



COMMONWEALTH GRANTS COMMISSION

DISCUSSION PAPER CGC 2002/28

SCHOOLS EDUCATION

Prepared for the Commission's Staff Conference
November 2002

November 2002

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INTRODUCTION

1. This is a discussion paper prepared by the staff of the Commonwealth Grants Commission on possible methods of treatment for the schools education categories for the 2004 Review. It is one of the papers prepared for the staff level conference being held in Canberra on 21-22 November 2002.

2. The views expressed in this paper are views of the Commission staff only and are put forward to encourage debate on the issues discussed.

3. The expenditure on Schools Education is assessed in four categories. These are:

- (i) Government Primary Education;
- (ii) Non-government Primary Education;
- (iii) Government Secondary Education; and
- (iv) Non-government Secondary Education.

4. The main issues of concern to the States were the cost weights for particular groups of disadvantaged students and the treatment of post-compulsory school-age students.

ASSESSMENT STRUCTURE, 1999 REVIEW

5. Table 1 shows the assessment structure adopted for each of the Schools Education categories for the 1999 Review.

6. **Government school categories:** The proportions of expenditure in the scale-affected, isolation and national capital components were estimated using the general approaches adopted in the assessment of those disabilities. The schools component proportion was calculated as the remainder.

7. **Non-government school categories:** The proportion of scale affected expenditure was calculated using the general approach adopted in the assessment of scale-affected expenditure disabilities. The schools component proportion was calculated as the remainder.

8. For all Schools Education categories, user charges were assessed by the equal per capita method. User charges are the revenues, excluding Specific Purpose Payments (SPPs), that are classified to the school categories. The amounts are very small as they do not include income from fund raising activities or parent contributions which are treated outside government budgets.

Table 1 ASSESSMENT STRUCTURE FOR SCHOOLS EDUCATION, 1999
REVIEW

Component & Factor	Component Weights			
	Government Primary	Non-government Primary	Government Secondary	Non-government Secondary
Scale Affected Expenditure	0.78	0.78	0.78	0.78
Administrative Scale	X	X	X	
Input Costs	X		X	
Schools	97.94	99.22	97.98	99.22
Cross border			X	X
Dispersion	X		X	
Grade Costs			X	
Input Costs	X		X	
Service Delivery Scale	X		X	
Socio-demographic composition	X	X	X	
Non-government Schools Cost		X		X
Isolation	0.25		0.20	
Isolation	X		X	
Vandalism	1.00		1.00	
Vandalism and Security	X		X	
National Capital	0.03		0.04	
National Capital	X		X	

Notes: X indicates which disability factor is assessed.

State Views

9. Tasmania and the ACT claimed that the scale-affected component of 0.78 per cent was too low. Tasmania said data from the Productivity Commission¹ suggested that the national proportion of the total per student cost of delivering central office and whole of State services was 5.7 per cent.

¹ Source: *Report on Government Services 2002*, Table 3A.10.

Options for the Assessment

10. The scale-affected component size will be examined as part of the review of the administrative scale method of assessment. Discussion Paper CGC 2002/23, *The Administrative Scale Factor*, sets out the Commission's proposed general approach to the assessment of this factor for the 2004 Review. The assessment of this factor for the Schools Education categories will be consistent with the general approach.

MAJOR ISSUES FOR THE 2004 REVIEW

11. The Commission's Discussion Paper CGC 2000/17, *Issues in the Schools Education Assessments for the 2004 Review* dealt with two important issues on which the Commission sought the States' views. The issues were:

- (i) whether the proportions of students in the government and non-government sectors are driven by policy or non-policy influences — and thus whether the four category assessment structure should be changed; and
- (ii) whether participation in the post-compulsory ages of secondary education is driven by policy or non-policy influences.

12. Most States provided comment on these issues in their submissions. In addition, States raised the following issues:

- (i) whether an adjustment was needed to the method of calculating the service delivery scale factor;
- (ii) whether changes were required to the method of calculating the non-government cost factor;
- (iii) whether there was a need to adjust the socio-demographic composition factor to account for the extra expenditure that the States incur in providing education to students with disabilities;
- (iv) whether the higher educational costs for humanitarian migrants should be recognised by adjusting the weights for groups from non-English speaking (NESB) and culturally and linguistically diverse (CALD) backgrounds in the Commission's assessments; and
- (v) whether a measure based on socio-economic factors was a more appropriate measure of needs associated with vandalism than one based on urban density.

13. This paper deals with each of these issues. It presents the issues raised by the States and discusses their implications for the 2004 Review assessment.

FOUR CATEGORY STRUCTURE

14. Having separate assessments for various aspects of schools education has long been controversial, particularly the separation of government and non-government schools.

The 1999 Review

15. In the 1999 and previous reviews, the Commission divided the schools education function into four categories — government primary, government secondary, non-government primary and non-government secondary. The notional enrolments² for each category were calculated using actual government and non-government shares of total actual enrolments as these proportions were assumed not to be policy influenced.

Discussion Paper CGC 2000/17

16. In its 1999 Report, the Commission said that the determinants of school sector enrolments would benefit from further attention. Accordingly this was one of the two issues examined in Discussion Paper 2001/17, circulated to States in November 2001.

17. In that paper, it was pointed out that this was an important issue as different resolutions would have different grant share effects. Possible policy and non-policy influences and their likely impacts on the government and non-government shares of enrolments were discussed. The possible policy influences discussed were:

- (i) the sector placement of Year 7 students;
- (ii) having a senior secondary college system (Years 11 and 12);
- (iii) the levels of subsidy to non-government schools; and
- (iv) staffing levels.

18. It was found that the actual enrolment pattern of government and non-government students in each State needed to be adjusted for the location of year 7, as is currently done, but that no other adjustments for policy influences appeared to be justified.

19. The influences considered to be likely non-State policy influences on sector enrolments were:

- (i) the proportion of Catholics in the population;
- (ii) the socio-economic status of the community;

² Actual enrolments adjusted to take account of the impact of sector placement of Year 7 and for standard pre and post compulsory enrolments.

- (iii) parental perceptions of ‘quality’;
- (iv) the geographical distribution of the population;
- (v) the size of the Indigenous population; and
- (vi) the impact of Commonwealth policies.

20. Religious affiliation appeared to be the most important influence, followed by socio-economic status.

21. Overall the Commission concluded that:

We can find no evidence to change our view that enrolments in government and non-government sectors are largely the result of community preferences and not government policies. We propose to continue to use actual government and non-government student numbers, adjusted only for the placement of Year 7.

This also means that a four category structure for schools education is necessary to achieve equalisation in a transparent manner. The States fund government and non-government schools differently and thus it is essential that the different cost weights are applied to the policy neutral measure of enrolments in each sector³.

State Views

22. All jurisdictions except New South Wales and the ACT discussed this issue in their submissions and all, except Victoria, supported the maintenance of the existing four category structure.

23. Victoria said that the assessment of government and non-government schools education should be combined, with the eligible population being all children of specified ages, and with Commonwealth Specific Purpose Payments (SPPs) to non-government schools treated by inclusion. Victoria said that this would allow a better focus on the States’ overall education needs, not just the needs in a particular sector. It would enhance equity between States.

24. Victoria quoted from a recent report by the Ministerial Council on Education, Employment, Training and Youth Affairs⁴ (MCEETYA) which stated that: ‘Non-government schools are not private in the sense that they are funded to a large degree by the government and are reliant on government support. In this sense, non-government schooling is, to varying degrees, a de-facto government sector’.

³ Commission’s Discussion Paper CGC 2001/17, p8.

⁴ MCEETYA (2001). *Clarifying Commonwealth State Financial Relations in School Education*, MCEETYA State and Territories Working Party on the Enrolment Benchmark Adjustment, Ministerial Council on Education, Employment, Training and Youth Affairs, Melbourne.

25. Queensland supported the existing four category structure and said it allowed a greater transparency and clarity of assessment that would not be achievable if fewer categories were assessed. It said that all States spend much more on a government school student than on a non-government school student. Subsequently, State funding was provided differently to these sectors (direct provision and grants) and different cost and demand disabilities applied. Separate categories allowed the different disabilities applicable to different student populations in each sector to be identified and measured.

26. Western Australia said that it supported the Commission's view that State differences in the proportions of public and private school enrolments were largely driven by non-policy influences. It also considered that the only policy influences of significance were the placement of Year 7 in the primary or secondary schools, and the existence of a Year 11 and 12 college system (separate campuses) to varying degrees in the government school system in some States.

27. South Australia agreed with the Commission's view that enrolments in government and non-government schools were largely the result of community preferences and not government policies – and therefore argued that the four category structure for schools should remain.

28. Tasmania supported the continuation of the four category structure. It said government and non-government enrolments should be treated separately as parental preference for non-government schools was not significantly influenced by State government policy. Tasmania also said primary and secondary sectors should continue to be assessed separately as there were significant cost differentials between them, and that this was generally reflected in the funding mechanism of States.

29. The Northern Territory agreed with the Commission's conclusions that the pattern of enrolments in government and non-government schools was mainly determined by non-policy influences. It considered that any change to the current four category structure would be inappropriate.

Options for the Assessment

30. The main alternatives to the existing four category structure are to combine the government and non-government enrolments into either two categories (primary schools and secondary schools) or one category.

31. Victoria's arguments in favour of amalgamation are not consistent with the fact that State governments, by their common policy, treat non-government schools differently from government schools. States provide a subsidy to non-government schools on bases which account for selected influences on the cost of providing education in those schools. Government schools education is directly provided and States are exposed to all the demand and cost influences on these services. Furthermore, almost all expenditure in government schools is government funded⁵, whereas (using 1999 figures) non-government

⁵ The proceeds of school-level fundraising and parent levies make a small contribution to the costs of running government schools..

schools receive about 40 per cent of their funds from the Commonwealth and about 17 per cent from State governments — leaving over 40 per cent of their funds to be provided by parents⁶.

