

Submission to 9-12 Curriculum Review

Introduction

Analysis of data at 4 key points in the system indicates that there are about 10% of students that fall short of the educational standard all through their education. Approximately 60% succeed at each stage and around 30% fall below the standard at some point but succeed at other stages. This diagram illustrates the data. (Lamb S, 2015, p. iv)

The index of educational opportunity in Australia



As senior secondary educators in Tasmania our best chance of improving attainment is to capture the ~16% that fall below the minimum standard between grade 7 and grade 12 and boost them back to a satisfactory level of attainment, as well as improve the outcomes of the ~10% that have consistently failed to meet the minimum standard. The question of course is how to go about that.

What is restricting attainment?

Before looking at solutions we need to find out what factors mitigate against attainment. Lamb et.al, suggest a number of factors (in summary):

- Completion is linked to achievement in school. Only one in two of the lowest mathematics achievers (lowest decile) at age 15 completed Year 12 by age 19. For the highest achievers, 94.3 per cent had completed Year 12 by age 19.
- Levels of student engagement in school – cognitive, emotional and behavioural – as well as student dispositions towards school and learning (sense of belonging, sense of purpose, self-efficacy, determination or grit) vary by student background and are correlated with achievement.
- Linked to the likelihood of doing well at the end of the senior school years are social and cultural factors, as well as differences in the concentrations of disadvantage across schools and communities.
- Year 12 attainment among 19-year-olds varies substantially by socio-economic background. The SES gap is as much as 28 percentage points between highest and lowest. About 40 per cent of young people from the lowest SES backgrounds do not complete Year 12 or its equivalent by age 19.
- Location is strongly linked to Year 12 attainment. Remote and very remote communities have high numbers of young people not completing – 56.6 per cent and 43.6 per cent respectively.

Of these SES is by far the strongest factor, followed by location. These are things, however, which we cannot do anything about. Things which we can exercise some control over are engagement and achievement.

Achievement

Students that achieve well tend to complete their education. The building blocks of achievement are literacy and numeracy, students with poor literacy and numeracy skills do not achieve well at school in general and as a result they tend to disengage and not complete their education. For this reason one way to improve completion and attainment, particularly for the 'at risk 30%', is to build literacy and numeracy.

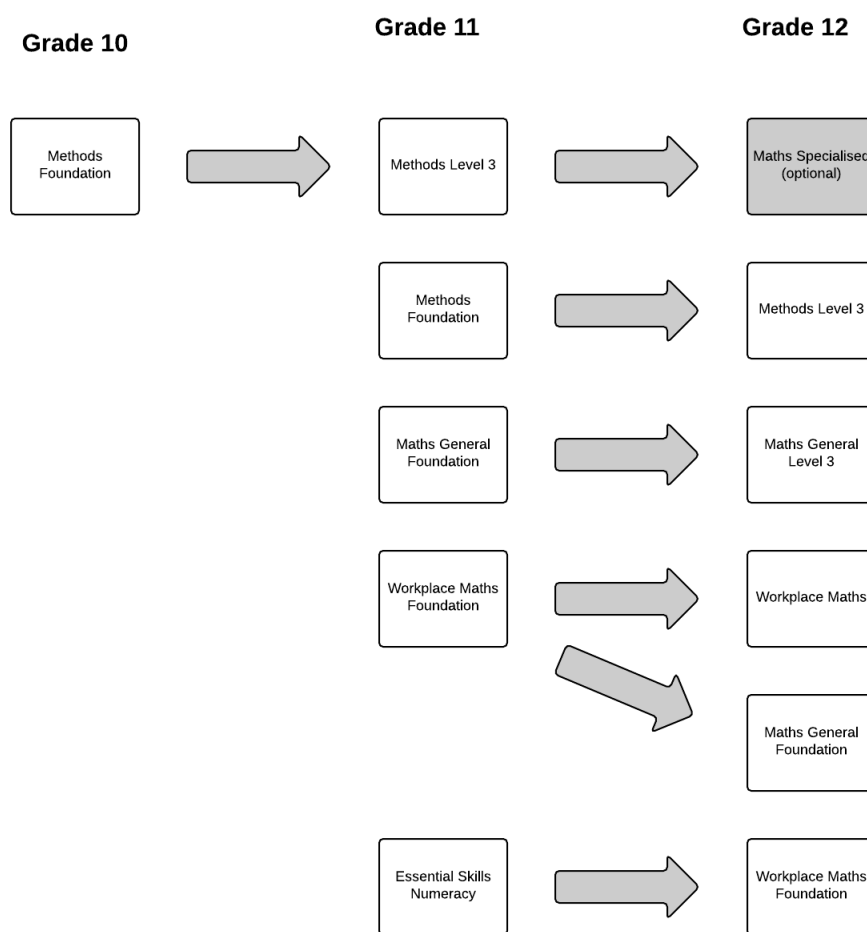
A good tool to evaluate the literacy and numeracy skills of our students is the PISA testing for 15 year olds in 2009. On this scale Tasmania provides the following results (Lamb S, 2015, p. 49):

