is able to apply this knowledge and these skills to most situations.</i>
C	<i>The student has a sound knowledge and understanding of the main areas of content and has achieved an adequate level of competence in the processes and skills.</i>
D	<i>The student has a basic knowledge and understanding of the content and has achieved a limited level of competence in the processes and skills.</i>
E	<i>The student has an elementary knowledge and understanding in few areas of the content and has achieved very limited competence in some of the processes and skills.</i>

The NSW Education Standards Authority (NESA) maintains a website which provides advice to teachers on the use of the A-E grades. On that site, teachers are advised to make professional on-balance judgements to decide which grade best matches the standards their students have achieved, based on assessment information collected. Teachers are provided with work samples and other information to help them to “see the standards associated with each grade” (NESA, n.d.-b). They are also advised that grades need to be supported by teacher comments (written or verbal) and “other information the school provides on student achievements, activities, effort and application.”

In addition to reporting student achievement in each KLA against state-wide syllabus standards, if requested by a parent, public schools are to provide information on how a child’s achievement compares with the performance of the student’s peer group. This information takes the form of the number of students in the school peer group receiving each grade or achievement level.

A set of principles underpinning the assessment and reporting of student learning in NSW was prepared in 2008. These principles state that reporting is the process of communicating information to a range of stakeholders about student learning – including a student’s level of attainment and the progress they have made (NSW Department of Education & Training, 2008). One of the reporting principles elaborates the focus on reporting students’ progress:

4. Student Reports should show students’ progress.

Reports should show progress and allow progress to be monitored over time. In any given year level, children are at very different stages in their learning. Reports need to give an accurate picture of where each student is up to in his or her learning in a way that allows parents to monitor learning. Reports need to focus on learning and progress, rather than make judgements of the child.

In circumstances where schools provide lock-step, age-based curriculum, grades that are anchored to an expected stage are unable to indicate whether, or how far, a student is operating below or above this expected standard, or the progress made in their learning over time. This could only be achieved by separately communicating what Stage a child is operating at, independent of their performance grade.

Canada

Ontario

Ontario's current assessment, evaluation and reporting policies are detailed in its *Growing Success* document (Ontario Ministry of Education, 2010). A 'Kindergarten Addendum' document was released in 2016. The *Growing Success* (2010) policy mandates that all publicly funded schools use newly created or revised Elementary Progress Report Cards, Elementary Provincial Report Cards (Grades 1-6 and Grades 7 and 8) and Provincial Report Cards Grades 9-12 to communicate student learning. With few exceptions, the policy states that no changes are to be made by schools to any of these documents.

All report cards require reporting in two areas of student learning: Learning Skills and Work Habits and academic achievement in Subjects or Courses. All report cards provide teachers with comment fields to indicate a child's Strengths/Next Steps for Improvement in both these areas. The same six Learning Skills and Work Habits (Responsibility, Organisation, Independent Work, Collaboration, Initiative and Self-Regulation) are reported on in each level of report using a rating of Excellent, Good, Satisfactory or Needs Improvement.

Academic achievement is however reported differently. The Elementary Progress Report Card requires teachers to provide information midway through the school year. For each subject the teacher is required to indicate whether the student is 'Progressing With Difficulty', 'Progressing Well' or 'Progressing Very Well' in achieving the curriculum expectations in each subject. These imply a single (most-likely age-related) curriculum expectation of all students, and no provision exists for a high-performing student to be shown to be progressing beyond the curriculum expectation, or to designate the curriculum level towards which low-performing students are progressing.

Depending on the level, the Provincial Report Cards require teachers to report academic attainment using grades A-D or percentage marks in ranges that correspond to four levels of achievement: 'surpasses', 'meets', 'approaches' or 'falls well below' the standard. These in turn are referenced against the Achievement Chart (see example in Table 3). An 'R', or marks below 50 per cent, indicate 'extensive remediation' is needed. Provision is made for insufficient evidence to judge (I). A key is supplied on the final page of each report explaining these levels of achievement, and grade or percentage medians are also presented for each Subject/Course, to indicate how a child's achievement compares to the cohort. Depending on the level and type, Provincial Report Cards are issued multiple (between two and four) times per year and are designed to show a student's achievement at the current *and each previous point* of reporting within the school year.