32. Given the strong influence of non-policy influences on the size of the non-government sector, staff consider that removing the distinction between government and non-government education would undermine the policy neutrality of the Commission's assessments. Amalgamating the categories would also be inconsistent with the way States fund each sector since States only partially fund non-government schools. All but one of the commenting States support retention of the four-category structure. Subject to further discussion, staff intend to recommend that the existing four-category structure be retained.

33. In summary, staff propose that the numbers of enrolments for each sector would continue to be derived as the sum of:

- (i) actual enrolments aged 6-14 years;
- (ii) notional enrolments aged under 5 divided between the two sectors according to the actual government/non-government proportions of students aged 5 years and younger in each State; and
- (iii) notional enrolments aged 15 and over divided between the two sectors according to the actual government/non-government proportions of students aged 15 years and over in each State.

POST-COMPULSORY ENROLMENTS

Background

34. Post-compulsory enrolments relate to Years 11 and 12 or to a population generally aged 15 to 19 years.

35. The propensity to enrol in post-compulsory education varies between States. The degree to which this propensity differs between States, and consequently the ranking of the States from highest to lowest propensity, depends on the method of measurement (see Table 2). The two measurement methods generally adopted are:

- (i) ***Participation Rate*** which measures the proportion of a particular age group enrolled in school at a given time; and
- (ii) ***Retention Rate*** which measures the proportion of a Year 10 student cohort which was enrolled in Year 12 two years later.

⁶ Report on Government Services 2002, Vol.1, p61.

Table 2 RANKING OF AGE PARTICIPATION RATES AND APPARENT RETENTION RATES OF STUDENTS, 2000^(a)

Method of measurement	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Age participation Rate	4	2	6	7	5	3	1	8
Apparent retention Rate	6	2	3	4	7	4	1	8

(a) Ranked from highest to lowest. Age participation rates are for ages 15 to 19 and apparent retention rates are for Year 10 to Year 12.

Source: ABS Schools Preliminary 2000 4220.0.

The 1999 Review

36. Up to and including the 1999 Review, successive Commissions have held the view that the predominant influence on differential levels of post-compulsory enrolments is State government policy. For this reason, in the 1999 Review, the Commission adopted a method of calculating standardised numbers of post-compulsory enrolments which assigned the standard (that is, Australian average) age participation rates to each State adjusted only for the influence of urbanisation and socio-economic status. These influences were measured using the ABS SEIFA measures. Details of the method adopted are in Attachment A. In effect, the present assessment attributes about one third of the difference between actual and standard post-compulsory enrolments to non-policy influences

37. Researchers have used a number of methods⁷ to measure post-compulsory enrolments. In the 1999 Review, the Commission used participation rates for this purpose because the relevant data were easily accessible at a small area level such as Statistical Local Area (SLA). This choice enabled use of the rich data describing socio-economic status available in the ABS Census and was further influenced by the fact that data for only a single year was required to measure post-compulsory enrolments. If retention rates had been used as the bases of the calculation, data for a sequence of years would have been needed and Census data could not have been readily used to analyse the impact of non-policy influences.

Discussion Paper CGC 2001/17

38. With regard to post-compulsory enrolments, the Commission's Discussion Paper CGC 2001/17 identified three main issues that would require investigation for the 2004 Review.

- (i) the nature of State policy influences on post-compulsory enrolments;

⁷ Sandra Roussel and Terry Murphy in their paper, *Participation in Post-compulsory Schooling*, (IAED Occasional Papers Series 3/2000, Research & Evaluation Branch, Department of Education, Training and Youth Affairs, May 2000) noted that researchers have used participation rates, progression rates and retention rates as measures of post-compulsory schooling. They said that the first measure is simple and easily derived — therefore the most widely used. They noted that not all researchers advocate the use of participation rates because these tend to 'aggregate historical and current decisions students make regarding participation rates'.

- (ii) how to account for policy and non-policy effects (i.e., whether to adjust standard levels of participation or retention for non-policy effects or to use actual enrolments or adjusted actual enrolments); and
- (iii) the adequacy of the coverage by the present method of non-policy influences on post-compulsory enrolments (that is, whether SEIFA is adequate⁸) and how to measure non-policy influences not covered by the present assessment.

39. The Discussion Paper reported that Commission research showed that potential State policy influences on post-compulsory school enrolments came from several sources.

- (i) **The age of commencement at school and/or the rate of progress through the early grades of primary school.** The research shows that the rate of participation in post-compulsory schooling tends to be lower in States where the commencement age is relatively low. The converse is true for States that have a relatively late commencement age. Queensland is the exception. Although it has a late starting age, the duration of schooling is only 12 years compared with 13 years in all other States.
- (ii) **The ability of students to repeat and advance.** In New South Wales, students repeating a senior year are compelled to do so through the Vocational Education and Training system (VET). This lowers the school participation rate.
- (iii) **Characteristics of the school system.** Perceptions of ‘quality’, desirability and accessibility of post-compulsory schooling were determined by State differences in school characteristics. These included the structure of schools, whether a Year 11 and 12 college system existed, school location, curriculum offered, the method of school assessment and the like. Influences of most of these characteristics are difficult to measure. Although it is possible to approximate the quality of school systems using student-staff ratios, these were influenced by non-policy influences as well.
- (iv) **Interactions between schools education and VET.** The effect of the VET system on post-compulsory participation rates is not clear. Nevertheless, the provision of VET in school may encourage students to remain in school when they may otherwise have left.

⁸ The ABS constructed SEIFA using Principal Components Analysis—a statistical technique used to estimate an overall measure from a number of similar variables. Users have no control over what goes into the index. A further criticism of the index is that it is a broad indicator and hence fails to adequately establish links between population characteristics and the cost impact of that characteristic to enable efficient assessment of a disability (see Discussion Paper CGC 2002/21, Socio-demographic Composition).

40. The Discussion Paper noted that the method recommended in the 1999 Review ‘gives a relatively policy-neutral measure of post-compulsory enrolments’. Although it might not have taken account of all the non-policy influences on participation in post-compulsory education, the paper pointed to the fact that ‘updating it and increasing the number of variables in the regression ... may simply add a level of complexity without having any material impact on the results’. To decide the extent to which the number of students who undertake post-compulsory education is influenced by State policy differences, the Commission asked the States to comment on:

- (i) the interim conclusions reached in its Discussion Paper; and
- (ii) other ways to measure non-policy influences on post-compulsory participation.

41. Specific comments and suggestions made by the States are summarised and discussed below.

State Views

42. The State views mainly related to:

- (i) whether differences in State policies affected the relative levels of post-compulsory enrolments;
- (ii) whether participation rates or retention rates were the best bases for analysis of the effects of non-policy influences on post-compulsory enrolments; and
- (iii) specification of the model used for standardising post-compulsory participation rate.

43. Lamb⁹, in his study for the Victorian Department of Education, made the following observations.

- (i) Retention rates rather than age participation rates should be used to calculate standardised post-compulsory enrolments because age-specific school participation rates were not neutral across States and data on ‘year-level structure’ that were consistent across all States should be used.
- (ii) Non-policy influences like socio-economic status, urbanisation, sector and language background were far stronger influences on State-specific participation in post-compulsory secondary education than were differences in State policies.

⁹ Lamb, S. (2002), *Responses to the Commonwealth Grants Commission (CGC) Discussion Paper: Issues in the Schools Education Assessments for the 2004 Review – Post Compulsory Enrolments*, Department of Education Policy and Management, The University of Melbourne.

- (iii) State policies exert only a marginal influence on retention rates/post-compulsory enrolments.
- (iv) The current approach of treating the residual differences between the standardised rates and the actual rates as due to differences in State policy would appear to over-estimate the influence of differences in State policy and under-estimate the effects of non-policy factors. The use of actual enrolments adjusted for State policy effects would overcome this error.
- (v) The Commission should model post-compulsory enrolments using Census data on the highest year of schooling attained to measure influences at the small area level on propensities to stay at school beyond the compulsory period.

44. Victoria noted that the Commission's current method, which adjusted for the non-policy influences of socio-economic advantage and urbanisation using SIEFA index, did 'not achieve the intended result or represent an equitable result'. It attributed this result to weaknesses in the formulation of the SEIFA and the resulting inability to correctly represent socio-economic differences in State populations. It said that the use of 1996 Census based SEIFA in the current model for urban centres of over 100 000 persons did not truly capture the intended socio-economic advantage or the urbanisation influences.

45. Victoria said that the Commission should use consistent methods to estimate post-compulsory enrolments in the non-government and government sectors — if actual enrolments were used for non-government schools, then actual enrolments should be used for government schools and similarly: if notional enrolments were modelled for government schools, then the same approach should be used for non-government schools.

46. Western Australia, South Australia and Northern Territory supported the continuation of the current method of assessment that used an adjusted Australian standard participation rate to assess post-compulsory enrolments.

47. Western Australia, both in its submission and in workplace discussions, provided information to demonstrate the policy influence on post-compulsory enrolments.

- (i) Age of commencement at school affected post-compulsory school participation rates. It noted that the age of school commencement was the key policy driver that affected differences between States in participation rates amongst 15-17 year olds. It agreed with the assertions made in Attachment B of the Commission's Discussion Paper — that States with the youngest starting age had the lowest participation rates.

It also noted that although the year one starting age in Western Australia was expected to change in 2003, this would not impact on post-compulsory participation until 2013.

- (ii) School location improved retention rates. It noted that Year 11 and 12 retention rates in the Mandurah area had doubled since a new secondary campus co-located with the local TAFE college and Murdoch University,

opened. Similar successes had been achieved in Cannington and Kalgoorlie where co-location of different levels of education and changes in the building structure had increased retention.

- (iii) Certification policies. The State noted that some of the current policies may have discouraged student retention and the recent shifts, in policy were likely to lead to an increase in retention rate.

48. South Australia said that ‘it appears the Commission is accounting for the predominant non-policy influences on post-compulsory participation’ and that it would ‘have serious concerns over the use of actual State data due to the large proportion of part-time students in post-compulsory education in South Australia, which would not be included in the assessment’.

