

RAPID RESPONSE

Drafter: § 9(2)(a)
Metis Number: 905982
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Request: Current PSKH resourcing model

The Parliamentary Under-Secretary would like information on the following:

- A. a summary that describes how each component of the current resourcing model for partnership schools (eg establishment, operational (base funding and per student), property funding, etc) is calculated
- B. the strengths and weaknesses of the methodology for each component
- C. summary statistics of the regression used to calculate the operational component (2011 data and also 2013 if possible), including relevant plots of the data
- D. initiatives included in the cashed up centrally funded support

Response:

A: Summary of how each component of the resourcing model is calculated

Before a school opens

Establishment Funding

1. Partnership Schools' establishment funding is made up of:
 - administration grant
 - learning and teaching resources grant
 - library and information resources grant
2. Partnership Schools' establishment funding is based on the amount given to state schools of equivalent roll numbers and year levels. This is a one-off payment based on the maximum proposed roll as agreed in contract negotiations.

Principal's salary

3. As with new state schools, Partnership Schools are provided with funding to employ a principal.
4. New state schools usually get funding to employ a principal for up to five school terms prior to opening. The much shorter set-up period for Partnership Schools has meant that funding to employ a principal has been given for one term at an average cost of \$28,000 for the first round of schools, and for two terms at a cost of \$65,597 for the second round of schools.
5. The principal's salary payment includes a base salary, staffing-based salary component, and leadership payment (as for state schools).

Property

6. Partnership Schools get some property funding (6 months prior to opening for the second round of schools) that allows them to enter into leases and prepare the property so that it is ready for students when the school opens.

Property and Insurance Funding

7. Cash is provided to Partnership Schools in lieu of the Crown property (excluding land) given to state schools.

Cash for Buildings

8. The property payment for Partnership Schools is calculated using the Cash for Buildings formula that is one method of delivering property funding for state schools.
9. The level of funding is calculated by multiplying a school's space entitlement by a conversion rate. The space entitlement for a Partnership School is based on that for an equivalent state school and is dependent on roll numbers. Partnership Schools' property funding is calculated on the maximum proposed roll.
10. The conversion rate is an amount per square metre that approximately averages the cost of providing one square metre of space over a 40-year period (i.e. the useful life of the building).
11. The Cash for Buildings model includes three components:
 - site works costs and the cost of constructing the building(s), including a furniture and equipment grant (capital costs)
 - 40 years of Operations Grant property funding (maintenance costs)
 - 30 years of Five Year Agreement (5YA) funding (modernisation costs).
12. The conversion rate is calculated so that the net present value of cash payments over 40 years approximately equals the cost of constructing a building and the associated payments for maintenance and modernisation. The conversion rate varies by school type as shown in the following table:

Type of school	Conversion rate \$/m²
Primary	132
Intermediate (years 7-8)	147
Composite (years 1-13)	145
Restricted composite (years 7-10)	155
Secondary (years 7-15)	157
Secondary (years 9-15)	162
Specialist classroom	163

13. The Cash for Buildings payments are reviewed and updated every three years. This should coincide with the Partnership Schools' mid-term contract reviews (after three years).

Property Insurance Payment

14. Partnership Schools receive a payment towards property insurance. This is because they must take out their own insurance, whereas the Crown carries insurance for state schools.
15. The insurance payment is based on the Hobsonville Public-Private Partnership business case where an approximate market rate for office buildings outside the Auckland CBD of \$4.58 per square metre per annum was used. This figure dates back to 2010. The insurance payment equals \$4.58 multiplied by the amount of square metres used for the Cash for Buildings calculation.