To this end, a record of a student moving from lower to higher levels of achievement from one report to the next at least appears to communicate progress, however the scope of this progress is at best limited. Though the key supplied to parents on reports suggests that Level 4 achievement (corresponding to A grades or percentages 80-100) "surpasses the provincial standard", the policy for assessment states, "*However, achievement at level 4 does not mean that the student has achieved expectations beyond those specified for the grade/course*" (Ontario Ministry of Education, 2010, p. 18, original emphasis). Similarly, the lack of information about what standard a student *is* currently at or working towards in their learning if they receive an R (remediation) or a D/50-59 (falls well below the standard), means it is not possible for any below-standard progress they might be making to register in the report. As such, the letter grades and percentage marks simply indicate the quality of a child's performance on at-

Table 3 Example Achievement Chart (Ontario)

ACHIEVEMENT CHART – SCIENCE AND TECHNOLOGY, GRADES 1–8

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding – Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)				
	The student:			
Knowledge of content <i>(e.g., facts; terminology; definitions; safe use of tools, equipment, and materials)</i>	demonstrates limited knowledge of content	demonstrates some knowledge of content	demonstrates considerable knowledge of content	demonstrates thorough knowledge of content
Understanding of content <i>(e.g., concepts, ideas, theories, principles, procedures, processes)</i>	demonstrates limited understanding of content	demonstrates some understanding of content	demonstrates considerable understanding of content	demonstrates thorough understanding of content
Thinking and Investigation – The use of critical and creative thinking skills and inquiry and problem-solving skills and/or processes				
	The student:			
Use of initiating and planning skills and strategies <i>(e.g., formulating questions, identifying the problem, developing hypotheses, scheduling, selecting strategies and resources, developing plans)</i>	uses initiating and planning skills and strategies with limited effectiveness	uses initiating and planning skills and strategies with some effectiveness	uses initiating and planning skills and strategies with considerable effectiveness	uses initiating and planning skills and strategies with a high degree of effectiveness
Use of processing skills and strategies <i>(e.g., performing and recording, gathering evidence and data, observing, manipulating materials and using equipment safely, solving equations, proving)</i>	uses processing skills and strategies with limited effectiveness	uses processing skills and strategies with some effectiveness	uses processing skills and strategies with considerable effectiveness	uses processing skills and strategies with a high degree of effectiveness
Use of critical/creative thinking processes, skills, and strategies <i>(e.g., analysing, interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence)</i>	uses critical/creative thinking processes, skills, and strategies with limited effectiveness	uses critical/creative thinking processes, skills, and strategies with some effectiveness	uses critical/creative thinking processes, skills, and strategies with considerable effectiveness	uses critical/creative thinking processes, skills, and strategies with a high degree of effectiveness

standard assessments: whether they have demonstrated ‘limited’, ‘some’, ‘considerable’ or ‘a high degree of’ the expected knowledge, understanding or skill. Put more simply, grades and marks in the Ontario system seem to communicate only “how well a student has learned what has just been taught” (Masters & Forster, 2005, p.9).

British Columbia

In British Columbia (BC), following recent redesign of the British Columbia Curriculum, the Ministry of Education undertook an extensive parent consultation process regarding how schools communicate student learning. The results of this consultation appear in a report titled *Your Kid's Progress* (2017) and have informed a recent *Draft K-9 Student Reporting Policy* (2019a) developed for use in a 2019/20 pilot of reporting reforms.

One of the prevailing concerns of parents expressed in the consultation process was the frequency and timeliness of reporting (2017, p. 4). According to the draft policy (2019a), Boards of Education in pilot schools must provide parents with a minimum of five reports describing students' school progress. These reports must include "a minimum of four points of progress throughout the year" (of which at least two must be documented in writing) and a final "summary of progress at the end of the school year or semester" (2019a. p. 1). Examples of possible points of progress reporting include student-led or parent-teacher conferences, digital portfolio updates, use of journals, discussions or telephone calls and written summaries.

Parents must receive information about their child in each area of learning at least once across the four points of progress in a year, while the final Summary of Progress must communicate information in all areas of learning. This guarantees parents receive communication in each area of learning at least (but not restricted to) twice across the year. Where written teacher descriptive comments are provided, the information should employ "straight forward, strengths-based language" (British Columbia Ministry of Education, 2019b, p. 8) and next steps for learning must also be included.

Within the policy document, the purpose of reporting is defined as being to "communicate student progress" or "describing students' school progress", yet, as with Ontario, it is unclear whether the reports communicate progress in learning per se, or merely performance in assessments.

Boards are required to use a Four-Point Provincial Proficiency Scale to measure a student's "understanding of the concepts and competencies relevant to the expected learning" (British Columbia Ministry of Education, 2019b, p. 6). The four points of the scale appear as a visual continuum, as displayed in Figure 1, and include Emerging (initial understanding), Developing (a partial understanding), Proficient (a complete understanding) and Extending (a sophisticated understanding). As these ratings are referenced to a single expected standard, then as with the Ontario grade-based system, the proficiency scale limits the scope of how a student's current point of learning – the standard at which they are currently operating – can be measured, as all points on the scale are 'anchored' to a single at-standard expectation.

Proficiency Scale	→			
	Emerging	Developing	Proficient	Extending
	The student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a sophisticated understanding of the concepts and competencies relevant to the expected learning.

