

Over-Assessment in NCEA: A Review

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Introduction:

An accepted advantage of the NCEA system is its flexibility. The broad range of assessable content within the curriculum and the interchangeability of standards across different subjects allows for the creation of programs that are tailored to maximise success for individual students. However, proliferation of standards, particularly those that are internally assessed, promotes a number of negative outcomes. This essay will explore the impact of NCEA's flexibility upon over-assessment, and the influence that over-assessment has upon student wellbeing, educational achievement, and the qualification credibility.

Internal vs External Assessment:

Internal assessment is an important part of the structure of NCEA, because it allows for an extremely broad range of types of assessment within given curriculum guidelines. Teachers writing assessments in schools have a large influence upon the structure of the internals which they give to students. Conversely, external assessments are written independently of schools. It is statistically obvious that internal assessments are quite significantly easier than externals:

	Entries	Number of Assessed Results	Not Achieved	Achieved	Merit	Excellence
Externally-assessed Achievement Standards	1,232,592	988,990	22.4%	38.2%	27.3%	12.2%
Internally-Assessed Achievement Standards	2,399,890	2,372,406	15.5%	34.4%	25.4%	24.8%
Unit Standards	793,878	779,073	9.5%	88.2%	1.1%	1.2%

Table 8. Percentage distributions of results for secondary school candidates in Externally-assessed Achievement Standards, Internally-assessed Achievement Standards, and Unit Standards in 2017. Percentages may not sum to 100 due to rounding.

Table 9 shows the number of credits for each type of standard along with grade percentages.

	Number of Credits	Not Achieved	Achieved	Merit	Excellence
Externally-assessed Achievement Standards	4,443,538	21.7%	37.8%	27.5%	13.0%
Internally-assessed Achievement Standards	9,228,384	15.4%	33.8%	25.3%	25.5%
Unit Standards	2,705,576	9.9%	86.7%	1.6%	1.8%

Table 9. Percentage distributions of credits for Externally-assessed Achievement Standards, Internally-assessed Achievement Standards, and Unit Standards in 2017.

(copied from Annual Report on NCEA and New Zealand Scholarship Data and Statistics (2017), published May 2018)

Almost twice as many excellence grades were awarded for internal assessments than externals in 2017, and fail rates for internals were also significantly lower.

It seems likely that the disparity in internal/external results is at least partially attributable to the greater capacity for teachers to exercise bias in their construction and marking of internals, but irrespective of the reasons behind the gap, it is clear that the relative ease of internals causes a proliferation of assessments throughout the school year.

High levels of assessment throughout the school year:

According to the statistics above, internals are more than twice as common as externals. I posit three main reasons for this.

Firstly, students can gain each level of NCEA (including overall endorsements) with total or predominant reliance upon internal assessment. This creates incentive to focus heavily upon internals throughout the year, so as to prevent the necessity of good grades in externals at the end of the year. It is common for students to sit only one or two externals for a given subject, but it is relatively uncommon for students to present no attempt at offered internals.

Secondly, for students with high levels of success within NCEA, there is incentive to focus upon internal assessment because it offers an easier pathway to differentiation from one's peers than focus on externals. It is common for students receiving university scholarships to have numbers of credits that go far beyond NCEA requirements; often numbering in the hundreds. Schools thus create subject programs that cater to students' and their parents' desire to extract far more credits than necessary for achievement in NCEA throughout the year. The easiest way to do this is via internal assessment.

Thirdly, for students who are likely to fail to meet the requirements for achievement for some standards throughout the year, internals offer the easiest means for teachers to ensure that students reach the bar to receive NCEA qualifications.

The combined result of these factors is that it is extremely common to find various subjects taught by schools across the three levels of NCEA offering 12-18 credits across the year via internal assessment. NCEA allows this because of the sheer number of achievement standards available. For a normal program of 5 subjects, that is sufficient to allow a student to reach the 60 credit bar to pass NCEA levels 2 and 3 without sitting a single exam. The tradeoff is that students have to sit 3-5 internals per subject throughout the year. That has a number of pernicious effects.