Base and Per-Student Funding

16. State school funding varies with a wide range of factors including school size, type, student year level, and roll numbers. Part of the rationale behind the Partnership School funding model was to trial a simpler model that was not built up from a large number of individual components, but was approximately similar to the total resourcing that an equivalent state school would get.
17. An averages-based model was determined using regression analysis based on actual salary and operations grant expenditure for decile 3 state schools (decile 3 was chosen because it is the mid-point of the lower decile range which is where we would expect Partnership Schools to be).
18. The Partnership Schools funding model cashes up an equivalent of teacher salaries and the operations grant to provide two components – a base grant and a per-student grant.
19. The base grant is provided to meet the fixed costs associated with running a school, and to compensate smaller schools for any inequities caused by diseconomies of scale. State schools get such an allocation through a mixture of some staffing entitlements (teacher salaries paid centrally) and some operations grant funding (paid to schools). Secondary schools receive a higher staffing entitlement than primary schools because of the need to provide subject specialisation in senior secondary schooling.
20. The per-student funding is a cashed-up payment covering operational funding and teacher salaries that is equivalent to the rest of the resourcing that a state school would get.
21. Partnership Schools are also eligible for entitlements that attach to individual students or schools and can apply to access this funding. These could include funding for students who are English Speakers of Other Languages (ESOL), special education, transport assistance, and Māori Language Programme Funding, and the isolation allowance.

Guaranteed Minimum Roll

22. A guaranteed minimum roll is set out in sponsors' contracts. This is used to calculate per-student funding and centrally-funded support funding in the first few years when the schools are building up to their maximum rolls. It does not affect property or base funding. New state schools also have guaranteed minimum rolls.
23. This provides some extra certainty by the Crown agreeing to staff and fund the school at a certain roll for the first three years, regardless of whether enrolments reach that level. This gives the school stability to be able to offer the breadth of the curriculum while it is growing its roll, making critical staffing decisions, and building community confidence.

Centrally Funded Support Funding

24. State schools receive a considerable amount of support that is centrally-funded. The main components are: itinerant and in-school specialist teacher assistance; professional learning and development; curriculum resources; and student engagement initiatives to support disengaged students. Appendix Two provides a table of all initiatives included in the cashed up centrally-funded support.

25. Special education support for moderate and high needs students remains centrally funded.
26. Partnership Schools receive \$276 per student in centrally funded support funding (Appendix Two provides detail of how this was calculated).

B: The strengths and weaknesses of the methodology for each component

Establishment Funding

27. Strength:
 - Provides the funding needed to enable a school to get into a fit state to accept students, and to have teaching and learning resources ready for students to start.
28. There are no obvious weaknesses with the establishment funding component.

Property and Insurance Funding

29. Strengths:
 - It provides sponsors with flexibility. While most sponsors are likely to use this funding to lease premises, if they wish they can use it along with other money to build their own school.
30. Weakness:
 - Cash for Buildings is based on average construction and maintenance costs and is not pegged to rental market rates. This does not seem to have caused a problem so far, possibly because the target student groups are not located in areas with the highest rents.
 - The insurance rate is pre-Christchurch earthquake and may go up significantly at review.

Base and Per-Student Funding

31. Strengths:
 - Because the Partnership Schools model is an averages-based model it is simpler than the state school model which is based on aggregating funding for individual components.
 - It provides a level of funding similar to that of an equivalent state school.
 - Cashed up funding gives sponsors flexibility.
32. Weakness:
 - While the Partnership Schools funding model should deliver similar funding outcomes to those in the state sector over a broad range of circumstances, it is less likely to do this when rolls are very small.
 - The base funding, in particular, is generous for small secondary schools as there are few examples of these in decile 3.
 - There is the risk of incentivising the establishment of small schools that are expensive and at risk of poor student outcomes.
 - Schools may be funded for more students than they have enrolled. This results from Partnership Schools being unable to meet the guaranteed minimum roll. This has led to the Crown funding unfilled places, and increased per student costs. However, this is not uncommon in new state schools.

Centrally-Funded Support Funding

33. Strength:

- Gives the schools the flexibility to achieve the agreed outcomes by using the resourcing available in the way that they think will best serve their students.

34. Weaknesses:

- In any year, each state school receives a unique amount of support. This is because:
 - the targeted nature of many initiatives means that not all schools are eligible for every item
 - even if eligible, a school may not have priority to receive it, or may not choose to access it
 - having accessed support once, a school may not receive it again – it is not ongoing.
- Partnership Schools receive an allocation based on an average, which does not allow close comparison with a state school of a similar size, type and socio-economic status.
- Modelling provides a rate of \$276 per student per year across all year levels. There is a risk that state schools will consider this to be more than they receive.