49. Tasmania noted that it has a relatively high school participation rate in the 15 to 19 year age group. This it attributed to a mix of Commonwealth and State policy influences and non-policy influences. The specific observations made by Tasmania in its submissions and in workplace discussions are as follows:.

- (i) Tasmania has a very high post-compulsory participation rate but a relatively low socio-economic status.
- (ii) High socio-economic status of families is no longer the important influence on the decision to undertake post-compulsory schooling.
- (iii) Changes in the Commonwealth policy initiatives on income support has increased the participation rate.
- (iv) Changes in workforce structures and related employment practices have encouraged students to remain in school to improve job prospects.
- (v) Changes to educational services in response to (iv) have also increased post compulsory schooling.
- (vi) The relatively low post-compulsory participation in rural areas is due to cost disadvantages in achieving standard levels of access and not due to a lower propensity to undertake post-compulsory schooling. This non-policy influence is omitted from the Commission’s existing assessment.
- (vii) Circumstances relating to the influence of Commonwealth government policies on post compulsory enrolments have changed significantly. It is important to recognise the extent to which post-compulsory enrolments reflect the mix of State policy choices, Commonwealth policies or demographic and economic circumstances.
- (viii) The calculation to remove State policy influences are overly complex and no longer necessary. The general principle adopted by the Commission to

derive ‘national average policy’¹⁰ should also apply in relation to participation rates for post-compulsory enrolments. It therefore follows that by applying the national average participation rates to each State’s population, it would be possible to derive the level of demand for services that would exist if each State applied the same national average policy in relation to participation rates.

50. Based on statistical analysis, the ACT¹¹ argued that its relatively high participation rates in the post-compulsory years of schooling were driven by non-policy influences. It said that the drivers of State differences in school participation for 15-19 year olds were non-policy social and economic factors, which accounted fully for the higher participation rate in the ACT compared to other jurisdictions. It said that national and Commonwealth policies played a strong role, reinforcing social and economic influences and lifting participation rates across all States.

51. It said that social factors which have an important influence on State differences in participation included:

- (i) the occupational and educational background of parents and household members;
- (ii) the metropolitan and non-metropolitan distribution of the population;
- (iii) the proportion of the population that is Indigenous;
- (iv) the levels of government and non-government school enrolment; and
- (v) proportion of students from a non-English speaking background.

It said that in the ACT the most important causal influence was the cultural influence of occupational and educational background.

52. The ACT said that the economic factors affecting participation were:

- (i) the level of full-time employment of 15-19 year olds;
- (ii) industry mix; and
- (iii) occupational profile.

¹⁰ Tasmania notes that the Commission uses this process in relation to hospital utilisation rates in the hospital cost index.

¹¹ The ACT produced statistical evidence based on a study by the National Centre for Social and Economic Modelling (NATSEM), University of Canberra (see Attachment A of the ACT Submission for the 2004 Review). In its study, NATSEM determined how significantly the educational participation of 15 to 19 year olds are influenced by individual as well as a combination of variables. Correlation analysis was used to study the influence of individual variables and regression analysis to study the influence of a combination of variables.

The NATSEM regression model for Australia showed that the percentage employment of 15 to 19 year olds, youth unemployment rate and the female labour force participation rate explained over 99 percent of the variation in the educational participation of 15 to 19 year olds.

53. It said that policies initiated by the Commonwealth and implemented nationally reinforced labour market and income factors. It said that Commonwealth and national vocational education and training policies increasingly locate the entry to specific vocational training within school, while at the same time reforms of vocational training have opened up competition at the lower levels to all ages, bidding up entrance qualifications. The replacement of the youth unemployment benefit by the Commonwealth Youth Allowance has created another income incentive to remain in education rather than join the full time labour force.

54. Regarding the effects of policy influences on post-compulsory enrolments, the ACT said that information on the influence of State policy differences was weak and problematic, and no convincing causal relationships had been established:

- (i) the relationship between age of commencement and post-compulsory participation rates could not be sustained as:
 - no consistent pattern existed across the States for these variables;
 - the relationship between age of commencement and participation was not statistically significant;
- (ii) the relationship between average age in Years 10 to 12 and participation across States is inconsistent:
 - for some States, a younger average age in Years 10 to 12 could lead to higher than average participation, whilst for others, it lead to below average participation;
 - for some States, above average age in Years 10 to 12 lead to below average participation, whilst for others, it resulted in above average participation;
 - any policy influences regarding repeating and advancing were marginal given the small proportion of students repeating;
- (iii) the presence or absence of a secondary college system (most, if not all, State school systems have introduced 'college like' features into Years 11 and 12) did not have a statistically significant correlation with participation, and the relationship across States was contradictory;
- (iv) no conclusion could be reached regarding the effect of location of schools in urban areas on post-compulsory school retention as there was no statistical or other information on which to determine such a relationship;
- (v) in terms of school curriculum, the States had implemented universal course and assessment arrangements and the curriculum was Commonwealth driven; and

- (vi) no relationship holds between student/staff teaching ratios and participation in Years 11 and 12 as the relationship was inconsistent between States and not statistically significant.

55. A summary of the statistical study commissioned by the ACT to establish the relationship between post-compulsory enrolments and various State policies is in Table 3.

Table 3 RELATIONSHIP BETWEEN POST-COMPULSORY SCHOOL ENROLMENTS AND STATE POLICIES

State Policy	Nature of Influence
Age of commencement at school	Not significant at 1% or 5% levels
Average age in Years 10, 11 and 12	Significant at 1% or 5% levels
Ability of students to repeat and advance	NA ^(a)
Secondary college system	Not significant at 1% or 5% levels
School location	NA ^(b)
School curriculum	NA ^(c)
Student-staff ratio	Not significant at 1% or 5% levels

(a) Due to the small number of observations, statistical analysis was not carried out.

(b) Statistical or other information was not available.

(c) States have put in place similar curriculum programs. Hence enrolments were not mitigated by this policy.

Source: Based on information in the ACT main submission.

56. The ACT argued that, given the overwhelming importance of non-policy factors in driving school education participation of 15-19 year olds, there was no room for attributing any influence to individual State policy differences. The ACT said that no convincing causal relationships had been established between differences in States' policies and differential rates of education participation in the post-compulsory years.

Options for Assessment

57. Commission staff are committed to devising a policy neutral measure of the relative levels of post-compulsory enrolments in the States. As service provision in virtually all instances is affected by both policy and non-policy effects, staff are of the opinion that a policy neutral assessment can best be achieved by starting with standard levels of participation or retention rather than actual levels and adjusting them for non-policy effects. When making such adjustments, it is important to ensure that the data and methods used in the adjustment process are not biased towards any one State.

58. Staff intend to rerun the 1999 regression model with the following modifications.

- (i) Replace SEIFA with a range of independent variables to more comprehensively explain the variability of post-compulsory enrolments

across States. For this purpose, the model will be respecified in recognition of available empirical research¹². Particular attention will be paid to the dependent variable and the independent variables used in the present model. As part of respecifying the model, staff intend to test the efficacy of including variables suggested by Victoria and the ACT. Variables to be considered will include:

- the occupational and educational background of households;
 - the metropolitan and non-metropolitan distribution of the population;
 - the proportion of the population that is Indigenous;
 - the levels of government and non-government school enrolment;
 - proportion of students from a non-English speaking background;
 - the level of full-time employment of 15-19 year olds;
 - industry mix;
 - occupational profile; and
 - urban centre size.
- (ii) To further increase the goodness of fit of the regression model (R^2), staff intend to include dummy variables for States. This will increase the initial explanatory power of the model and assist refinement of the model.

59. This work awaits the availability of the complete set of 2001 Census data, particularly the data allowing income variables to be derived, and will be available through CDATA in late November 2002.

60. Staff also intend to explore the feasibility of adopting the retention rate method proposed by Lamb using the new question in the 2001 Census concerning level of completed education. As suggested, we intend to match data from the Census on the numbers of 19 and 20 year olds who record that they completed years 11 and 12, with Census-based socio-economic variables for areas. We intend to undertake regression analysis of these data at the SLA level. We think this analysis has the potential to provide a reliable indication of the degrees to which policy and non-policy influences affect the propensity to complete post-compulsory education in each State.

¹² See, for instance, papers by Roussel and Murphy (2000) and Jones (2002). The paper by Roger Jones is entitled '*Educational Participation and Outcomes by Geographic Location*', (Australian Council of Education Research, Victoria, June 2002).

61. One possible complication in this analysis is the need to adjust for the mobility of the 19 and 20 year old population. To measure the extent of this problem, and if necessary derive some adjustment factors, we will include place of residence one and five years before the Census date in the cross tab we obtain from the ABS.

62. This work also awaits the availability of the full 2001 Census CDATA.

63. Victoria also presented analysis of factors affecting retention rates using data from the longitudinal surveys of Australian youth (LSAY). LSAY data comprises a series of past and continuing cohort surveys of Australian youth, with data focused on a number of issues including education. The original survey sample selected cohorts, each of over 13 000 Year 9 students in 1995 and 1998. Information with regard to each of these sample cohorts have been updated annually. Issues affecting the use of these data for Commission purposes may include the adequacy of State-specific representation of metropolitan, regional and rural populations in the samples, the representation of Indigenous people, the effects of sample attrition and the sample weighting procedure to represent the population of Year 9 students. Our preference however, is to undertake the two analyses proposed above rather than explore further the analysis of retention using the LSAY data. The use of Census data gives the capacity to accurately assess the influence of factors such as Indigeneity and location.

64. Subject to further discussion, staff intend to provide the States with a report on the outcome of these analyses by April 2003 so that we can receive any comments on it before the preliminary assessments are finalised.