Figure 1. Four-point provincial proficiency scale (British Columbia)

The policy also states that at Grades 4-9, upon request by the parent, Boards must provide a letter grade, and that the letter grade can be determined using a “proficiency scale/letter grade alignment table” supplied by the Ministry (British Columbia Ministry of Education, 2019a, p. 2). This alignment of learning ‘progress’ with improved performance grades assumes a lot about the consistency of the skills, knowledge and understandings being assessed across two or more points in time, and the consistency or comparability of the forms of assessment used by teachers to do this.

New Zealand

New Zealand’s approach to reporting is founded on several principles outlined in the *Reporting to Parents and Whanau Background Paper* (Evaluation Associates, 2014) commissioned by the Ministry of Education and involving consultation with parents. The aim of reporting, it states, is not simply to supply parents with information about their child’s learning but to engage parents in assisting their children to achieve. National Administration Guidelines (NAGs) issued by the Ministry of Education provide school boards with policy guidelines which include reporting and assessment practices. Currently, NAG 2 stipulates similar requirements to the Australian Federal Government policy on reporting: that schools provide minimum twice-yearly reports to students and their parents in writing and in plain language on the “progress and achievement of individual students” (New Zealand Ministry of Education, 2017).

However, the New Zealand approach to student reporting appears to be very unlike Australia’s current policy and practice. Australian legislation presents the assessment of students’ achievement as their performance against a given standard using a prescribed A-E (or equivalent five-point) scale, and makes no stipulations for how to report learning progress. In New Zealand, the opposite appears to be true. There is no such policy requirement for schools in New Zealand to assess achievement via performance scales like letter grades, and instead most of the supplementary information and resourcing provided for schools by the Ministry of Education about reporting relates to the communication of learning progress rather than performance (see the Te Kete Ipurangi (TKI) online school portal).

Several examples of reporting templates provided on TKI focus on the use of graphic representations to communicate student learning growth in the curriculum areas of reading, writing and mathematics. Some examples employ a ‘slider’ graphic, such as the one shown in Figure 2, that indicates where along the National Standards continuum a student had reached at the end of the previous reporting cycle, where they have achieved at the current point of reporting, how much learning growth the difference between these two points represents, and whether the student’s current position on the continuum is below, at or beyond the age-group expectation.

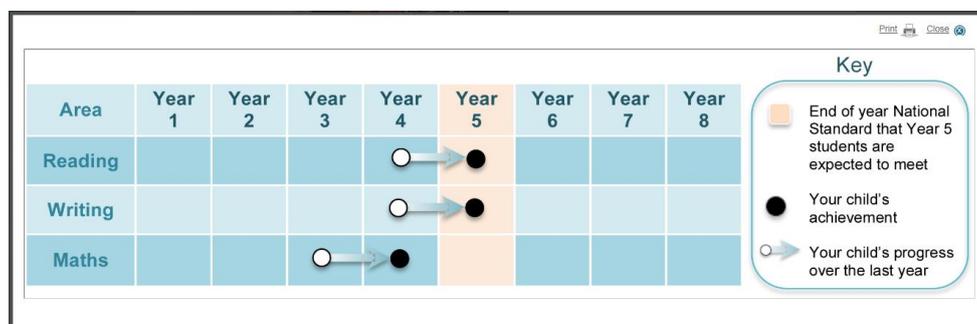


Figure 2. Example report template ‘slider graphic’ (New Zealand)

Several other examples perform much the same function using a ‘stepped’ graph that locates a student’s current level of achievement along their years at school (x axis) and the year level standards (y axis), as shown in Figure 3. With the expected standard at each year of schooling indicated along the 45 degree angle, a child’s achievement is plotted and recorded for each reporting cycle, and is visually located either below, within or above the expected learning trajectory. In both examples, ‘achievement’ appears to mean what particular national standard a child has most recently attained – not how well they have performed in assessments at the expected standard – and ‘progress’ is illustrated by the gains made in the standards attained over successive reporting periods. Such representations are in-keeping with the New Zealand Ministry of Education’s position on the purpose and function of summative assessment as a means by which “to look back and consider what progress has been made over a period of time compared with expected progress” (2011, p. 14).

