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# Review of Funding Systems

# Background paper for Advisory Group

**Per-child funding across schooling**

10 June 2016

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Introduction

The Review of Education Funding Systems (the Review) for early childhood education (ECE) services and schooling is seeking, as part of the broader Education Work Programme, to ensure funding is directed to the size of the education challenge ECE services, schools and Communities of Learning (CoL) face, and towards growing the learning and achievement of all children and young people.

The Review is exploring a more individualised and child-focussed funding model. In schooling this would comprise a standard per-child funding amount, and additional funding relating to children and young people who meet criteria associated with being most at risk of educational under-achievement.

This model envisages that a greater share of school and CoL funding would be determined on a per-child basis, compared to the current school funding model.

In this paper we consider issues relating to how the standard per-child funding amount might be determined, in particular how the amount might be aligned with the expected amount of teaching and learning, and children and young people’s needs at each stage of schooling. We also consider how this might differ for children and young people studying in, and through, te reo Māori or learning te reo Māori as a subject.

The current profile of funding across year levels and between children and young people studying in English and Māori medium contexts is outlined, and the drivers that have shaped this funding distribution are explored. Evidence that could inform decision-making, and other factors relevant to determining the relative per-child funding amount across the year levels are also outlined, together with insights from approaches in Australia.

Context

Overall, the broad expectation is that the school system is expected to:

* Help prepare children and young people to be confident, connected and actively involved lifelong learners, so that they can go on to realise their potential and participate successfully in society.[[1]](#footnote-1)
* Support the revitalisation of te reo Māori (where the curriculum is taught in, and through, te reo Māori); participation in, and exposure to, te reo Māori; and support the educational achievement of children and young people learning within this context.

The per-child funding amount is intended to provide in aggregate, sufficient funding for an effective school of reasonable size to enable most children and young people to make expected progress at each stage of the curriculum, and to appropriately provide for student wellbeing. As Communities of Learning become more established, in most cases effective schools would be supported by the expertise within its Community of Learning and would potentially be able to leverage economies through sharing or combining resources.

Within the per-child funding amount, schools would be expected to manage reasonable variability in a child or young person’s learning and needs. It is envisaged that schools would continue to have flexibility in how they can use funding, including shifting funding across year levels where they consider that this would more effectively support learning outcomes.

Specific additional funding would, however, be provided for those children and young people who are most at risk of educational underachievement, and to provide learning support (special education services) and a range of specialised services to individual children and young people.

We are not currently in a position to provide a definite answer about the proposed level of the per- child funding amount. Over time, there is an opportunity to develop a more robust understanding of this amount through the use of techniques that objectively identify schools that are achieving specific educational outcomes at reasonable cost, and analysing their particular circumstances, overall funding situation and practices.[[2]](#footnote-2)

The current pattern of funding

The current pattern of funding across year levels and the additional funding for children and young people learning in, and through, te reo Māori is the outcome of incremental decisions made over time. The current pattern of funding across year levels materially affects the total funding received by different types of schools, for example a primary school compared to a secondary school with a similar roll size. It can also affect the total funding received by schools of the same type and roll size, but with a different distribution of children and young people across year levels.

Some of the themes which have driven the current pattern of funding include:

* support for early acquisition of literacy and numeracy skills
* provision of a broad curriculum, with specialisation later in secondary schooling, including opportunities for experiential and vocational learning
* historical differences in structures for the internal management of schools across the primary and secondary levels, and
* provision of sufficient support to meet the additional challenges of accessing and successfully delivering the curriculum in te reo Māori.

At a system level, average government expenditure per-student[[3]](#footnote-3) is higher at secondary year levels compared to primary. Government expenditure per-student at the secondary level is around 1.3 times that on primary education. In 2011, the average across OECD countries was 1.1.

As shown in the graph below the pattern of funding follows somewhat of a u-shape.

**Graph 1: Estimated average government expenditure per-student by year level 2015[[4]](#footnote-4)**

Average expenditure per-student is comparatively high at Year 1, falling quite sharply to its lowest levels across Years 4 to 6. At Year 1, estimated average expenditure per-student is some 60% higher than at Years 4 to 6.

There is an increase in average expenditure per-student at Year 7 and Year 9 and then at each of Years 11, 12 and 13. Expenditure is comparatively high at Years 12 and 13. At Year 13, estimated average expenditure per-student is some 80% higher than expenditure at Years 4 to 6, and some 28% higher than at the beginning of secondary schooling at Year 9.

Key factors driving this pattern of funding are:

* the structure of curriculum staffing ratios[[5]](#footnote-5), especially for children and young people who are not studying in, and through, te reo Māori
* a gradual increase in operational grant funding as children move through the year levels
* greater management staffing entitlement as children move from primary and into secondary levels, and increasing as they move through secondary schooling
* provision of specific funding streams for schools with secondary students, and particularly for young people at the senior secondary level, including Additional Guidance Staffing Entitlement, the Secondary Tertiary Alignment Resource (STAR), funding for Secondary Tertiary Programmes (Trades Academies)
* the higher level of base operational grant funding and base staffing entitlement at the secondary compared to primary level, and
* a differential in average teacher salary levels between primary and secondary schools.