Assessment and student wellbeing:

Student wellbeing should be a priority within the NCEA system. Ministry of Health statistics from 2017 indicate that 11.8% of New Zealanders aged 15-24 are experiencing mental health issues, up from previous years. In a 2017 survey conducted by StudyTime across a broad cross-section of NCEA participants, 66% of respondents listed stress/anxiety over assessments as one of the most significant barriers to their learning. 88% of respondents selected at least a 3 on a 5-point scale from 'extremely anxious' (5) to 'not anxious at all' (1) when asked how exams make them feel. 34% percent of students selected a 5.

Obviously kiwi students care about their education, and worry about their achievement within NCEA. That worry has impacts upon the mental and emotional wellbeing of students within the NCEA system. High levels of assessment are likely contributors to poor mental health amongst

students, particularly amongst Māori and Pacifica students, who are disproportionately likely to face both poor mental health and significant barriers to achievement in NCEA (which might cause them to have greater angst over assessment).

Assessment and student learning:

The proliferation of assessments that students undertake throughout the year has a number of detrimental impacts upon the educational value that they can extract from NCEA.

Whilst some specialisation is useful in allowing flexibility within NCEA, the number of internals that students complete throughout the year requires a problematic level of hyperspecialisation. Achievement standards in NCEA are created so as to cover quantised areas of learning for students. However, in many cases the distinctions that are made between those areas are unhelpful in fostering a broad understanding of subject matter. For example: the level 3 Calculus standard commonly referred to as 'systems of equations' requires students to focus on an exceptionally limited subset of matrix algebra. In taking such a limited view of algebra, it becomes impossible for students to come to an understanding of how or why it is that the concepts that they are learning work - just that they do. Given that, the 'systems of equations' standard amounts to little more than rote learning. Students are quick to forget what they have learned upon completion of that standard, because the discrete separation of achievement standards is such that any skills gained will almost never be useful for future assessments, even in achievement standards that are based upon very similar mathematical concepts. This trend exists across a broad swath of subjects. It simply does not make sense to separate out fundamentally intertwined concepts, whether they be mathematical or scientific concepts, or skills like research and writing in the liberal arts.

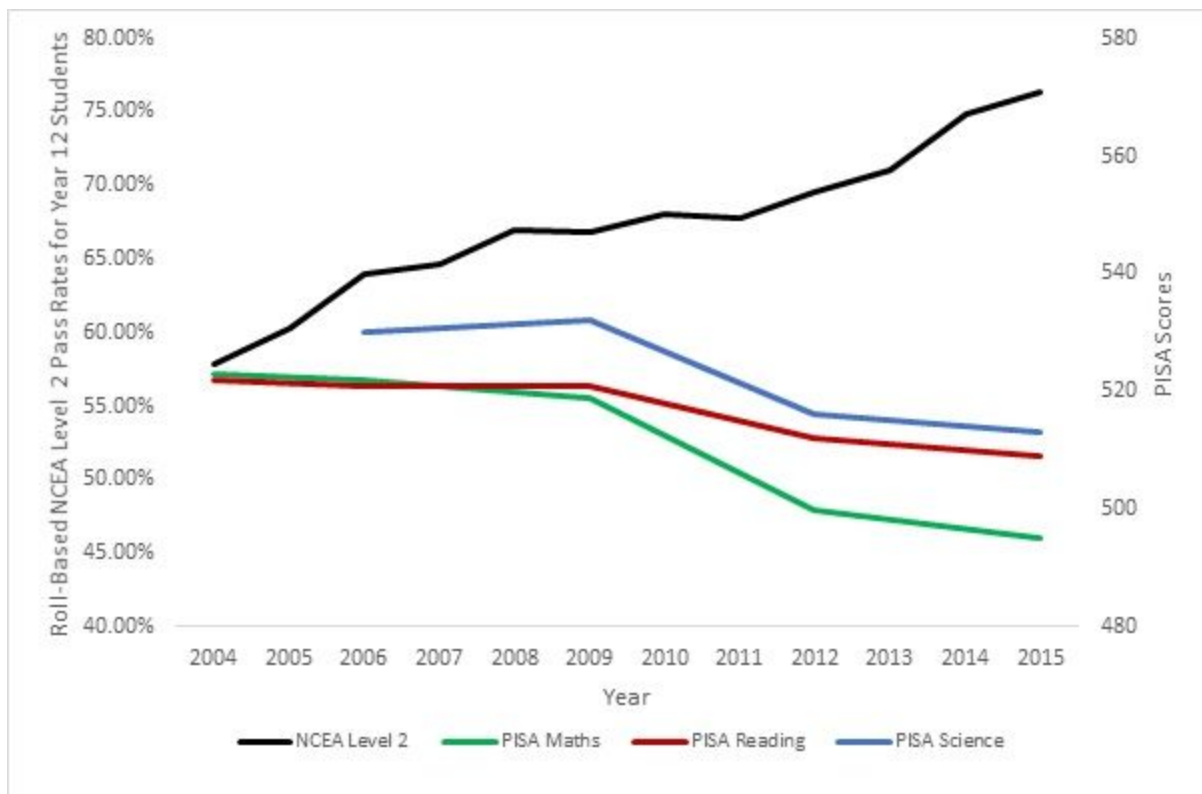
Additionally, the level to which achievement standards are specialised creates an environment in which internals become unuseful indicators of student achievement. There are a few reasons for this. Firstly, because the subject content which achievement standards are created to capture is often so narrow, there is a high level of predictability to assessments. Examples of narrow assessments might include tests which tend to test the same content year-to-year, projects that only require students to display learning on particular sections of the content, or assessments which do not directly test students at all on the content of class lessons, but which ask them to complete research in their own time. Within a credit-based system such as NCEA, the primary incentive acting on students is not to gather as broad an understanding of the subject as possible, but instead only to gain an understanding of what you know will be assessed, so you can collect the credits. This means that students can direct their efforts towards a limited subset of an already narrow subject content, such that they don't gain as great or useful an understanding of the broader subject as they might otherwise have.