C: Summary statistics of the regression used to calculate the operational component (2011 data)

35. The table below shows the funding rates for decile 3 primary (including intermediate) and secondary schools based on the regression results as applied to the 2014 school year.

Decile	Primary		Secondary	
	Base	Per-Pupil	Base	Per-Pupil
3	\$145,854.01	\$4,671.49	\$997,044.67	\$5,357.23

36. The following table shows the number of schools used in the regression analysis under each category¹.

Decile	Primary		Secondary	
	# Schools	R-Square	# Schools	R-Square
3	193	98.02%	33	98.90%

37. Appendix One provides further detail about this model, plus graphs comparing actual and theoretical funding proposed by the model.

38. The funding rates are not recalculated each year. Instead, the contract contains a provision for annual adjustments based on the Consumer Price index (CPI) and the Labour Cost index (LCI). The combined CPI and LCI applicable to the 2015 year is 1.15%.

¹ The smaller the number, the more volatile the result is likely to be. It also shows the R2 statistics (can roughly be interpreted as the proportion of variances/differences explainable by the regression model) – the closer it is to 100% the better fit the model is when comparing to actual funding.

39. 2013 data is not currently available but will be shortly, but will not be used for any Partnership School rate calculations (as explained in paragraph 38).

D: Initiatives included in the cashed up centrally funded support

40. The main components of cashed up centrally-funded support are: itinerant and in-school specialist teacher assistance; professional learning and development; curriculum resources; and student engagement initiatives to support disengaged students.
41. The fixed per-student amount of \$276 for cashed up centrally-funded support is not adjusted using LCI and CPI rates because the initiatives on which it is based are mostly not inflation adjusted.
42. Appendix Two provides a table of all initiatives included in the cashed up centrally-funded support plus the assumptions used to derive the per-student amount.

Further information regarding the regression model used to calculate the operational funding component

Methodology

1. The underlying statistical technique adopted in deriving the top-down model is the regression analysis. In particular, the linear regression model is used to estimate the relationship between schools' roll sizes and funding (operational funding and teachers' salaries) they received.
2. With the linear regression model, it is assumed that there is a straight-line relationship between schools' roll size and their funding. The model looks at all available funding data and attempts to produce a formula that produces the least amount of differences between what the formula estimates and what schools actually received in reality.

Underlying Data and Assumptions

3. The underlying data used in the regression analysis is based on the operational funding provided to schools and the amount of Ministry-funded salaries they spent during the 2011 calendar year. The 2012 data isn't used because of issues with the payroll system.
4. The proposed funding model for Partnership Schools is different from the state sector model and not all funding provided to state sector schools will be relevant and applicable to Partnership Schools.

Annual adjustments

5. The annual adjustments provided for in the contracts uses the general Consumer Price index (CPI) and the Labour Cost index (LCI) for education and training. The general CPI has been used because the education CPI reflects the price consumers pay for education services, whereas this model looks at what the school pays for products like rent, stationery etc. Both the LCI and CPI are the percent change from the June quarter of the previous year.

Composite schools

6. Note – there are too few composite schools at decile 3 to get a stable model.

Graphs

7. The following diagrams compare actual funding² against what the regression model proposed for decile 3 schools.

² Actual funding excludes specific funding components and estimated staffing expenditure for additional purposes mentioned in the previous section. It also includes estimated current impact for ACC and superannuation assumptions.