SOCIO-DEMOGRAPHIC COMPOSITION

The 1999 Review

65. In the 1999 Review, the Commission assessed a socio-demographic composition factor to take account of the joint effects of the relevant population and socio-economic composition. The relevant populations used were:

- *for the compulsory ages of school* (assumed to be 6-14 years) — the actual number of enrolments in each school category, but with Year 7 students notionally apportioned between each of the four categories to take account of the policy influence of the different sector placements of Year 7 among States; and
- *for the non-compulsory ages of school* (assumed to be 5 years and under, and students aged 15 years and over) — the notional number of enrolments in each school category. These were calculated by

applying the Australian average school participation rates¹³ for each of the age groups to the State’s population in that age group. In addition, the notional number of students aged 15 years and over was adjusted to take account of influences associated with socio-economic status and urbanisation. The notional enrolments were apportioned between the government and non-government secondary school categories according to their actual proportions.

66. The impact of socio-economic influences on costs was taken into account by applying cost weights to particular categories of students as detailed in Table 4 below.

Table 4 SOCIO-DEMOGRAPHIC COMPOSITION WEIGHTS FOR GOVERNMENT SCHOOL EDUCATION CATEGORIES

	Low fluency	Fluent
Indigenous persons – remote		
Low socio-economic status	1.45	1.35
Other	1.30	1.20
Indigenous persons – non-remote		
Low socio-economic status	1.35	1.25
Other	1.20	1.10
Non indigenous persons		
Low socio-economic status	1.25	1.15
Other	1.10	1.00

67. Adjustments were made for diplomatic students and Jervis Bay students in the ACT, pre-year 1 students in Queensland and Western Australia, and the former mission schools in the Northern Territory.

States Views

68. Most of the State comments on this factor were about the appropriate level of additional cost weights for particular groups of students. The main groups discussed were Indigenous, non-English speaking background/culturally and linguistically diverse (NESB/CALD), and special needs.

69. New South Wales said that the current method did not adequately capture the costs relating to migration, the CALD/NESB population, and the costs associated with the high level of drug use in New South Wales. It wanted a weight of two for low-English

¹³ For age 5 and under enrolments — the participation rate of 5-year-olds. For age 15 and over enrolments — the participation rate of 15-17 year-olds.

fluency and a weight of five for humanitarian migrants. The main points made by New South Wales were:

- (i) the proportion of migrants from Asia, the South Pacific, the Middle East and refugees is increasing and these migrants generally have higher cost disabilities;
- (ii) the education assessments should account for the costs resulting from diverse cultural backgrounds in addition to language services, such as the cost of addressing communication breakdown and cultural differences; and
- (iii) humanitarian migrants require much more additional time and resources to determine their education status and meet their needs as a result of their traumatic experiences and lack of educational attainment. Table 5 below shows the number and percentages of these migrants by State.

Table 5 HUMANITARIAN SETTLER ARRIVALS BY STATE, 1999-2000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Humanitarian Settler Arrivals	3097	2122	494	550	854	37	46	66	7266
Share of total (%)	42.6	29.2	6.8	7.6	11.8	0.5	0.6	0.9	100.0
Mean Resident Pop share (%)	33.7	24.9	18.7	9.8	7.8	2.4	1.6	1.0	100.0

Source: Migration Flows to the States 2000, DIMA

70. New South Wales also claimed that the Commonwealth's immigration policies cause additional costs to the State because:

- (i) the additional demands for ESL support are only partly met by the Commonwealth;
- (ii) New South Wales has to bear the cost of operating Intensive English Centres for recently arrived NESB students of secondary school age;
- (iii) the number of high cost temporary visa holders is rising; and
- (iv) the characteristics of these migrants result in schools having to accept more welfare responsibilities, including programs to address truancy, violence, poor literacy, student assistance support, and the welfare needs of staff and students.

71. New South Wales gave examples of comparative per student costs between five disadvantaged high schools with low proportions of NESB students and five disadvantaged high schools with high proportions of NESB students. These showed that the staffing and other school-based cost in the NESB schools averaged \$1559 per student compared with \$772 per student for the non-NESB schools.

72. New South Wales also wants a weighting to reflect the additional costs arising from its high level of drug use resulting from causes beyond its control. These costs are associated with criminal activity and providing drug education programs.

73. Victoria said that if ‘broad judgement’ had principally been used to derive the existing cost weights for low-English fluency and Indigeneity, it questioned the reliability of these weights. It argued that these weights should be based on quantitative evidence not CGC judgement because of their important contribution to the socio-demographic composition factor.

74. Victoria asserted that a useful guide to the relative costs of Indigenous and low-English fluency students, was the basis for allocation of Commonwealth funding. It pointed out that the per student rate in the 2001 Agreement between the States and the Commonwealth for Indigenous students was \$1 000 for remote senior secondary students, but that per student funding for the New Arrivals Program (NAP) students in 2001 was \$3 997, including supplementation. This differential presumably was the basis behind Victoria’s suggestion that the cost weights for the subgroup of low-English fluency should be four times that of Indigenous students.

75. Queensland argued that the current weights for Indigenous students should be reviewed. It asserted that the current weight of 1.45 for remote, Indigenous students with low English fluency and low socio-economic status underestimated the cost of providing education services to children in these circumstances. It referred to a Education Queensland (EQ) case study that showed the State costs in providing education services to an Indigenous student with low English fluency in a remote Queensland island community was 1.74¹⁴ times more than to a non-Indigenous student with English fluency based in a middle-class suburb in Brisbane.

76. Queensland also said that further evidence that the CGC was applying inadequate weightings for remote Indigenous students was highlighted by the weights applied by the Commonwealth in its Schools Quadrennial Administrative Guidelines 2001-2004. In that program, the weighting applied to remote Indigenous students was double that applied to non-remote Indigenous students.

77. Western Australia said that the existing cost weights failed to adequately compensate Western Australia for the additional costs of its Indigenous population. It also offered the following comments.

- (i) *Mission Schools* The Commission treats the former mission schools in the Northern Territory as government sector schools because they are largely government funded. Western Australia has similar schools in remote areas and said they should get similar treatment.
- (ii) *Low Participation of Indigenous Students* The Northern Territory has its participation rate for students aged 6-14 years inflated to bring it up to the rate of the next lowest participation rate. Western Australia

¹⁴ It was 3.4 when including the Commonwealth payment.

suffered similar difficulties in providing services to remote Indigenous students.

78. South Australia pointed out that the current assessment did not take into account the additional costs of servicing students with a disability. It presented a table that showed South Australia had an above average proportion of students with disabilities in government schools. At its Workplace Discussions, South Australia also indicated that it had cost disabilities associated with refugees.

79. Tasmania supported the current cost adjustment for socio-economic status and said that the correlation between low socio-economic status and the higher cost of providing education services had been well established.

80. In relation to the English fluency component, Tasmania accepted that there were additional costs associated with students from non-English speaking backgrounds (NESB), but it said that there were also economies of scale advantages in the delivery of targeted services in areas where concentrations of non-fluent English speakers reside.

81. The ACT wanted the assessments for primary and secondary school education to include an adjustment for all States to reflect the effects of dependents of temporary visa holders on the demand for and cost of delivering education services. It claimed that a disproportionately high number of temporary visa holders are attracted to the ACT because of the nature of its economy, particularly the number and type of Commonwealth government agencies. The ACT provided the number of dependents of temporary resident visa holders per capita by State. Based on its experience, the ACT proposed that temporary residents be weighted by a factor of 1.10 for primary schools and 1.15 for secondary schools.

82. The ACT claimed that it had a higher incidence of the most severely disabled students due to the migration of households including a child with a disability to the Territory. It proposed that a special data collection be commissioned to collect the number of disabled students, by severity, to accurately measure the relative incidence and extent of students with disabilities in the States. The ACT said that, based on its experience, students with disabilities should be weighted by a factor of 1.4 in mainstream schools and 4.05 in special schools.

83. The Northern Territory argued that the non-government cost factor used for non-government schools did not adequately account for the Territory's socio-economic (and other) disadvantages that influence the level of subsidies it provides to non-government schools. It proposed that the disabilities assessed for the government school categories be used for the non-government school categories.

Options for the Assessment

84. The main questions to be considered are as follows:

- (i) Should higher cost weights be introduced for new arrivals requiring intensive English language courses?

- (ii) Should additional cost weights be introduced for NESB/CALD students to recognise the higher costs of educating them (beyond ESL costs)?
 - Is the proportion of humanitarian migrants and their additional costs above other NESB/CALD students sufficient to justify a further cost weight?
 - If so, what weights are appropriate?
- (iii) Are the current cost weights for Indigenous students appropriate — in particular, the cost differential between remote and non-remote students?
- (iv) Should cost weights be introduced for special needs students?
 - Are there likely to be material differences in the proportions of special needs students between States after eliminating classification differences?
 - If so, what weights are appropriate?
- (v) Apart from in the Northern Territory, are there other fully government funded non-government schools specifically servicing Indigenous students that should be treated as government schools in the Commission's assessments?
- (vi) Should the impact of drug use be treated as a disability.

85. *NESB/CALD students* — The present method gives a weight of 1.15 to non-Indigenous persons of low socio-economic status. If they are not fluent in English, this is increased to 1.25. For a non-Indigenous student, whose only disability is low-English fluency, the cost weight is 1.10. Some of the data provided by States arguing for higher costs weights seem to relate more to resource intensive services provided for recent arrivals through the NAP. It is hard to see how a cost weight of 4 for low-English fluency compared with Indigeneity, as proposed by Victoria, could be justified for the whole of the NESB population.

86. The present assessment assumes that Intensive English services to newly arrived migrants are fully funded by the Commonwealth and there are no cost impacts for the States. New South Wales has suggested that the Commonwealth does not meet all the costs of providing intensive language training for new arrivals.

87. Under the English as a Second Language — New Arrivals element of the Commonwealth Schools SPP, the States receive a standard payment for each new arrival identified by the States as requiring intensive English tuition. With the recent addition of Temporary Visa Holders to the list of eligible new arrivals, coverage of this measure seems comprehensive. Whether the standard payment is sufficient to cover the per student cost incurred by States is not yet clear and States are requested to provide additional information on this point.