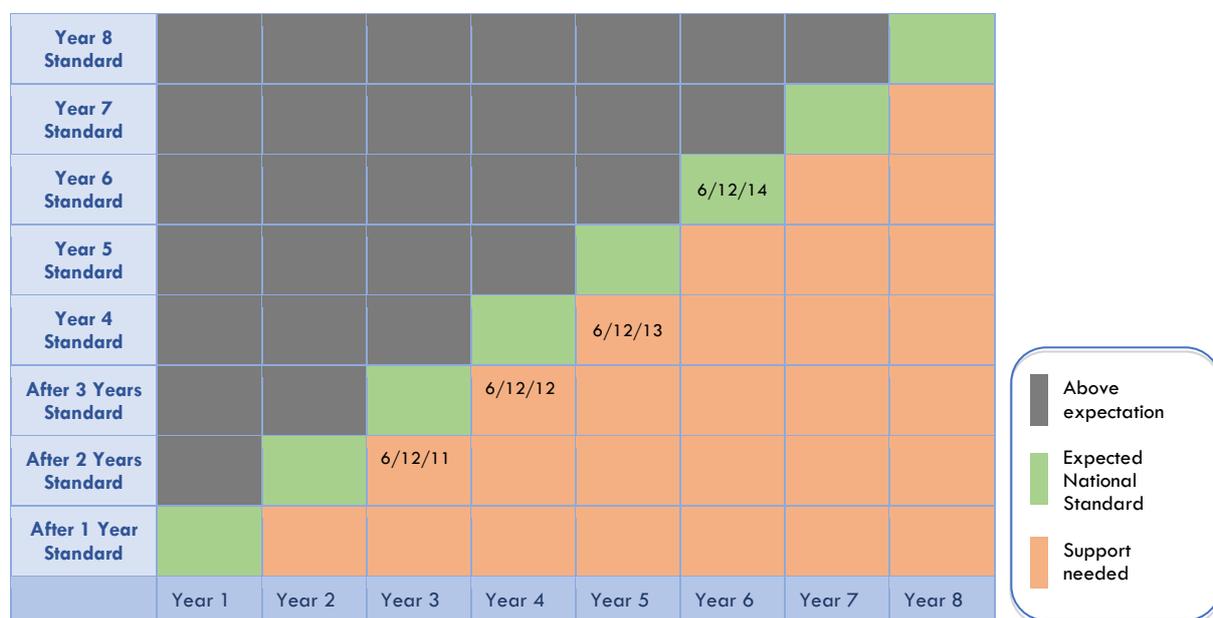


Figure 3. Example report template ‘stepped graph’ (New Zealand)

Emerging from community consultations occurring in 2019 (the Kōrero Mātauranga | Education Conversation) as part of a recent review of the education system, the New Zealand government has pledged to develop additional initiatives to assist in the process of monitoring student learning and sharing this information with parents. New resources aimed at mapping student progress across the national curriculum will be developed, complementing existing resources for literacy and numeracy, and which will “reflect the progress of all learners, including those who are working long term within level one of the curriculum.” (New Zealand Government, n.d.-a). Digitally accessible ‘records of learning’ that accompany individual students across their years of schooling will also be developed to provide parents with real time updates of their child’s learning progress and identify areas for additional support or extension. The updating of online records of learning throughout the year would satisfy the requirement that schools report in writing to parents at least twice a year without the need for additional written reports (New Zealand Government, n.d.-b).

Scotland

In 2010, Scotland's reformed curriculum, Curriculum for Excellence (CfE), was formally introduced to Scottish schools. The CfE places children and young people at the heart of the Scottish curriculum, and is "built around a commitment to giving every child the best possible chance to realise their full potential and become: successful learners; confident individuals; responsible citizens; effective contributors" (City of Edinburgh Council, n.d., p.1). The entire CfE curricular framework is arranged in six curricular levels (rather than according to age-based year levels) and eight broad curricular areas (as distinct from discipline-based subjects). The first five curricular levels apply to the 'broad general education stage', (early years, primary, and Secondary 1 to Secondary 3) and the sixth level applies to the 'senior phase' of schooling (Secondary 4 to Secondary 6). 'Benchmarks' set out clear statements about what learners need to know and be able to do to achieve a level across all curriculum areas, and a set of clear and concise statements about children's learning and progression in each curriculum area are presented as 'Experiences and Outcomes' (Education Scotland, n.d.-a). A high level of autonomy is afforded to schools and teachers to design integrated learning experiences within the CfE curricular framework that are suitable for their own context (Education Scotland, 2016), in a move away from the prescriptive curriculum that was previously in place (OECD, 2015).

Among the suite of major reforms that accompany the implementation of CfE is a strong focus on monitoring and reporting students' learning progress. Within the CfE, assessment is seen as the process of making sure that learners are progressing through gauging development at appropriate points including, throughout learning, at transition points, and at the end of sections of learning. This enables schools and teachers to: track progress, support learning effectively; plan suitable next steps for learning; summarise and recognise achievement and attainment; and, inform learners and parents/carers of progress (City of Edinburgh Council, n.d., p. 5).

The CfE proposes the use of assessment approaches that "will involve the learner and the teacher considering what constitutes the best evidence of progress at a particular point" (City of Edinburgh Council, n.d., p. 8), and suggests that work will be gathered, recorded and saved as a portfolio, and summarised and reported at key stages in the form of a 'pupil profile'.

Reporting to inform parents/carers of their child's progress takes place at intervals agreed locally with their child's school. Pupil profiles describe or show: strengths and areas for development; progress in the eight curricular areas; achievement within one of the six levels; achievement in different contexts; learning goals and next steps; and, specific supports for learning. Terms used to describe students' learning achievement, and progress, in the CfE curricular levels may vary, however terms that appear to be established in some locations are displayed in Table 4.