Figure 1: Comparison between Actual and Theoretical Funding Proposed by the Model (Primary decile 3 Schools)

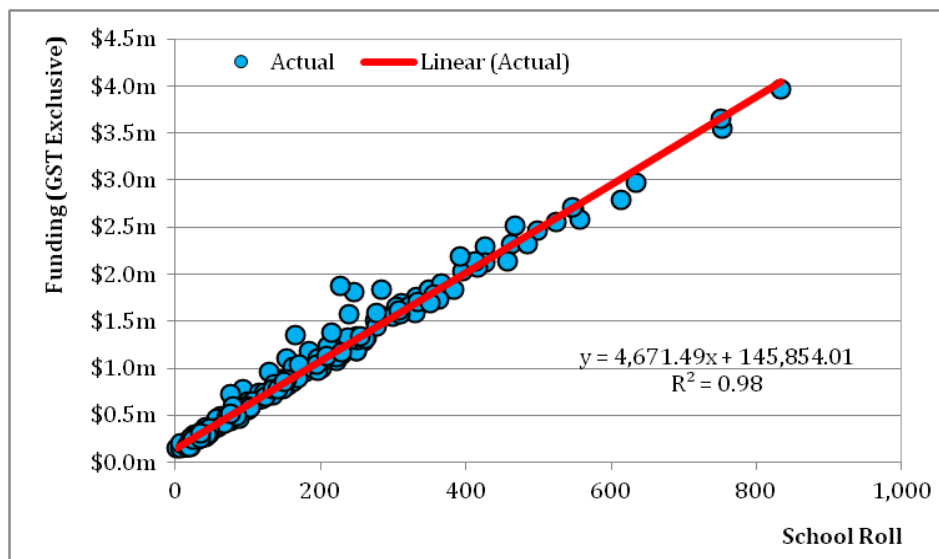


Figure 2: Comparison between Actual and Theoretical Funding Proposed by the Model (Secondary decile 3 Schools)

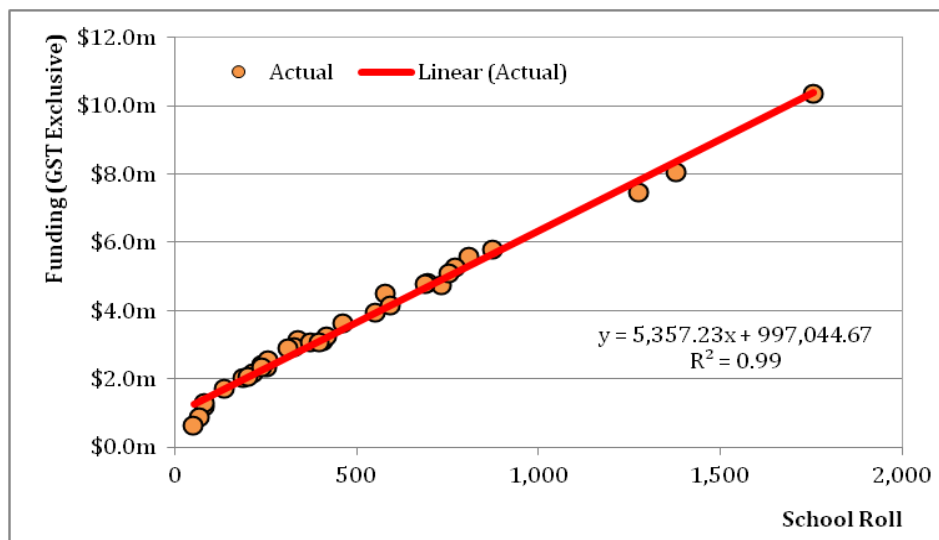
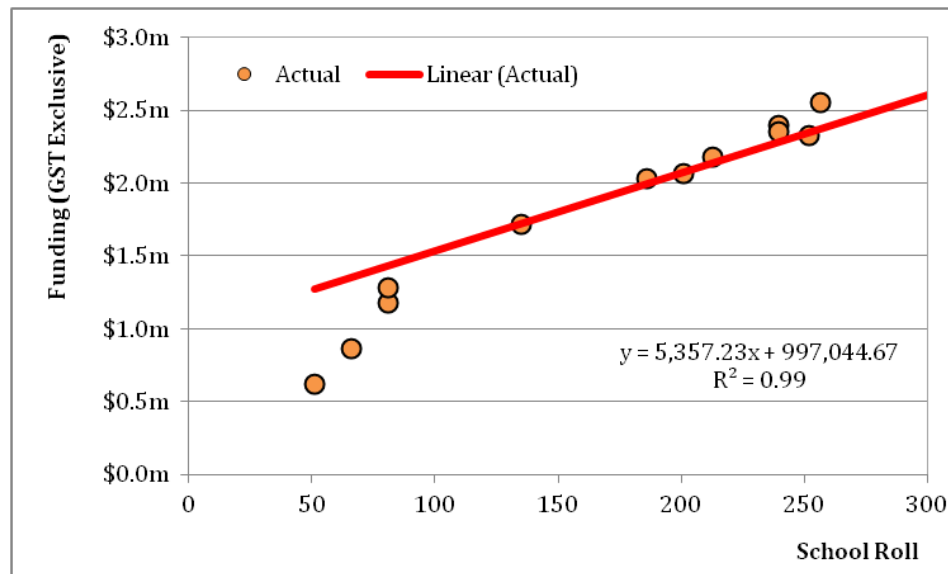