88. If it becomes clear that States bear some of the cost of providing intensive English tuition to new arrivals, there are at least two possible assessment approaches:

- (i) include an additional cost weight into the socio-demographic composition factor (although, given the relative size of the target population, materiality will be a consideration); or
- (ii) treat the New Arrivals element of the Schools Grants by exclusion.

89. While it is accepted that humanitarian migrants have particular needs which further increase costs, it is not clear that the number of such students are sufficient for their extra costs to have a material impact on total school expenditures. The data presented by New South Wales showed that for 1999-2000 these migrants (not students) for all jurisdictions totalled 7266 in 1999-2000 (see Table 5 above). This total number translates into a very small proportion of school students across Australia.

90. Although the New South Wales case study data showed the average NESB student cost was double that of a non-NESB student (in the selected schools used), the study does not appear to have included all student costs. The average student costs shown were \$1559 and \$772 respectively, whereas the average government secondary student in Australia in 2000-01 cost about \$7000. Furthermore, the 2001-02 budget school education data below, provided by New South Wales at its Workplace Discussions, seems to suggest that the amount of additional funding associated with NESB/CALD students is a small proportion of total school recurrent funding.

	\$m
Total recurrent expenditure	5771.3
Equity funding	
Special Education	477.7
Socio-economic disadvantage	56.5
Rural Education	69.2
Aboriginal Education programs	32.6
NESB students	84.7
Other Equity programs	<u>4.8</u>
Total Equity funding	725.5

91. Although it will be examined further, there does not seem to be a strong case for changing the existing weights for NESB/CALD students. There may be an in-principle case for a further cost weight — additional to low-socio-economic status and low English fluency — for humanitarian refugee students, but their cost impact on State budgets seems insufficient to justify its inclusion.

92. **Indigenous Students** — Only Queensland provided any data directly comparing cost of Indigenous and non-Indigenous students. Using its case study example,

Queensland claimed that the cost weight for an Indigenous persons with low-English fluency living in remote areas should be increased from 1.45 to 1.7. However, these data seemed to include costs associated with other disabilities such as dispersion and service delivery scale. Staff therefore are not inclined to recommend any change to the weights for Indigenous students in non-remote areas but, noting the difference in Commonwealth funding between non-remote and remote areas, may recommend an increase in the weight for Indigenous students in remote areas.

93. *Special Needs Students* — It is recognised that the costs of providing services to special needs students are much higher than the costs for other students. Table 6 compares the proportion of students with disabilities among States.

Table 6 STUDENTS WITH DISABILITIES —2000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT(a)	Aust
	%	%	%	%	%	%	%	%	%
Government Schools	4.2	3.4	3.0	4.0	4.5	4.7	3.7	14.9	3.9
Non-government Schools	2.6	1.6	1.4	1.3	2.9	1.3	1.2	2.8	2.0
All Schools	3.7	2.8	2.5	3.0	4.1	3.8	2.8	12.4	3.3

(a) The NT advises caution regarding these figures. Source data is being examined for accuracy.

Source: South Australian submission — original DETYA (unpublished)

94. While this table shows significant differences among States, it is not clear to what extent these differences are due to classification differences in identifying and defining special needs students. It is also understood that a disproportionately high number of these students come from Indigenous¹⁵, low-English fluency or low socio-economic backgrounds. It is the view of Commission staff that the associated cost weights are best treated under the socio-economic classifications rather than special needs because of likely classification differences in defining special needs students. If parents with special needs children are attracted to a particular jurisdiction because of its special needs assistance policies, whether they are education or other policies, this should be treated as a policy influence.

95. *Former Mission Schools.* The Commission currently makes an adjustment by notionally transferring all students in the former mission schools in the Northern Territory from the non-government to the government sector. This is done because these schools, although technically non-government in that they are still under the auspices of the Catholic Church, are virtually fully government funded. Western Australia wants similar treatment for some of its schools. Staff would appreciate details from other States if they believe that they have schools in similar situations to those in the Northern Territory. We will make a recommendation on their treatment after consultation with the Commonwealth Department of Education and Training.

¹⁵ This is likely to explain the very high proportion of special needs students in the Northern Territory caused by the poor health of many Indigenous students living in remote areas — particularly hearing problems.

96. ***Low Participation of Indigenous Students*** — Staff are considering whether this adjustment should be abandoned. Where students do not attend school no costs are incurred. Therefore there seems no reason to treat low participation as a disability. If low participation is due to transience or truancy associated with Indigenous students, the associated costs can be included in the Indigenous cost weight.

97. ***Impact of Drug Use*** — While the cost impact of drug use is increasing in many areas of government activity, including school education, Commission staff, are not inclined to recommend the assessment of a disability because:

- (i) drug education programs in schools are likely to be conducted by all jurisdictions;
- (ii) some of the disabilities will be picked up in the vandalism and security factor;
- (iii) the proportion of school costs associated with drugs may not be large enough to warrant separate assessment, even if the costs can be identified and classified consistently across all States;
- (iv) defining a drug user and comparing the educational cost impacts by type of drug use is difficult — for example, do the cost impacts to school budgets associated with heroin or alcohol use differ from those of petrol sniffing.

98. However, the views of States are sought on whether a disability should be assessed and if so, the amount of recurrent expenditure related to drug use.

SERVICE DELIVERY SCALE

The 1999 Review

99. The Service Delivery Scale (SDS) factor was used in the assessment of both government school categories, with separate calculations for each.

100. It was designed to reflect the diseconomies of scale incurred by small schools in sparsely populated areas. Derivation of this factor could not be based on the actual distributions of small schools in the States because States have different policies regarding the provision of small schools. It was necessary to base the factor on an interpretation of the effect of the average policies of the States.

101. The method adopted by the Commission incorporated the following implicit assumptions:

- (i) that in-school education was provided for all students except those in isolated areas where alternative out-of-school education was provided;

- (ii) that in sparsely settled areas, States aggregated school populations, often providing school transport, to achieve some economies of scale; and
- (iii) that, nevertheless, all States maintained small schools which they resourced at higher than average rates.

102. Ideally, this factor would have been based on an analysis of school costs taking account of the size and characteristics of schools. Since data showing the in-school costs for each school were not available in a comparable form, the model used staff numbers as a proxy for costs. It was based on a comparison of differences in student to staff ratios by Urban Centres/Localities (UC/Ls)¹⁶, or expanded UC/Ls where required. Staffing data were taken from the Commission's special data collection. The total number of government school students in the UC/L (or expanded UC/L) were estimated using the government to non-government school proportions at the statistical division level or statistical sub-division level applied to the populations aged 5-11 years (primary) and aged 12-17 years (secondary).

103. An expanded UC/L was used where a government school was located outside a UC/L but was within a 60 kilometre (for primary), or an 80 kilometre (for secondary) boundary, from the centroid of the nearest UC/L. In these instances, the UC/L was notionally extended to include all persons and school staff within 60 kms or 80 kms from its centroid. These distances were estimated to be the maximum distances students were expected to travel each way to school under average policies.

104. These distances were the base distances in the model. As straight line distance between two points differs from the corresponding road distance (sinuosity), these base distances were adjusted either upwards or downwards to better reflect the actual distances travelled by students in each State.

105. The UC/Ls (includes expanded UC/Ls) were grouped together by size, as determined by the estimated numbers of government school students, and the Australian average student to staff ratio was calculated for each group. Each UC/L was then assigned the standard student to staff ratio according to its estimated school population size. Based on judgement, only UC/Ls with estimated government school populations below 350 (primary) or 800 (secondary) were treated as having service delivery scale disabilities. All UC/Ls above these thresholds were assumed not to experience diseconomies of scale and were assigned the average student to staff ratio shown below. These ratios were the Australian averages for UC/Ls above the threshold sizes.

- (i) Government Primary — 15.5 to 1

¹⁶ Under this ABS classification system, an Urban Centre is generally defined as a population cluster of 1000 or more people. A Locality is generally defined as a population cluster of between 200 and 999 people. People living in Urban Centres are classified as urban for statistical purposes while those in Localities are classified as rural (i.e. non-urban). Each Urban Centre and/or Locality (UC/L) is bounded (i.e. a boundary for it is clearly defined) and composed of one or more whole Collection Districts (CDs). UC/Ls are defined for each Census and are current for the date of the Census.

- (ii) Government Secondary — 10.1 to 1

106. All persons of school age living outside an urban centre (defined as a UC/L or an expanded UC/L) were assumed to be living in areas in which States, at average policy, would not provide in-school education but would provide some form of out of school tuition. These students were assigned student to staff ratios of 6 to 1 for primary and 5 to 1 for secondary based on a further assumption about the level of resources applied to distance education.

State Views

107. The main issues raised by States concerned some of the assumptions in the current model and problems associated with providing services to centres with declining populations.

108. Victoria said that:

- (i) the calculation of the SDS disability was distorted by allocating students in very low density areas into UC/Ls with a significantly higher student density;
- (ii) an estimate of the students in the least dense Census Collection Districts would be a better proxy of the rural balance;
- (iii) the SDS factor when recalculated using the Special Data collected in 2001 will be out-of date by 3 years in 2004 and by the time the 2009 Review it will be 8 years out-of date; and
- (iv) overseas experience should be used to confirm the reasonableness of the outcomes of the existing method.

109. Table 7 presents the disability factors estimated by Victoria based on its proposed method and compares them with those currently used by the Commission.

Table 7 PROPOSED DISABILITY FACTOR BASED ON POPULATION DENSITY

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Proposed population density based disability factor	0.99489	0.99011	1.00745	1.01372	1.00110	0.99208	0.98757	1.10336
U 2002 factor	0.99271	0.98495	1.00570	1.01223	1.01311	1.03777	0.96502	1.13680

Source: Victorian Government Submission to the CGC 2004 Review, February 2002.