Table 4 Key phrases used to report progress (City of Edinburgh Council, n.d., p.9)

Developing	Consolidating	Secure
<p><i>The pupil has started to engage in the work of the new level and is beginning to make progress in an increasing number of outcomes of that level;</i></p>	<p><i>The pupil has achieved a breadth of learning across many experiences and outcomes for the level, can apply this learning in familiar situations and is beginning to undertake more challenging learning and to apply learning in unfamiliar contexts;</i></p>	<p><i>The learner has achieved a breadth of learning across almost all the experiences and outcomes for the level, has responded consistently well to the level of challenge, has moved on to more challenging learning and can apply learning in new and unfamiliar situations.</i></p>

Clearly the language used in these descriptors is signalling transition within and across levels. This suggests that students within a single age group are not being assessed against a single curriculum level, but rather where they are currently at in their learning. Whilst it's unclear whether the progress from one level to the next is visually shown in a single report (pupil profile), it is anticipated that the use of these descriptors provides parents and carers a simple means by which to monitor their child's learning progress across reporting periods.

Scotland's CfE is complex and multidimensional (OECD, 2015), and the discussion of it here is necessarily limited. However, some key elements that inform the ways that student reporting is undertaken within the CfE can be summarised: teaching, learning, assessment, and reporting are regarded as inextricably linked; there is a strong focus on progress and a clear, shared understanding of progression underpins what will be taught and how to best meet learners' needs; achievement of curricular levels is based on teachers' overall professional judgement, informed by evidence; students are expected to be involved in leading their own learning and profiling their achievements; and, there are high levels of flexibility and autonomy at the school level to decide on the formats and timing of reporting.

Considerations for reforming student reporting processes

This section draws together lessons from the research and international examples above to inform any review or refinements NSW might make to its student reporting policies and practices in the context of the NSW curriculum review. Each section highlights a key consideration in student reporting policy and practice reform.

Stakeholder engagement

As noted earlier in this paper, satisfaction with student reporting practices among stakeholders has been vexed for some time. One possible underlying reason for this might be the lack of a clearly articulated purpose for student reporting; a purpose that stakeholders have been involved in defining and/or have shared understandings about. Messages from the research and various stakeholder consultations signal that the purpose and the contents of reports are often not clearly understood. For example, there appears to be confusion within and across stakeholder groups about such things as scores, grades, standards, expectations, and teacher comments, as well as what it means to report about both achievement and progress in learning. Students, parents, teachers and school leaders – at different levels of schooling (primary and secondary) and in many locations (national and international) – also point to a lack of clarity, timeliness, and cohesion across communication forms used for reporting.

In two of the international examples reported in the previous section, British Columbia and New Zealand, processes have been implemented at the system-level to ensure stakeholder engagement as they embark on reporting reforms. Extensive consultation processes have been undertaken in both locations, and lessons learned through these have been acted on. In British Columbia, for example, new draft policy has been prepared that responds to prevailing concerns expressed by parents regarding the frequency and timeliness of reporting, and reports being prepared in pilot schools in 2019 include four points of progress through the year and a final summary of progress at the end of year or end of semester.

In New Zealand, a clear focus on reporting student learning progress has also been established both in policy and in practice. Information and resourcing provided by the Ministry of Education has been focussed on the communication of learning progress rather than performance, and

following community consultations in 2019, a further government pledge has been made to develop additional initiatives to assist in the process of monitoring student learning and sharing this information with parents. Effort and investment is being aimed at mapping student progress across the national curriculum, and developing new resources such as digitally accessible ‘records of learning’ that accompany individual students across their years of schooling and provide parents with real time updates of their child’s learning progress.

Examples such as these signal possibilities for creating reporting systems that meet the needs of all stakeholder groups. Students, parents, teachers and school leaders all have interest in, and can contribute to, improving reporting systems if provided the opportunity. What might effective stakeholder engagement with respect to reimagining student reporting processes look like? Hattie and Peddie (2003) offer one perspective:

... school reports might be considerably more powerful and useful for parents and schools if one simple step were to be included in the development of reports: Ask a cross-section of parents to come to the school, give them copies of various students’ reports... and ask them to interpret aloud what they are reading, and then to comment generally on what they have read, what information they would have wanted in the report, and where they were confused by the report. Schools often do consult their parents, but we are advocating clearer focus on interpretation... This simple step might dramatically improve the power of school reports to reflect the performance [and progress] of students in ways that are meaningfully and accurately interpreted by parents, and could also inform teachers how to better devise and write the reports. (p. 9)

Reporting learning progress

Properly understood, learning progress can be defined as the gains, or the increasing proficiency in skills, knowledge and understanding, students make over time in an area of learning (Masters, 2017). To communicate student learning progress in reports therefore not only requires recurrent assessment of these skills, knowledge and understandings to locate where a student is at along a progression of learning, but a means by which this sense of growth over time can be clearly represented or communicated to parents.