Children and young people studying in, and through, te reo Māori (particularly those studying at immersion levels 1 and 2) or studying Māori as a subject generate additional funding. At immersion levels 1 and 2, the differential is the result of a combination of Māori Language Programme Funding and specific curriculum staffing ratios.

The pattern of funding for children and young people studying at Māori immersion levels 1 and 2 is more even across year levels than in English medium contexts, due to a flatter profile of curriculum staffing ratios. The specific differential in funding for children and young people studying at Maori immersion levels 1 and 2 is greatest over Years 4 to 8 and smallest at Years 1, 12 and 13.

*Questions for discussion*

*Is the current profile of funding aligned with the teaching and learning expectations in the curricula and student needs at each stage of the schooling journey?*

*To what extent do schools use funding in line with current allocations within the operational grant and staffing entitlement, such as the curriculum staffing ratios?*

*How do differences in the profile of funding across year levels impact on the certainty for schools to plan and effectively manage?*

Considerations to inform the level of the per-student funding amount

***Size of the teaching and learning challenge***

We have considered how the curriculum design and understanding of a ‘years worth of progress’ might guide the design of a per-child funding amount that is aligned to the size of the teaching and learning challenge and children and young people’s needs at each stage of their schooling journey. We have defined the teaching and learning challenge broadly, including requirements for assessment to support learning and progress, and for educational leadership.

We know that:

* Schools, kura and CoL are faced with making multiple and complex decisions many times a day as children and young people pass through their classes.
* The New Zealand Curriculum and Te Marautanga o Aoteroa (the national curricula) specify the learning outcomes in eight levels of the eight learning areas of the New Zealand Curriculum and nine learning areas of Te Marautanga o Aoteroa to indicate progression and continuity of learning throughout schooling from Year 1 to Year 13.
* The curriculum was designed to support an incremental approach to learning throughout the schooling journey – i.e. attainment and progress is organised along a steady upwards trajectory (on paper at least).
* Schools tailor key competencies to address the specific needs of children and young people, and the competencies should only be developed within the context of the learning areas.
* In any one class, students may be working at a range of levels, both in the different learning areas, and within a single learning area. Assessment practices will provide insights about the stage that learners have reached, and for the next learning step.
* Emphasis on learning expectations is different across the curriculum levels.
	+ From Years 1 to 10 the national curricula provides the basis for what children and young people learn. For example, in Years 1 and 2 the emphasis is on establishing the learning foundations so that learners can access the curriculum throughout their schooling.

* + From Year 11 onwards young people have an opportunity to broaden their subjects and specialise beyond the national curricula to obtain NCEA qualifications. The depth of learning (covering 3 curriculum levels in 3 years) and range of subjects (over 45) provided, places pressure on teachers and schools/kura to meet those expectations.
	+ Provision from about Year 11 also includes increased experiential learning opportunities, including vocational oriented learning, which hav particular costs of provision.

But there are gaps in our knowledge and new challenges that have implications for such a design, for example:

* There is much to learn about how the national curricula impacts on transition points, and on children and young people’s overall progress. There are long held views that transition points from ECE to schooling, Year 6 into Year 7, and Year 8 to Year 9, impact on children and young people’s progress and outcomes.
* An increasingly diverse student population and advancing technologies add complexity to teaching and learning at all levels of the curricula.

Therefore as a starting point, a curricula focus suggests a relatively even funding requirement in terms of the teaching and learning challenge at each stage of a student’s journey through schooling, increasing in secondary schooling in order to provide diverse learning options.

*Education research*

In terms of education research, we have limited evidence to guide decision-making about the level of the per-student funding amount. The strongest evidence relates to the early years of primary schooling. It suggests a case for comparatively higher expenditure in the early years of primary schooling compared to later stages of schooling. For example, evidence from Project STAR in Tennessee found that sustained exposure of students to smaller class sizes over Kindergarten to Year 3 (our equivalent of Years 1 to 4) led to improved levels of achievement. [[6]](#footnote-6)

*Other factors*

Another issue for consideration is how non-teacher costs change over the schooling journey. Issues include the differing costs of learning experiences that enable children to gain the knowledge, skills and competencies expected across the curriculum at different levels. In some areas of the curriculum, more expensive materials and equipment are required at advanced levels of instruction.

Costs at each stage of schooling are also affected by agreed conditions of employment, which differ across primary and secondary levels. A particular difference relates to curriculum release or non-contact time for teachers. The Secondary Teachers’ Collective Agreement also commits to reasonably endeavour to ensure that every teacher who takes more than one class does not have an average class size exceeding 26 students.

In considering how the per-child funding amount might change across the schooling journey, a further issue is the balance between the merits of a finely calibrated funding system and providing reasonable certainty for schools to plan and to be efficient. Significant differences in funding across year levels can increase funding uncertainty for individual schools.