110. Tasmania, South Australia and the Northern Territory said it was important to recognise time-related influences on costs when assessing the Service Delivery Scale factor. Tasmania asserted that a time related measure would reflect the actual costs incurred

by affected children. Such a measure would account for costs arising from not only distance, but also for sinuosity, unsealed roads and the terrain.

111. As was pointed out during workplace discussions in South Australia, Western Australia and in several State submissions, especially that of Tasmania, maintaining schools in small rural centres has become an issue that needs to be considered in the 2004 Review. According to the information supplied by the States, this is an issue about the need to continue services in rural centres despite the declining rural population and the associated diseconomies.

112. Queensland said that in very small communities, schools also contributed to social cohesion because schools often served as a central place for different community groups to meet and interact. For this reason, Queensland maintained school facilities in small rural centres.

113. For effective delivery of education services, Western Australia said there was a need to have a large number of relatively small schools in rural centres. It said that the higher cost in these centres due to lower student to staff ratio were compounded by the base level of administration costs required to run a school of any size.

114. Western Australia said that the costs of such services were relatively lower than the cost of alternative options, such as distance education. It also said that there were disadvantages associated with those alternatives.

115. The Northern Territory asserted that the method used by the Commission to calculate the service delivery scale factor produced an inaccurate estimate of the disabilities faced by the Territory education system. In particular, it said that the students and staff of smaller homeland and outstation centres were inappropriately grouped in with their regional hub counterparts. The Territory pointed out that the staff to student ratios in these centres were typically quite high, and their exclusion resulted in an underestimation of the number of service delivery sites and therefore the scale costs in the Territory.

116. The Northern Territory also said that the use of technology had not reduced service delivery costs, but had increased costs in some areas.

Options for Assessment

117. The key to the appropriateness of this factor is the degree to which the method adopted by the Commission to calculate it reflects average State policies regarding the provision of small schools. In its request for special data for this Review the Commission sought additional information from the States to help verify the assumptions implicit in the present method.

118. The main issues to be reviewed in the SDS assessment are:

- (i) does the existing model sufficiently take account of standard policies affecting the maintenance of uneconomic schools in rural areas –

- should the factor be based on population densities (Victorian model) or assumed maximum student travel distances (CGC model)?
- (ii) to what extent should travel time influences (for example, road sinuosity, rough terrain etc.) be taken into account?
- (iii) what are the appropriate student to staff ratios for students deemed by the method to be receiving out of school tuition (distance education)?
- (iv) how else can the existing model be improved?

119. ***Population Density or Travel Distance.*** The present method attempts to reflect an Australian average policy regarding the location and resourcing of small schools. Justification for changing the method can be based on evidence that:

- either the assumptions about average policy which are implicit in the method are incorrect; or
- an element of the method or its structure is not consistent with average policies.

The threshold question of whether the assessment should be based on the population density of CDs in the rural balance or on travel distance needs to be considered in this framework.

120. Based on the information provided in its submission, the policy logic of Victoria's method based on the density of CDs is not clear since the method appears to have the potential to assign contiguous CDs to scale affected or non-scale affected categories. Staff are inclined to favour a model based on UC/Ls expanded using travel distance criteria as this seems to better reflect the main issue education authorities have to consider on whether to establish, or maintain, small schools in rural areas.

121. State comments are sought on the adequacy of the average policy parameters on which the present assessment is based and on whether the assessment method is a reasonable simulation of the relative effects of those policies.

122. ***Time Influences.*** In the present method, a sinuosity index was calculated for each State based on differences between straight line and road distances between UC/Ls. Commission staff think that this adjustment adequately takes account of the time issues. If a population density model were to be adopted, a related matter is how time influences should be incorporated if required.

123. ***Distance Education.*** The 1999 Review method deemed that students in the rural balance not taken into an expanded UC/L would, under average policies, be provided with out-of-school tuition. The method assigned a high level of resourcing for these students. Subsequent testing has shown that the results of the method are highly sensitive to the ratios assigned. The Commission's Policies and Practices Special Data Request for schools for this review sought details on the numbers of staff and students involved with distance education as a guide to the student to staff ratio which should be assigned to students deemed by the method to be receiving out of school tuition. Although the

responses varied, they clearly show that the assumption in the present method is too generous. Table 8 summarises the information provided by the States on the resources applied to distance education.

Table 8 STUDENT TO STAFF RATIOS FOR DISTANCE EDUCATION

	NSW	Vic ^(a)	Qld ^(b)	WA	SA ^(f)	Tas	ACT	NT
Primary Education	14:1	12:1	13:1	15:1 ^(c) 23.1 ^(d)	24:1	No data	na	13:1
Secondary Education	30-40:1 ^(e)	12:1	13:1	50-100:1 ^(e)	24:1	No data	na	42:1 ^(e)

Source: State responses to the Commission's Policy and Practice request for education, 2002

Notes: These ratios should be used carefully. Some ratios were provided by States. Ratios for other States were deduced from the data provided. In particular, the secondary school ratios are not always FTE student based.

(a) Derived from the total number of FTE teachers and students covering both primary and secondary education.

(b) Queensland advised the teacher/:student ratios for distance education are half of those applicable to normal schools. Ratios shown are averages of more detailed ratios by grade.

(c) School of the Air.

(d) School of Isolated and Distance Education.

(e) May be subject based.

(f) Includes an additional 25 per cent loading for distance education.

124. For illustrative purposes, staff have recalculated the factor for primary schools assigning the student to staff ratio applied to UC/Ls above the threshold to students deemed to receive distance education, that is 15.55. The results, compared with the present primary schools factor, are shown in Table 9.

125. Staff intend to recommend that the ratios applied to students deemed to receive out of school tuition be revised. The revised ratios would be derived from the data already provided by the States and any additional information the States provide.

Table 9 REVISED SERVICE DELIVERY SCALE FACTOR FOR GOVERNMENT PRIMARY SCHOOLS

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Revised factor ^(a)	1.00044	0.99475	0.99765	1.03023	1.00981	0.99479	0.97709	1.00709
U2002 factor	0.99271	0.98495	1.00570	1.01223	1.01311	1.03777	0.96522	1.13680

(a) Based on a student to staff ratio of 15.55 for students deemed to receive out of school education.

Source: CGC

126. **Other improvements to the existing model.** The existing method calculates the notional number of students for each UC/L (including expanded UC/Ls) based on school age populations and the estimated proportions of these attending government schools. The government school proportions were calculated at the Statistical Division level and were potentially inaccurate at the UC/L level. Consideration is being given to simplifying this method by using the actual number of students in government schools (separately for

primary and secondary). The present calculation of notional students seems to be an unnecessary complication and a potential source of inaccuracy in the calculation.

127. **Hub schools.** Staff intend to obtain detailed information from the Northern Territory to explore the influence on SDS calculations of treating the students at homeland learning centres and hub schools differently.

128. Table 10 shows a recalculation of the service delivery scale factor for primary schools using actual government school enrolments derived from the Special Data Collection, rather than estimated enrolments.

Table 10 REVISSED SERVICE DELIVERY SCALE FACTOR FOR GOVERNMENT PRIMARY SCHOOLS

	NSW	Vic	Qld	WA	SA	Tas	NT	ACT
Revised factor ^(a)	0.99261	0.99479	1.00296	1.00360	1.00504	1.02440	1.12292	0.97775
U2002 factor	0.99271	0.98495	1.00570	1.01223	1.01311	1.03777	1.13680	0.96522

(a) Based on actual government school enrolments rather than estimated government school enrolments

Source: CGC.

129. The present assessment method does not adjust government enrolments for the standardisation that the Commission applies to pre and post-compulsory enrolments. Staff have not tested the effect of this modification but consider that it would have a marginal effect on the factor. It could be justified on consistency grounds. Also, the present assessment does not include a specific adjustment to account for the additional costs weights applied to Indigenous students in the socio-demographic composition factor. An adjustment would add transparency to the assessment and make clear that potential double counting was being specifically eliminated. Staff intend to investigate how such an adjustment could be incorporated and, subject to the materiality test, intend to recommend its inclusion.

NON-GOVERNMENT SCHOOLS COST FACTOR

The 1999 Review

130. The non-government schools cost factor measured the differential cost to the States of providing subsidies for non-government education. It was based on the per student grants paid by the Commonwealth in accordance to its categorisation of schools and students according to the Education Resource Index (ERI) calculated by the Commonwealth Department of Education Training and Youth Affairs (DETYA). The Commission used the ERI as the basis for this factor because, in the 1999 Review, the majority of States indicated

they used it, to varying degrees, as the basis for distributing recurrent payments to non-government schools. In addition, the distribution of Commonwealth payments for non government schools paid through the States, which the Commission treated by inclusion, were based on this index.

131. In the May 1999 budget, the Commonwealth announced that its method of funding for non-government schools would change in the quadrennium 2001 to 2004. Although the Commonwealth has now implemented this policy and the ERI has not been updated since 1999-2000, the Commission has continued to use the ERI basis for its factor¹⁷ because most States have indicated that they are continuing to use the ERI approach to distributing their subsidy payments to non-government schools.

State Views

132. Victoria said that the Commission should keep the non-government cost factor under review in the context of further work being undertaken for Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). A MCEETYA Taskforce on Schools Resourcing has commenced work on a study of the costs associated with providing high-quality education to students in Australia. The study includes consideration of principles for government funding of schooling to ensure efficient, effective and equitable schooling is provided to all students, based on an understanding of Commonwealth and State responsibilities for the government and non-government sectors.

133. Western Australia said that the Commission's use of the ERI to calculate cost factors did not fully reflect how Western Australia currently funds non-government schools. Western Australia uses ERI but has an additional category for schools that operate as the sole providers of schooling in remote areas of the State (typically at remote Aboriginal communities). Per capita funding of these remote schools is 50 per cent higher than category 12 schools (the highest of the ERI funding categories). In any case, it noted that the Commission will not be able to continue to use ERI, following its abandonment by the Commonwealth. Western Australia is conducting a review of its non-government school funding methods, and said it would be making further comments on this issue.