Australia, and NSW, are not unique in having current policy guidelines and principles that explicitly require the reporting of students’ learning progress, as distinct from their achievement (or performance) in subjects. However, where Australia and NSW have privileged the reporting of achievement via the use of letter grades, other jurisdictions internationally appear to be attempting to represent some measure of growth or gain over time in their report formats.

In Ontario, the association of A-D grades with a student’s level of achievement of an expected standard, along with the inclusion in each report card of a student’s current *and all previous* report grades across the school year, is perhaps one such attempt: a record in any given report card of achievement across reporting cycles, which may be construed as reflecting ‘progress’ over time. However, it is unclear whether it can be reasonably inferred by parents that improved summative grades in a subject denote learning gains made by the student. Year-long subject syllabi tend to be structured as sequences of relatively discrete and unrelated topic-based learning modules. If so, it would be more likely that any improvement in summative grades across the year merely indicates improved performance in assessments of different skills and content. For improved summative grades in reports to signify increasing proficiency first assumes teachers are, in an iterative way, teaching and measuring the same sets of skills and content knowledge each new reporting cycle, and assessing them in a relatively standardised way, to identify growth.

Similar assumptions about the consistency of teacher assessment across the year apply to the British Columbia Four-Point Provincial Proficiency Scale as a valid measure of progress over time in reports. Neither this instrument nor the Ontario A-D scale describes what each level of

achievement toward the expected standard actually ‘looks like’ in terms of the knowledge, skills and understandings a student has demonstrated, using instead language related to completeness of knowledge (‘partial’, ‘considerable’, ‘thorough’). Such language implies a measure of how much of the taught content a student can demonstrate rather than increased proficiency per se. In both Canadian systems, the fact that grades or proficiency ratings are referenced only to the expected standard also presents communication problems, as it is unclear how growth can be represented in either system for students who perennially operate below or above the expected level.

For these reasons, and following the recommendation of researchers that grades in reports be reserved for communicating summative achievement only, one consideration might be how else to represent the learning gains a student has made between reporting cycles independently of their achievement (the grades, scores or percentage marks they achieve) on assessments. To this end, some of the visual representations arising from New Zealand school reports, and the suggested language used in Scottish pupil profiles may provide some direction. In both examples, while a student’s current level of attainment – and whether they are judged to be operating at, above or below expected standard – is explicitly identified, their growth is measured not in reference to the expected standard but in reference to the curricular level at which the student was previously operating. Other options revealed in the literature (Wiggins, 1994; Clarridge & Whitaker, 1994; Aidman et al., 2000) involve the inclusion of developmental rubrics in reports. These rubrics would describe increasing proficiency towards mastery, or an exit-level standard, and could be used to visually locate a student along this continuum. Such developmental continua in reports could neatly represent a student’s current level of attainment, their progress made since a previous reporting cycle, and a clear description of their future focus for improvement.

Clarity

Standards and expectations referencing

The research literature reveals that a major source of confusion for parents about reports are the standards or expectations to which students are being assessed by teachers, and therefore what the various symbols and ratings used in reports are really communicating (Waltman & Frisbie, 1994; Guskey, 2002; Timperley and Robinson, 2002; Dixon et al., 2015). As Wiggins writes, “To know how a child is doing, the parent needs a context: compared to *what?*” (1994, para. 3, original emphasis). Information not commonly understood by parents includes the actual distribution of grades within a class or cohort, whether a child’s performance in assessments is criterion-referenced or norm-referenced, and whether the standards applied to assessing student achievement are locally-devised (teacher-based or school-based) or aligned to state-based curriculum expectations. The combination of these questions makes it difficult for parents to know whether they can infer ‘where their child sits’ in relation to their classmates or year-level cohort or within a state-based normal population distribution. As the role of reports is to communicate information about a child’s learning to their parents, consideration should be given to clearly and concisely explaining how students have been assessed and what their results mean (Friedman & Frisbie, 1995; Kunnath, 2017). Particularly in instances in which students might be assessed on work that is below or above the expected curriculum standard for their age, consideration should be given as to how, or whether, to report the student’s performance in these tasks relative to the difficulty of the task itself (Wiggins, 1994).

Role and function of grades in the reporting process

Whilst acknowledging the limitations and possible demotivating effect for students of using A to E grades to report student learning (Masters, 2017), grades in reports (or their equivalent) are currently mandated in legislation and an entrenched reporting practice in NSW. They are also popular with many parents, who see them as a familiar and meaningful way of rating student

performance and determining how their child is going at school (Cuttance & Stokes, 2000; Ridgway & NSW DET, 2006). Ironically, the overwhelming message emerging from the research into report grades is that grades are often a meaningless basis upon which to measure or compare student achievement. This is due to the fact that grades largely act as multidimensional and differently-weighted measures of student performance in some or all of a range of assessments, as well as dispositional and behavioural factors (Brookhart et al. 2016).