Further than this, internal assessments are often changed only marginally year-to-year, which allows firstly for students to rely on the previous work of elder siblings and friends, but more importantly allows teachers to teach to assessments. Although the moderation system goes some way to mitigating the influence of teacher bias, it is easy to see how this might operate. It is certainly my belief that the majority of teachers in New Zealand care deeply about the

success of their students. Achievement in NCEA is the most obvious metric by which teachers can gauge that success. Having themselves written the internals which their students are offered, teachers know exactly what it is that students must understand in order to succeed in assessment, particularly when effectively the same assessment is run every year. Despite the benign intention of those teachers, teaching to tests can have an enormous impact upon student learning, because teachers spend a large proportion of their effort on helping students to get the grades, rather than helping to foster an understanding of and passion for the broader content of the achievement standard.

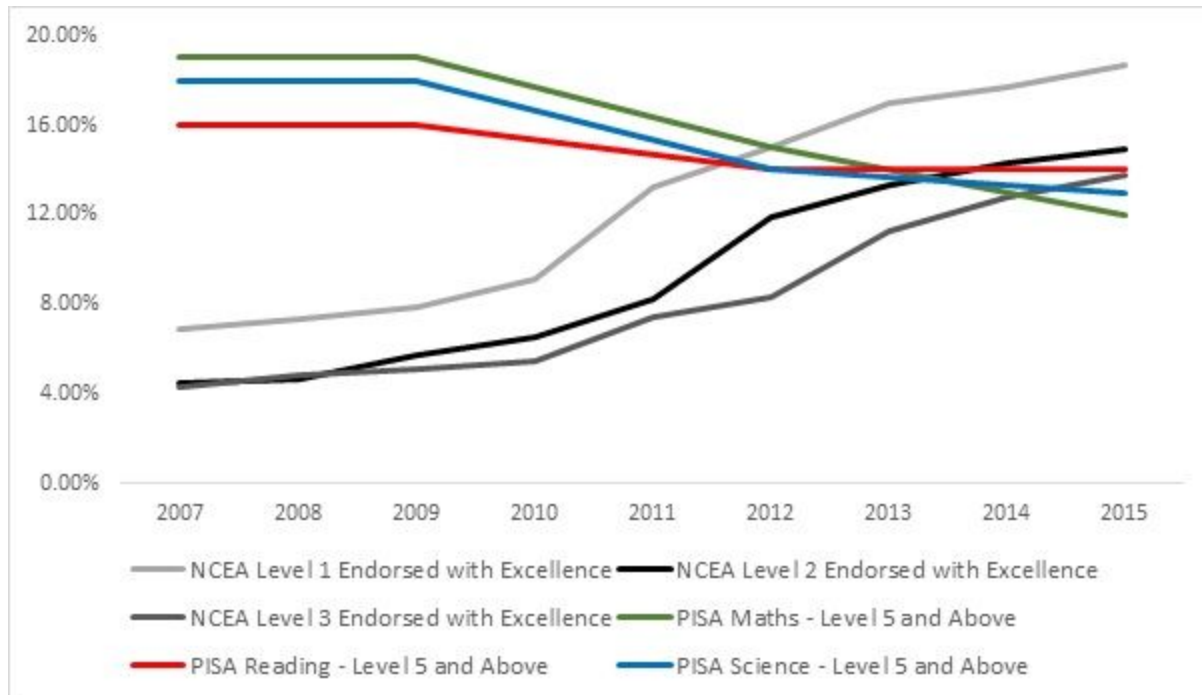
Assessment and grade inflation:

For whatever reason - be it teaching to tests, bias in the way that teachers mark their own students, or greater inherent difficulty to exams - it is statistically clear that internals are easier than externals. The proliferation of internals then can be considered problematic, because it makes the overall achievement in NCEA an easier task. Whilst it is important that all students can access and achieve within the NCEA framework, it is also important that students come out the other end of their schooling with a meaningful qualification.



Retrieved from <https://www.newsroom.co.nz/2017/04/18/19406/what-pisa-tells-us-about-grade-inflation-in-ncea#>

Evidently, the increase in achievement rates in NCEA over recent years does not actually indicate increased competency in key skills, as tested by PISA.



Retrieved as above.

Similarly, as the number of students who are considered to have achieved excellent results within the NCEA system has increased, the number who are considered to have achieved highly by an international standard has actually decreased.

The phenomenon of nominal student achievement increasing without a corresponding increase in real achievement is known as grade inflation. It seems likely that the grade inflation which NCEA is experiencing is a function of the proliferation of easy internals.

Grade inflation is problematic because it increases the likelihood that employers and institutions for education after high school will raise the bar for future students to qualify - in a similar way to how many university scholarships currently require students to get dozens more excellence credits than they would need for endorsement at level 3. This creates the perverse incentive for schools to offer even more assessments than they currently do. Further, inflation causes past students' qualifications to decline in relative value, such that they become less competitive in employment and education.

Recommendations:

Given the above issues, it seems a direct line can be drawn between high numbers of assessments in NCEA and worse outcomes in student wellbeing, achievement, and qualification value. Responding to this, my recommendations are as follows:

1. Drastically reducing the number of opportunities for assessment in NCEA, represented by a hard limit on the number of credits students may attempt to earn annually
2. a proportionate decrease in the requirements for achievement and endorsement in NCEA

3. reshaping achievement standards in NCEA, such that subject areas which are theoretically or practically indistinct but which are currently separately assessed are combined into a single achievement standard
4. greater degree of scrutiny from NZQA over internals, to ensure that they are suitably unpredictable as to encourage students to engage with the full breadth of the course content and incapacitate teachers from teaching to tests
5. Assessments themselves should not, however, necessarily be any more rigorous or lengthy than they currently are.

An NCEA system set up in this way would bring a number of discrete benefits:

- fewer anxiety-producing assessments
- assessments that require students to have a broad understanding of concepts that are relevant to future study/employment, as opposed to rote-learned knowledge that does not encourage conceptual learning
 - As a function of the above, a tighter correlation between NCEA results and results under international measures like PISA
- Less predictable assessments, incentivising a focus on all aspects of course content
- Lesser opportunity for teachers to settle into patterns which encourage them to teach students towards achievement in assessments, rather than towards breadth and depth of understanding
 - As a function of the above, NCEA success becomes more dependable as a proxy for actual educational success, mitigating the impact of grade inflation