Mathematics		Reading	
	Mean score		Mean score
OECD	487	OECD	496
Australia	504	Australia	512
Tasmania	478	Tasmania	485

Clearly Tasmania is behind in these areas when compared to the Australian average and the OECD in general. These mean scores hide even worse results for low SES students. Poor literacy and numeracy undermines learning and achievement, and contributes to poor attainment and retention figures.

One focus for improvement is therefore to boost literacy and numeracy, particularly for those students who are at risk. At the moment most students only complete one year of Maths and English in grades 11/12. In fact those students who are weakest in these areas are more likely to complete the least Maths and English subjects. I propose that students complete 2 year courses in literacy and numeracy, in line with the national curriculum. This will give students the best opportunity to build their skills in these areas.

As a teacher of Maths I will use that subject area as an example. If students enrolled in Maths courses over 2 years they would end up with an improved and less rushed coverage of the Maths curriculum and the standard and morale in classes would be much better. With minimal curriculum modification I can see possible Maths pathways for students as follows:



This can be achieved now by having students enrol in a 2 year pathway for Maths rather than individual subjects. A similar collection of pathways could be developed for English.

Engagement

“Engagement is of primary importance to succeeding at school. Many students who do not feel they belong at school, or reject school values, and become alienated or disaffected, struggle to succeed and place themselves at risk.”

(Lamb et. al. page 53)

Engagement refers to the extent to which students identify with the school and value the outcomes. There are three aspects to engagement (Lamb S, 2015, p. 53):

1. Emotional engagement refers to acceptance of school values and responses to peers and teachers.
2. Behavioural engagement refers to participation in school activities.
3. Cognitive engagement refers to connections with the learning tasks.

Measurements of these 3 dimensions of engagement indicate that Tasmania is slightly behind the Australian average, but more importantly this measure is also strongly influenced by SES and therefore has most impact on the students who are often already struggling with poor achievement and family support.

As an exercise it is interesting to think first about what sort of things mitigate against engagement:

1. Emotional engagement
 - Ensure students are constantly changing groups so that they find it difficult to get to know their colleagues. Make sure that all their class groups are different and they have little time to develop relationships.
 - Ensure that students have as many teachers as possible so they find it difficult to get to know their teachers well and feel comfortable with them.
2. Behavioural engagement
 - Make sure that students have as little time and opportunity as possible to engage in extra-curricular activities.
 - Ensure that any extra-curricular activities have as little connection as possible with the school.
3. Cognitive engagement
 - Make the curriculum as complex as possible.
 - Ensure that the assessment is complex and difficult to understand.
 - Make the enrolment process confusing and subject choice is complicated by a bewildering array of options.
 - Teach what the curriculum stipulates. The objective is getting a pass, not learning something useful or valuable. Also don't connect anything learned with the real world.

Based on this much of what we do in senior secondary education actually works against engagement. Again much is outside our control, but there are some things which I think we can work towards.

- Reduce the number of subjects. This will make the enrolment process less confusing and reduce the number of different subjects that students are doing, giving them more in common with their peers. There is evidence that reducing subject choice improves engagement. (Darling-Hammond, et al., 2006/2007)

- A good first exercise is to establish subjects on the basis of learning outcomes and level of difficulty, rather than content. If two subjects in the same learning area have similar learning outcomes then is there a need for both of them?
- Encourage project based learning.
- Provide credit for the learning that takes place in clubs and societies, or community work.

These are just a few thoughts, and they are somewhat controversial and in some cases counterintuitive. But I think that a new direction is needed to improve attainment and retention.

Grant MacDonald B.Sc. (Hons.), M.Ed.Studs

Declaration:

The opinions expressed in this submission are personal and representative of my employer or any group I am associated with.

This is a public submission - it does NOT contain 'in confidence' material in the main submission or its attachments, and can be placed on ACER's website.

References:

Lamb S, Jackson J, Walstab A, Huo S, 2015. *Educational opportunity in Australia 2015: Who succeeds and who misses out*, Centre for International Research on Education Systems, Victoria University, for the Mitchell Institute, Melbourne: Mitchell Institute

Linda Darling-Hammond; Peter Ross; Michael Milliken. (2007), **High School Size, Organization, and Content: What Matters for Student Success?**, Brookings Papers on Education Policy, No. 9, 2006/2007, pp. 163-203)