134. Tasmania argued against using the Commonwealth's new funding model as the basis for this factor, claiming that it did not distribute funds equitably. It conceded that the ERI basis could not continue to be used and proposed that the Commission use a measure that reflected the average method used by the States to distribute funds to non-government schools.

135. The Northern Territory said that the distribution of the Commonwealth SPP was not an adequate measure of the relative costs to State Governments of non-government schooling. The Territory said that this measure was inadequate because it did not accurately capture the characteristics it was designed to measure and did not cover the key drivers of costs to State Governments. It said that the key cost drivers affecting non-government

¹⁷ The factor calculated for 1999-2000 has been used for 2000-01 and will be used for 2001-02 in the 2003 Update as no new ERI data are available following the abandonment of the ERI by the Commonwealth for distributing SPPs.

schools were similar to those for government education, so the same assessment methods should be used.

Options for Assessment

136. Staff accept that the ERI method cannot continue for the 2004 Review because it will not be updated. Complete details of the way the States intend to fund non-government schools are not yet available. Our aim will be to devise a measure which reflects the way most States determine the levels of non-government funding. As noted below, staff consider that there may be implications for the treatment of the Commonwealth SPP for non-government schools, depending on the basis of the calculation of the Non-government costs factor.

VANDALISM AND SECURITY FACTOR

The 1999 Review

137. The method of assessing this factor was first introduced in the 1988 Review and has undergone virtually no change since then.

138. It accounts for the costs to schools due to vandalism and the associated security needs. Table 11 presents the weights assigned to the vandalism and security factor. By design, these weights were meant to vary with the sizes of urban centres.

Table 11 WEIGHTS FOR DIFFERENT URBAN CENTRES

Size of the Urban Centre (persons)	Weight
More than 2 000 000 persons	5
750,000 to 2 000 000 persons	3
100 000 to 749 000 persons	2
less than 100 000 persons	1
Persons in rural areas	1

Source: 2002 Update, Working Papers 1996-97 to 2000-01, Volume 4.

139. Table 12 shows the State-specific factors. These have been estimated based on judgement and using Census data.

Table 12 VANDALISM AND SECURITY FACTOR FOR DIFFERENT STATES

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
State ratio	3.28912	3.64923	1.88066	2.27144	2.37055	1.27373	1.99265	1.00000	2.84197
Factor	1.57374	1.28405	0.66174	0.79925	0.83412	0.44819	0.70115	0.35187	1.00000

Source: 2002 Update, Working Papers 1996-97 to 2000-01, Volume 4.

State Views

140. A number of States asserted that the current method of assessing the vandalism and security factor was conceptually unsound because of its underlying assumption that vandalism and security costs were solely dependent on the size of population centres.

141. All jurisdictions except New South Wales and Victoria have raised concerns over the Commission's urbanisation-based assessments. Their main concern was that it often focused on population, or other measures as proxies for urbanisation costs, and that such proxies were not reflective of the actual costs faced by the States.

142. Queensland said that there had been little evidence provided to support the theory that the level of school vandalism was directly correlated to the size of urban centres. It presented, in Table 14 below, Australian Institute of Criminology data to support this claim.

Table 14 INCIDENCE OF MALICIOUS DAMAGE^(a) PER 1000 POPULATION

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1991-92	869	755	994	1598	1607	673	2369	2022	1021
1992-93	975	710	1183	1838	1711	752	2970	1842	1116
1993-94	990	306	1247	1859	1832	1020	2965	2033	1054
1994-95	1167	314	1406	1987	1879	1112	3612	1685	1165
1995-96	1234	373	1431	2245	1867	1247	3522	2139	1242

(a) Malicious damages are damages that are caused with intention to harm people or property.

Source: *Australian Institute of Criminology*.

143. Queensland also said that, should the vandalism and security assessment remain unchanged in the 2004 Review, urban centres should be grouped by conurbations as was currently done in the Urban Transit expenditure assessment for the Gold Coast and Sunshine coasts.

144. Western Australia contended that this factor was the most arbitrary of the school assessments and did not reflect reality. It said that the State's non-metropolitan schools were equally subject to major acts of vandalism as those in the metropolitan area and often the annual cost of vandalism in non-metropolitan areas was higher because

remoteness of schools increased the costs of repair. For these reasons, Western Australia suggested that Commission abandon the existing population-based vandalism disability factor.

145. South Australia said that it believed that vandalism was not purely a function of density and size. It considered that more appropriate indicators of graffiti, vandalism and property attacks were socio-economic indicators of the surrounding population, such as youth unemployment.

146. Tasmania proposed that the vandalism factor be reviewed to take account of socio-economic factors that influenced the level of vandalism and security costs, and also to recognise that population size was not an influence.

147. The ACT proposed that the current method be replaced by one that reflected the actual costs incurred by States. Alternatively, it said that if data were not available, the factor should either be abandoned or, if the present method were to be continued, the ACT's weighting should be increased to the highest weight of 5 in recognition of its high vandalism costs.

148. The Northern Territory also proposed that the urbanisation factor be based on actual expenditure. It said that the key driver of expenditure was social dislocation, not urbanisation. In the Territory, social dislocation and vandalism was higher in remote centres.

149. New South Wales argued that the urbanisation disability was only partially addressed through the recognition of vandalism and security costs. It wanted the factor to be broadened to include other issues such as truancy, student mobility, teacher mobility, violence in schools and migration.

150. Victoria did not comment on this factor in relation to school education, but implicitly appeared to support its continuation by proposing a similar factor for Vocational Education and Training.

Options for Assessment

151. Work will be undertaken by Commission staff to test the feasibility of developing a factor that measures both the effects of population size and socio-economic characteristics. If socio-economic effects are found to be important, one assessment option would be to fold this element into the calculation of the socio-demographic composition factor. Irrespective of whether vandalism is treated as a separate factor or as part of socio-demographic composition, it will be necessary to review the cost weights by location. To assist with this, States are requested to provide the following recurrent cost data:

- (i) the proportion of schools expenditure associated with vandalism and security;
- (ii) a break down of the vandalism and security expenses; and

- (iii) a comparison, in cost per student terms, of metropolitan and non-metropolitan vandalism and security costs.

GRADE COST FACTOR

The 1999 Review

152. The grade cost factor was derived by applying a cost weight of 1.2 to the standardised numbers of students in Years 11 and 12 in each State. The standardised numbers of students were derived from the calculation of post compulsory enrolments.

State Views

153. Victoria said that the cost weights for senior level students should be reviewed and increased. In particular, based on an inquiry undertaken in Victoria, it argued that Year 12 students should receive a weight of at least 1.3. It also advocated replacing standardised student numbers with the actual number of Year 11 and Year 12 students as the basis for the factor.

154. No other State commented on this factor, but Queensland, in its response to the Commission's special data request for schools education, indicated that its normal class sizes were 30 for Years 8-10 and 25 for Year 11 and 12. This implies a cost weight of 1.2 for students in Years 11 and 12 relative to students in Years 8-10.

Options for Assessment

155. We seek the comment of other States on the cost differential proposed by Victoria. The present factor ranges between 0.996 and 1.008. Its relatively small size has caused the staff to consider whether its retention is warranted. As well as the cost weight that is currently used, these factors are affected by the method used to measure standardised post-compulsory enrolments. Under the present method the standardised number of enrolments age 15 years and over, used in the socio-demographic composition factor, does not differ much from the standard number of enrolments¹⁸. This enables all States to have a very similar proportion of standardised post-compulsory enrolments.

156. If a new assessment method of calculating these enrolments was introduced and this resulted in a bigger gap between the standardised and standard numbers of post-compulsory enrolments, the grade cost factor might assume more importance. When the method of assessing post-compulsory enrolments is resolved, the implications for the grade cost factor will be examined.

¹⁸ The standard number of enrolments, aged 15 years and over, is calculated by applying the Australian average school participation rate of persons aged 15-17 to each State's 15-17 year old population.

CROSS-BORDER

The 1999 Review

157. A cross-border factor was calculated for the ACT covering both government and non-government school categories to take account of the costs associated with the use of its post-compulsory education services¹⁹ by students resident in New South Wales. The method used the above average proportion of 14 year-old²⁰ non-resident students to calculate a notional number of net cross-border students age 15 years and over. This calculation was based on standard participation rates for the post-compulsory ages. The additional students were then allocated to the government and non-government secondary school categories according to the actual proportions in each sector of students aged 15 years and over.

State Views

158. No State commented on this factor.

Options for Assessment

159. Commission staff see no reason to change the current method of assessment.

ADMINISTRATIVE SCALE

The 1999 Review

160. An administrative scale factor was calculated for all school categories using the general method of assessment.

State Views

161. All States discussed administrative scale as a general issue. In addition, the Northern Territory in the education part of its submission, provided data to support its argument not to remove the scale-affected variable component of this factor.

¹⁹ This factor does not take account of students of compulsory school age as these students are included in the socio-demographic composition factor which uses actual enrolments.

²⁰ 14-year-olds were used as this is the oldest age of compulsory schooling for all States. This was done to avoid complications associated with participation rate issues for post-compulsory aged students

Options for Assessment

162. Discussion Paper CGC 2002/23, *The Administrative Scale Factor*, sets out the Commission's proposed general approach to the assessment of this factor for the 2004 Review. The assessment of this factor for the Schools Education categories will be consistent with the general approach.

INPUT COSTS

The 1999 Review

163. An input costs factor was calculated for the government primary and government secondary school categories using the general method of assessment.

State Views

164. States discussed input costs as a general issue. In addition, Tasmania in the education part of its submission, indicated that it does not support the continuation of the general method of calculating the input cost factor for schools education. Its main concern is using the average weekly earnings in the private sector to measure school wage costs in the government sector. Tasmania said that its school salaries are based on average teacher salaries in all other jurisdictions.

Options for Assessment

165. Discussion Paper CGC 2002/20, *Input Costs*, sets out the Commission's proposed general approach to the assessment of this factor for the 2004 Review. The view of staff is that, as far as possible, the assessment of this factor for the Schools Education categories should be consistent with the general approach. However, Tasmania's views will be considered.