Figure 3: Comparison between Actual and Theoretical Funding Proposed by the Model (Secondary decile 3 Schools with Rolls Fewer Than 300)



Appendix Two

Initiatives included in the Centrally Provided Support to be Cashed Up

Appropriation	Programme	2013/14 (\$000)	Description
Curriculum Support	Books in Homes	1,396	Funding that enables lower decile schools to join in financial partnerships to purchase books of children up to Year 8 who live in homes with few books.
	Gifted Education	1,270	Pays for PLD of teachers of gifted and talented students –priority for Māori and Pasifika and students with SEN
	Information Technology Initiatives	4,008	6 initiatives to help schools build capability in the use of ICT for leadership, teaching and learning
	Language Contracts	1,636	Provides PLD opportunities through literature reviews, workshops, language courses, language assistants and other support for language programmes
	Laptops for teachers	21,082	Provides subsidised and unsubsidised leased laptops to principals and teachers through an all of Government contract
	Learning Experiences Outside the Classroom	4,964	Funding to community organisations to deliver curriculum-linked authentic learning experiences
	Microsoft licensing agreement	10,864	Provides Microsoft software licensing and support to state schools (including integrated)
	Reading and mathematics proposal pool	3,142	Tuition fees for teachers to complete graduate and postgraduate papers in literacy or mathematics education and funding for a number of school-based literacy and mathematics initiatives
	Student Engagement Initiative	1,460	Delivered on an ad hoc basis to schools that have high suspension rates, high truancy rates and/or high levels of early leaving exemptions.
	Truancy initiatives	9,676	Funding for the new integrated attendance service. Deals with truancy referrals from schools and helps learners not at school to re-engage.
Primary Education	Homework centres	3,883	This funding covers study support centres, Reading Together, and the admin contract (audit fee). A study support centre is a Ministry funded educational programme which provides additional educational support for year 5 - 8 priority learners. The centres are run outside regular school time, by schools or community groups. Reading Together funding is to support all English medium decile 1-3, schools (that include students at any of the years 1-8) to implement the Reading Together Programme.
	Improves school admin standards and ability to use NCEA data	1,411	This initiative is to assist schools to use their Student Management System to analyse data particularly for NCEA.
	Literacy standards	16,388	This is a new initiative. Pays for a range of programmes aimed at improving reading and mathematical literacy.