To improve the accuracy and reliability of grades as a measure, aspects of a student's learning process (work habits, behaviour, effort and participation), as well as their learning progress, are regarded as being better communicated separately from their report grade, leaving grades as signifiers of a student's academic performance in summative assessments only (Guskey, 2006). To improve the comparability of grades, consideration should be given, at least at the school level, as to the consistency of assessment-types used and the relative weighting of these assessments in determining grades. Irrespective, however, the literature strongly encourages grading that is criterion-referenced to the achievement of standards, and not norm-referenced to the student's class or cohort, so that they act as meaningful indicators of student learning. Given the breadth of student ability in any given class, however, and the increasing emphasis on providing differentiated assessment targeting a student's individual level of ability, consideration should also be given to whether the standard to which grades are referenced is always the age-based expected standard, or the standard to which the child is working to achieve. Assuming grades reflect criterion- rather than norm-referenced achievement, and that progress can be otherwise communicated in reports, there should be "no inherent conflict" between differentiating assessment and grading a student's performance (Tomlinson, 2005, p. 268).

Interpretable language

A perennial concern in the research into reporting – noted by parents, teachers and researchers – is the accessibility of the language used to report to parents about student learning (Cuttance & Stokes, 2000; Power & Clark, 2010; Hollingsworth et al, 2019) When assessment is closely aligned to objectively measuring the achievement of curriculum outcomes, it can be tempting for schools to reflect this in reports and address parents "in the often turgid, sometimes impenetrable language of the curriculum" (Tasmania. Reporting to Parents Taskforce, 2006). Such jargon-laden statements of what a student 'can do' are potentially even more meaningless if they are not aligned to a particular level within a learning progression, or to a standard within a curriculum scope and sequence, to help locate and describe where a student 'is at' within a continuum of learning.

The concern for the interpretability of language used in reports extends to the language chosen as the indicator labels used in achievement or proficiency scales (Hattie & Peddie, 2003; Guskey, 2004). For example, if a scale uses frequency indicators (e.g. never, sometimes, usually, always) are the things it purports to measure even able to be 'always' achieved or demonstrated? It is not uncommon for proficiency scales to use labels like 'progressing' or 'improving' as mid-point indicators, but in a system in which all students are expected to progress and improve, what exactly do these terms mean? The confusion may even be greater if the full (usually four-point) scale is not presented in reports: when, for example, labels such as 'Adequate', 'Proficient' or 'Intermediate' might appear on a student's report but with no referent position within a scale. Similarly, the label 'Satisfactory' has very different meanings if used as part of a four-point scale (often signifying low-level achievement) or as a binary (satisfactory/not-satisfactory) code.

Personalised teacher comments

A consistent preference expressed by parents and students within consultation forums is that the teacher comments in reports are specific and personalised, so that they describe the particular achievements of the student in question and articulate their specific next steps for learning (Cuttance & Stokes, 2000; Power and Clark, 2010; British Columbia Ministry of Education, 2017, Hollingsworth, et al., 2019). Generic or generalised comments that merely describe the topics and content covered in class, that repeat the language of curriculum outcomes achieved, or are drawn from computer-generated comment banks may be used by teachers and schools to minimise the workload associated with generating reports. However, they are commonly perceived as depersonalised and may therefore be glossed over or ignored by both parents and students (Power & Clark, 2010; Hollingsworth et al., 2019).

Further consideration should be given to a perception by parents (borne out by research) that teacher comments tend to be singularly positive, giving a somewhat incomplete, and therefore distorted, picture of a student's achievements. By describing only what a student can do, or has demonstrated, it remains unclear to the parent what they can't yet do that they perhaps ought to be able to, and should be working towards achieving next. While these may often be covered in comments regarding future improvement, this does not signal clearly enough for the parent whether these skills and understandings were existing expectations that the student was not able to demonstrate or simply the student's next steps in learning as a result of having achieved all existing expectations. In this, teachers perhaps need to better understand that to describe objectively what a student has not yet been able to achieve is not being negative about the student, and appears in fact to be appreciated by parents (Cuttance & Stokes, 2000; Power & Clark, 2010; Harris, 2015).

A coherent and comprehensive reporting system

Though the scope of this paper has not extended to literature about forms of reporting other than written student reports, some of the literature reviewed has commented on the importance of complementing written reports with other forms of communication to parents as part of a broader system of reporting. Shepard and Bleim (1995) found that while parents rated standardised tests highly as a source of information about their child's progress at school, they saw report cards, hearing from the teacher, and seeing graded samples of student work as more informative. Selected work samples and portfolios of student work are considered useful aids to assist parents to verify their child's results and achievement in reports (Wiggins, 1994). Reports are seen as necessarily incomplete summaries of much more detailed assessment information, and parent-teacher interviews are often seen to be opportunities for parents to seek clarification about the reports (Tuten, 2007) particularly when they centre around portfolios of student work as demonstrations of student achievement and progress (Dixon et al., 2015). However, in one study, parent-teacher interviews were widely regarded by parents as unsatisfactory in providing them any meaningful opportunity for dialogue, or to further understand their child's report. Perceived as rushed and restrictive occasions, parents often see them as a one-way dissemination of information from the teacher merely confirming what was already stated on the report (Power & Clark, 2010).