DISPERSION

The 1999 Review

166. A dispersion factor was calculated for the government primary and government secondary school categories using the general method of assessment.

State Views

167. States discussed dispersion as a general issue. In addition, Western Australia in the education part of its submission, proposed that a new dispersion cost component be introduced for education categories, to cover additional incentives to attract and keep teacher in non-metropolitan schools.

Options for Assessment

168. Discussion Paper CGC 2002/22, *Dispersion*, sets out the Commission's proposed general approach to the assessment of this factor for the 2004 Review. The view of staff is that, as far as possible, the assessment of this factor for the Schools Education categories should be consistent with the general approach. However, Western Australia's views will be considered.

ISOLATION

The 1999 Review

169. An isolation factor was calculated for the government primary and government secondary school categories using the general method of assessment.

State Views

170. States discussed isolation only as a general issue.

Options for Assessment

171. Discussion Paper CGC 2002/43, *Isolation*, sets out the Commission's proposed general approach to the assessment of this factor for the 2004 Review. The view of staff is that the assessment of this factor for the Schools Education categories should be consistent with the general approach.

NATIONAL CAPITAL

The 1999 Review

172. A National Capital factor was assessed to take account of the additional costs incurred by the ACT in providing government school education services to students from

the diplomatic community. The additional costs for the primary and secondary categories were assessed as being \$2 million in each sector.

State Views

173. Western Australia and South Australia argued that including students from diplomatic families in the socio-demographic composition factor and having a national capital factor for these students may be 'double counting'. Victoria said that it considered the \$4 million currently assessed excessive.

Options for Assessment

174. The view of staff is that there is no issue of double counting as the National Capital factor recognises only the higher per student costs associated with diplomatic students. However, as pointed out in Discussion Paper CGC 2002/05, *Cross-border Disabilities and Special Circumstances of the ACT*, staff will review this factor to ensure that it captures only the standardised level of costs in accordance with the general principles for assessment.

TREATMENT OF SPECIFIC PURPOSE PAYMENTS

Background

175. Table 13 shows the Commonwealth Specific Purpose Payments (SPPs) directed to Schools Education and the way in which the Commission treated them in the 2002 Update.

Table 13 TREATMENT OF SPECIFIC PURPOSE PAYMENTS FOR SCHOOLS EDUCATION, 2002 UPDATE

Payment	Year Payments Made					Treatment
	96-97	97-98	98-99	99-00	00-01	
Government Schools	x	x	x	x	x	Inclusion
Non-Government Schools ^(b)	x	x	x	x	x	Inclusion
Targeted and Joint Programs Government Schools	x	x	x	x	x	Inclusion
Targeted Programs Non-Government Schools ^(b)	x	x	x	x	x	Inclusion
Indigenous Education Strategic Initiatives Program - Government	x	x	x	x	x	Inclusion
Indigenous Education Strategic Initiatives Program – Non-Government ^(e)		x	x	x	x	Inclusion

State Views

176. Victoria advocated the continued treatment of the Commonwealth SPP for Non-government schools by inclusion. This was in the context of its advocacy of a combined assessment of the needs of government and non-government schools which it said would allow a better focus on the States' overall education needs.

177. No other State commented on the treatment of the Commonwealth SPPs for Education.

Options for Assessment

178. Depending on the method adopted for measuring the relative levels of funding States need to provide for non-government schools, staff consider that there may be a need to review the treatment of the Commonwealth payments for non-government schools. In the 1999 Review, there was alignment between the distribution of these payments and the basis on which the Commission measured the non-government schools costs factor. This symmetry meant that whether the Commonwealth payment was treated by inclusion or exclusion was not a critical issue. If the Commission adopts a basis other than the Commonwealth's distribution method as the basis for its non-government schools costs factor, the treatment of the SPP will need to be reviewed. Decisions on this issue will have to await decisions on the way non-government costs will be assessed for the 2004 Review.

CONCLUSION

179. Set out below is a summary of the staff's preliminary views on the main issues raised by the States for the Schools Education categories for the 2004 Review.

Four Category Structure

- Retain the current four category structure based on actual sector enrolments.

Post compulsory enrolments

- Any measure of post compulsory enrolments will use Australian average participation rates, or retention rates, as the starting point.
- Staff intend to rerun the 1999 regression model for determining the standardised participation rate replacing SEIFA with a range of independent variables to more comprehensively explain the variability of post-compulsory enrolments across States.

- Staff also intend to undertake the analysis proposed by Lamb, using responses to the new question in the 2001 Census concerning level of completed education.
- Staff preference is to undertake these two Census based analyses rather than an analysis based on LSAY — there are a range of issues affecting the LSAY data, including the adequacy of State-specific representation of metropolitan, regional and rural populations in the samples; the representation of Indigenous people; the effects of sample attrition and the sample weighting procedure to represent the population of Year 9 students.

Socio-demographic Composition

- Not to introduce any cost weights for population groups that do not receive any in the current model, with the possible exception on humanitarian migrants, subject to their additional costs being material.
- Not to change the level of existing cost weights, except perhaps to increase the weights for Indigenous person in remote areas.
- Not to introduce a disability to reflect the higher costs associated with students with special needs.
- To remove the adjustment for the Northern Territory reflecting the lower participation levels of its Indigenous students.
- Not to introduce a disability to reflect costs associated with drug use.

Service Delivery Scale

- Adopt a slightly simplified version of the existing model.
- Review the treatment of students requiring distance education — particularly their number and assumed student to staff ratios.

Non-government School Cost

- Develop a new factor. With the demise of the ERI method (used by the Commission and many States), some States are currently reviewing their methods. The new method will need to take account of the new methods adopted by these States.

Vandalism and Security

- Investigate whether this disability relates to socio-demographic composition or urban centre size.

Grade Cost

- Seek views of other States on whether the cost weight proposed by Victoria is more appropriate than the weight used in the current assessment.
- Examine the importance of retaining this factor once the method of assessing post-compulsory enrolments is resolved.

Cross Border, Administrative Scale, Input Costs, Dispersion, Isolation

- To continue to use the general approach in the calculation of these factors.

National Capital

- The staff will review this factor to ensure that it only captures costs up to the standardised level.

Treatment of Specific Purpose Payments

- This to be reviewed after deciding on the method to be used in the calculation of the non-government school cost factor. If the method used in assessing this factor differs from the Commonwealth model, it may be appropriate to exclude SPPs for non-government schools.

ASSESSMENT OF POST-COMPULSORY ENROLMENTS

0. Details of the key tasks carried out in the 1999 Review to assess post-compulsory (PC) enrolments.

- (i) **Estimated standardised PC participation rates:** As post-compulsory enrolments tend to increase with a State's socio-economic advantage as measured by the Socio Economic Indexes for Areas of urban and rural advantage (SEIFA), regression analysis was carried out using this relationship to generate the required information to estimate the standardised participation rates for urban and rural areas²¹.
- (ii) **Estimated the relevant populations in secondary schools:** Separate estimates of the 15 to 17 year-old populations were made for urban SLAs and rural SLAs for each State. Urban SLAs were grouped into five quantiles based on the SEIFA index of urban advantage. A similar procedure was used to estimate the relevant population in the rural SLAs. Here SEIFA index of rural advantage was used.
- (iii) **Estimated the standardised²² number of post-compulsory students:** The notional standardised number of students aged 15 years and over was calculated for each SLA by applying the standardised participation rate in (i) to the population estimates made in (ii). For each State the estimates were aggregated separately for urban and rural areas.
- (iv) **Estimated the standard²³ number of post compulsory students:** The total standard number of students aged 15 years and over was calculated for each SLA by applying the Australian average participation rate to its 15 to 17 year-old populations. For each State the estimates were aggregated separately for urban and rural areas.

²¹ The regression models specified by the staff used the rate of post-compulsory enrolments as the dependent variable and socio- economic influences as independent variables. These were estimated using the 1996 Census data at SLA levels for urban and rural areas of each State. The estimated models explained about one-third of the variation in participation rates of 15-17 year-olds.

Assuming that virtually all non-socio-economic influences on post-compulsory enrolments are due to State policy influences, the regression models were rerun by introducing seven binary State-dummy variables and treating NSW as the reference State. These models explained approximately two thirds of the differences in participation rates.

²² This is the number of enrolments that a State would have if it were to follow Australian standard policies, allowing for the specific disabilities it faces in providing educational services and assuming it provided services at the standard level of efficiency.

²³ The benchmark against which the performance or characteristics of a State can be assessed. It is derived from the experience of Australia as a whole (the Australian average standard), and may be a financial standard or a policy standard.

- (v) **Rescaled the standardised number of post compulsory students:** Each State's standardised number of students age 15 years and over in (ii) was rescaled so that the Australian total for standardised students equalled the total standard number of students aged 15 years and over in (iv).
- (vi) **Estimated the ratio of standardised to standard number of post compulsory students:** The ratio of the total notional standardised number of students (15 years and over) in (v) to the total standard number of students (15 years and over) in (iv) was calculated for each State.
- (vii) **Estimated the standardised number of students by year level.** The ratios from (vi)²⁴ were applied to the standard number of enrolments for each year (using ABS schools data) to derive the standardised number of students —both government and non-government, aged 15 years and over for each State and for each year level.
- (viii) **Estimated standardised number of all secondary students:** Each State's notional number of standardised students aged 15 years and over was added to its actual secondary students aged 14 years and under (excluding year 7) and its notional Year 7 students, to derive the total standardised number of secondary students for each year level.
- (ix) **Determined the number of standardised post compulsory enrolments by sector.** Each State's resulting total standardised number of secondary students was apportioned between government and non-government sectors using its actual proportions in those sectors²⁵.

²⁴ As noted before the ratio was estimated based on 1996 Census data.

²⁵ The Year 7 proportions were adjusted to take account of the influences resulting from State differences in sector placement (that is, primary or secondary).