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	Literacy standards – school grants	1,030	Programmes designed to support students to achieve literacy & numeracy standards. Major programmes are Accelerated Literacy learning (ALL) and accelerated learning in Mathematics
	Relieving teachers	6,387	This funding is used to provide additional relief teacher funding to Primary schools over and above their Operations grant funding for this purpose where the absence of a teacher due to his/her own illness exceeds eight consecutive full school days.
	Resource teachers Literacy	7,522	RT: Lits are specialist teachers that help schools meet the needs of Yr 0-8 learners with reading and writing difficulties
	Reading Recovery Time Allowance	18,388	For primary and composite schools and allocated by regional offices.
	Resource Teachers of Māori (RTMs)	3,585	RTMs provide support for principals and teachers in the provision of teaching and learning programmes for students in Year 0 to Year 8 in Māori medium settings, particularly at immersion Levels 1 and 2.
Professional Development and Support	Growth and development of te Reo and Tikanga Māori in schools	1,563	PLD funding aimed at strengthening Te Reo and Tikanga Maori as a second language area in English medium schools.
	Information technology initiatives	11,210	This pays for a series of initiatives comprised of Classroom informed research a website, professional resources and a PLD support mechanism
	International teacher exchange	1,056	Funding for International Teacher exchange programmes. It provides development opportunities overseas and teaching support through language assistants.
	Māori Language training	2,447	Provides training for primary teachers, provision to increase the fluency of Te reo for practising teachers and provides immersion courses.
	Māori teacher workload	2,510	Enables targeted Māori teachers to undertake PD to improve teaching practice
	NCEA, Numeracy and Literacy and Pacific English Language and Literacy Initiative	2,911	These programmes are a suite of three centrally funded initiatives which provide teachers in the compulsory schooling sector with access to ongoing learning and professional development
	School Advisory services	24,751	These programmes are a suite of centrally funded initiatives which provide teachers in the compulsory schooling sector with access to ongoing learning and professional development
	School Trustees Association	1,826	A contract with STA to provide employment related advice and support and a helpdesk on governance issues
	Te Kotahitanga and Te auhua	8,707	This covers 3 programmes Te Kauhua to build culturally responsive school practices Te Kotahitanga explicitly focuses on Maori

Appendix Two

			achievement and He Kakano to build the capability of secondary & Area school leaders
	Teacher professional development	16,190	These programmes are a suite of centrally funded initiatives which provide teachers in the compulsory schooling sector with access to ongoing learning and professional development
	Technology/ Hangarau Curriculum in senior secondary	2,090	The purpose of the Technology / Hangarau Curriculum in Senior Secondary Schools, now called the Growth and Innovation Framework (GIF) Technology Education Initiative appropriation is to raise the quality and effectiveness of senior secondary technology education through building teacher capability and developing flexible technology programmes for learners
	Trustee training	2,495	Provides training and support for BoTs through tailored support to Boards to address identified needs and national training & resources for Boards
Secondary Education	Mentoring Programme for Māori secondary school students	1,449	He Ara Tika is a nationwide mentoring programme focusing on Māori rangatahi. The scheme matches 1,000 Māori secondary students with volunteer mentors from the Māori community.
	Relief Initiatives	2,474	This funding includes training for Relief Teachers and support to schools organising training for relievers
	Relieving teachers	4,965	This funding is used to provide additional relief teacher funding to secondary schools over and above their Operations grant funding for this purpose where the absence of a teacher due to his/her own illness exceeds eight consecutive full school days.
	Wharekura Curriculum Support	1,198	Provides support for Wharekura delivery of curriculum through shared expert teachers and assistance to travel to intensive courses
	School Property Maintenance Exp (Vandalism)	1,400	A reserve for maintenance to fund repair of vandalism in schools when baseline funding for this item is exceeded
TOTAL		207,334	

Assumptions:

- Curriculum, administration, and PLD centrally-funded support included. Does not include special education support.
- A significant number of programmes are potentially caught. Apply a materiality test - only line items above \$1 million included.
- Student numbers based on 2012 rolls. 759,960 students less 8936 International fee-paying Students = 751,024
- A flat rate regardless of age. Allocation of PLD can change according to government priorities. This is based at a particular point in time when the balance of initiatives favours the early years but that could change in the future. Don't want to keep having to adjust the formula by component. (Risk is that new initiatives will be age, sector or school type specific and will be applied to the relevant partnership schools)
- An across the board allocation regardless of eligibility. No school would be eligible for all the components outlined here. Some schools might be eligible but would get the programme only once for a time-limited period, although the appropriation is ongoing. Any more-fine-grained approach would not be worth the time involved and would produce a very complicated formula.
- If an annual amount;
 - a. School of 50 would get \$13,800
 - b. School of 120 would get \$33,120
 - c. School of 176 would get \$48,576
 - d. School of 300 (secondary) would get \$82,800.