The balance of detail to provide in reports is not easy to strike. While previous parent consultations have suggested parents want little more than a grade and an idea of where their child sits in relation to peers (Eltis, 2003, p. 89) other research has found parents seeking more information from reports than is given (Dixon, et al., 2015) with one study finding this was particularly true for highly-educated parents (Deslandes, et al., 2009). The timing and frequency of student reports is also considered an issue by parents who express a desire for more, and more frequent, reporting to enable them to act to support their child's learning if problems arise (British Columbia Ministry of Education, 2017; Hollingsworth, et al., 2019).

Education Scotland acknowledge that “parents value on-going information about their child’s progress instead of lengthy end of year reports which may leave little time or information to help them support their child’s learning” (Education Scotland, n.d.-c, p.3).

With the emergent trend towards online forms of reporting via school management and learning management systems, more detailed and more timely feedback to parents, aligned to the assessment cycles of different classes and teachers, is becoming possible. In 1994, Wiggins proposed that student reports are “a mere cover page or ‘executive summary’ supported by documentation to justify and amplify the meaning of the grades given” (1994, para. 57). Increasingly, continuous reporting via an online and interactive parent dashboard display, regularly updated by teachers with assessment grades, rankings and scores, is serving the purpose of this “cover page”. Sitting ‘underneath’ it are often multiple possible layers of assessment documentation, supporting evidence and detail to justify the results shown and meet parents’ differing needs for further information. Clicking on elements within the dashboard display could potentially allow parents to access annotated samples of student work, teacher feedback comments on assessments, completed rubrics for assessments, descriptions of the curriculum standards students have attained or are working towards, checklists of outcomes the student has achieved, and so on.

Such online systems would not therefore be simple summative records of what – or how well – a student has learned, but have “diagnostic value” and fulfil the function of “reporting for learning” (Forster, 2005, para. 4 and 5). While online forms of reporting hold much promise as tools for sharing more, and more frequent, information to parents about their child’s learning (Silva, Rocha, & Cota, 2015), much work needs to be done to manage the access, practice and expectations of the various users of such systems, to ensure home-school communication is not simply increased, but the quality of that communication improved (Miller, Brady, & Izumi, 2016). Similar considerations regarding the management of different forms of communication about student learning are proposed by Hollingsworth et al. (2019):

An effective school reporting system will make explicit the distinct role of different forms of communication – continuous reports, written reports, interviews, portfolios, etc. – and the ways that these are intended to work together to ensure cohesion and maximise efficiencies with respect to communicating student learning progress. (p.8)

Conclusion

A shift in emphasis is taking place in many education systems’ policies and practices, including Australia’s, to include a focus on assessing and reporting students’ learning achievement and their learning progress. This shift reflects a departure from only reporting students’ performance on age-based, lock-step syllabus outcomes, towards reporting students’ attainment against learning progressions spanning the schooling years (and beyond), together with the progress (gain or growth) they make along a continuum of learning over time. This represents a potential disruption to traditional student reporting processes, and the need for schools and teachers to find new ways to communicate learning progress.

A number of systems, including those of Ontario, British Columbia, New Zealand and Scotland, appear to be some way along the path to defining what it means to track, monitor, and report student learning progress, and to implementing reformed reporting practices. As noted in the previous section, these systems offer examples and lessons regarding key considerations for engaging in reform of student reporting practices. In addition, research focused on student reporting (albeit not abundant) also offers insights worthy of consideration.

In Australia, and specifically NSW in the context of its current curriculum review, policy frameworks such as *Through growth to achievement: Report of the review to achieve educational excellence* (Gonski et al., 2018), will need to be accompanied by clear guidelines for, and examples of, assessment and reporting formats aligned with curriculum, teaching and learning approaches recommended. As noted earlier, such details are anticipated to be forthcoming.

In NSW, future student reporting will need to be responsive to policy and practice considerations relevant to a reformed NSW curriculum. For example, how will alignment between teaching, learning, assessment, and reporting be achieved? What will be the (clearly articulated) purpose of student reporting? How will stakeholders be engaged in the reform of reporting processes? How will requirements of student reporting at the national level be incorporated at state and school levels? How will schools and teachers be supported to implement new approaches to communicating student learning progress? What degree of autonomy might be devolved to schools for the design and implementation of student reporting (including for example, student report formats, contents, and timing)? What kinds of accountability processes will be needed to ensure quality and consistency in student reporting processes and practices across the state?

It is hoped that the research-based perspectives on the reform of student reporting presented in this paper will stimulate and inform discussions about these and other questions related to student reporting in NSW.

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