*Children and young people* *learning in, and through, te reo Māori*

With regards to children and young people learning in and through te reo Māori, the teaching and learning challenge generally involves supporting children and young people to achieve language proficiency, as well as to make expected progress against Te Marautanga o Aotearoa.

For many children and young people learning in this setting, te reo Māori is a second language so they must acquire both basic language and academic proficiency. This also tends to occur against a community backdrop where te reo Māori is not the main language spoken. This may require more 1 to 1 support than students learning in non-immersion contexts and accessing the New Zealand Curriculum.[[7]](#footnote-7) Further, given the requirement that students in Māori immersion settings are bilingual by the end of schooling, in later years the teaching and learning programme must also support the development of English language proficiency.

The delivery of effective teaching and learning programmes can also involve greater investment of time because of the scarcity of available resources in te reo Māori. Over time this is being mitigated by technological advancements and the growth of resource banks.

**Conclusion**

Considering all these matters an overall ‘u-shaped’ funding curve appears appropriate, with some differentiation between Maori immersion and English medium. However, the curve would be less steep than the current pattern.

*Questions for discussion*

*How does the teaching and learning challenge, including the requirements for educational leadership, differ over the schooling journey?*

*What are the major drivers of differences in non-teacher costs over the schooling journey?*

*Are the costs of providing greater specialisation of learning and more individualised learning pathways at the senior secondary level materially different from providing a broad based curriculum at lower secondary levels? How might Communities of Learning change this?*

*To what extent is the teaching and learning challenge increased by the need to support students to develop language proficiency, and to make expected progress against Te Marautanga o Aotearoa?*

Insights from Australia

We have also looked to some international examples. Some insights are available from Victoria and Western Australia.

***Western Australia***

In Western Australia the per-student funding level is the same over Pre-primary to Year 3 (equivalent to New Zealand Years 1 to 4), and 20% higher than in their Years 4 to 6 (equivalent to New Zealand Years 5 -7). Per-student funding rises for Years 7 to 10 (equivalent to New Zealand Years 8 to 11) by around a third, and again by 7.5% in Years 11 to 12 (equivalent to New Zealand Years 12 and 13).

***Victoria***

The profile of funding in Victoria, Australia also follows a u-shape, but is shallower than in New Zealand. The following graph shows funding amounts for 2016. The per-student funding rate for Prep to Year 2 (our Year 1 to 3) is 17% higher than for Years 3 to 6. All secondary year levels are funded at the same rate which is 33% higher than for Years 3 to 6.

**Graph 2: Relative value of per-student funding rates for Victoria, Australia**

Victoria has a ‘dynamic’ funding model in the sense that since 2005 the profile of funding rates across year levels is reviewed every three years. Since 2005 there has been a simplification and marginal flattening of the distribution.[[8]](#footnote-8) The setting of relativities is informed by research on school effectiveness and the analysis of expenditure patterns in sample schools. The effectiveness takes into account a range of student outcomes including engagement, achievement, retention and transition.

For example, 2011 benchmarking research confirmed previous research that in Victoria high-performing primary schools consistently spent more money on preparatory and early years, whereas high-performing secondary schools spent slightly more at the most senior levels. To encourage secondary schools to invest in early intervention, a decision was taken to establish a common funding level across Years 7 to 12.

Over time, there may be an opportunity for New Zealand to build a stronger information base to align with the Victorian approach. This would require more reliable and long-running information on the pattern of education achievement, information on the funding allocation choices of efficient and effective schools, and the ability to isolate the impact of funding patterns on educational achievement from other potential factors.

*Questions for discussion*

*Would there be value in seeking to move toward a more evidenced-based model similar to Victoria?*

*Would resetting the funding thresholds at intervals to provide for a dynamic model add value to our funding system?*

*How should effective and efficient schools be identified?*

1. This is consistent with the common direction provided by the New Zealand Curriculum and Te Marautanga o Aotearoa. [↑](#footnote-ref-1)
2. The work undertaken by Sapere Research Group explored in a preliminary way the application of these types of techniques to the New Zealand context. [↑](#footnote-ref-2)
3. Operational grant funding and teacher salary costs. [↑](#footnote-ref-3)
4. <http://www.educationcounts.govt.nz/statistics/schooling/resourcing/per-student-funding>. Values are average per-student expenditure on operational grant funding (core funding components only – this includes property maintenance funding) and teacher salaries. This indicator is calculated for state and state integrated schools only. [↑](#footnote-ref-4)
5. Including technology staffing at Years 7 and 8. [↑](#footnote-ref-5)
6. Project STAR in Tennessee and SAGE in Wisconsin involved reducing kindergarten to grade 3 class sizes of 13-17 students. Follow up studies on STAR have also been carried out which showed that the benefits were sustained. [↑](#footnote-ref-6)
7. There are, however, some parallels to the situation of English as a Second Language students. Specific additional funding is provided to support these students. [↑](#footnote-ref-7)
8. Department of Education and Early childhood Development, The School Global Budget and Student Resource Package in Victoria, Twenty Years of Innovation and Refinement, October 2013. [↑](#footnote-ref-8)