

## DOCUMENT RESUME

ED 455 046

RC 023 042

AUTHOR Witham, Mark  
TITLE The Real Cost of Rural Secondary Schooling in South Australia (from a School's Perspective). Keynote Address.  
PUB DATE 2000-05-00  
NOTE 12p.; In: Issues Affecting Rural Communities (II). Proceedings of the International Conference [on] Rural Communities & Identities in the Global Millennium (Nanaimo, British Columbia, Canada, May 1-5, 2000); see RC 023 040.  
PUB TYPE Numerical/Quantitative Data (110) -- Reports - Research (143) -- Speeches/Meeting Papers (150)  
EDRS PRICE MF01/PC01 Plus Postage.  
DESCRIPTORS Class Size; Expenditure per Student; \*Expenditures; Foreign Countries; \*Resource Allocation; Rural Schools; \*Rural Urban Differences; Secondary Education; \*Secondary Schools  
IDENTIFIERS \*Australia (South Australia)

## ABSTRACT

This paper examines the costs of rural schooling in South Australia from the internal allocations of resources in four country and four metropolitan schools. Case studies considered only secondary education and the differences between how metropolitan and country schools allocate resources to students; subjects; and activities such as administration, teaching, and resource centers. A second issue was whether secondary schools' allocation of resources is congruent with how the government allocates resources to schools. This study's consideration of total resource allocation yielded different findings than analyses based on salary expenditures only. Salary expenditures tend to overstate the resources allocated to curriculum delivery and support, understate administration and transportation, and diminish rural-urban differences. Years 9-12 were more expensive than year 8, and expenditure per student in years 11-12 was significantly greater in rural than in urban schools. Compared to metropolitan schools, junior secondary subjects were 19 percent more expensive in country schools and senior secondary subjects were 69 percent more expensive. These results were related to differences in class size. Almost all subjects were more expensive in country schools, using the measure of cost per student per hour. All schools received more resources than needed for senior secondary students and reallocated these resources back to the school. But with lower retention to year 12, country schools had less surplus for reallocation. (Contains 15 data tables and figures and 12 references.) (SV)

## KEYNOTE ADDRESS

# The Real Cost of Rural Secondary Schooling in South Australia (From a School's Perspective)

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)."

Mark Witham, Australia

### Introduction

This paper examines the costs of rural schooling in South Australia from the internal allocations of resources in four country and four metropolitan case-study schools. The case studies considered only secondary education and the differences between how metropolitan and country schools allocate resources to students, subjects and activities such as administration, resource centre provision and delivery of the curriculum. A second issue was whether the way that secondary schools allocate resources is congruent with how the Government allocates resources to schools.

The methodology used in this study differs from previous studies in two ways:

- ❖ It includes all resources available to schools including teachers, goods and services, equipment, learning resources and major capital. Previous studies of within-school resource allocation have relied on the assumption that teacher salaries are the most significant expense (about 80%) and can be used to estimate the total allocation of resources. This study is able to compare the outcome from just using teacher salaries to that obtained by using all resources. It shows that methodologies using teacher salaries only, will understate the differences between year levels and between country and metropolitan schools.
- ❖ Resources are allocated to individual students rather than only to subjects. This allows for the reduced number of subjects taken by senior secondary students to be taken into consideration in the costing of year level and individual student allocations. This methodology shows that students studying at senior secondary year levels do not require as high a level of resources as would be assumed from previous studies that allocate only to the subject level.

It is clear that the basis for allocating resources at the system level is not congruent with how schools themselves allocate resources. The particular policy implication of this mis-match for rural schools relates to the allocation of resources to senior secondary students. The system allocation assumes that senior secondary students require significantly more resources than schools actually allocate. Schools re-allocate these surplus resources back to junior secondary students in both country and metropolitan areas. Country schools tend to have relatively lower retention to year 12 and thus have less surplus resources to re-allocate compared to metropolitan schools.

### Literature Review

Teacher salaries make up around 60% of school resources (McKenzie, Harrold, & Sturman, 1996, P.50 ) and these are allocated to students by means of a timetable. Much of the research on within-school resource allocation concentrates on teacher allocations. Curriculum Delivery is the major purpose of schools and represents the largest component of school resource allocation with coincidentally around 60% of resources being allocated to it. ( McKenzie, 1992, P.170).

McKenzie (1992, P.175) found in New South Wales (NSW) class sizes in small schools for students in years 7-10 were 1.73 times larger than class sizes for students in years 11&12. In medium-sized schools this ratio was 1.45 and in large schools 1.35.

McKenzie believed that this was evidence of cross subsidisation - although this would not seem to take into account the fact that students in senior secondary typically spend an average of 650 hours in a face-to-face learning situation, compared to around 1000 to 1077 in years 7-10 (Abbott, 1999). Abbott's work was in Western Australia, Victoria and South Australia in 1999, and it is possible that McKenzie's sample of New South Wales (NSW) schools in 1990 did not have unsupervised lessons for senior secondary students common in these other States in 1999. If we adjust McKenzie's findings for the class size ratio between years 7-10 and 8-12 to account for the 350 hours pa that year 11 and 12 students are unsupervised, we find a very different result as shown in Figure 1.

This would indicate that in small high schools, junior secondary subsidises senior secondary, but in medium and large high schools the opposite is true.

An important study on within-school resource allocation by Harrold (1998, Pp.150-162) focused on Cross Subsidisation Analysis. He identified free periods in the timetable for teachers as "*a source of slack in the utilisation of staff time*" (1998, p.153). Harrold provided a methodology for determining the equity ratios for secondary year levels that he described for a secondary school in NSW (1998, P.157). This analysis compared the percentage of total teacher periods allocated to each year level and divided this by the percentage of student periods in each year level. Harrold's study aonly considered staff time and did not take into account the reduced contact time for senior secondary students.

ED 455 046

RC 023042  
ERIC  
Full Text Provided by ERIC

A major investigation in 1996 by McKenzie, Harrold, & Sturman found that "there is a particular concern that rural secondary schools may provide inadequate coverage of several of these (major curriculum) areas" (McKenzie, Harrold, & Sturman, 1996, P.3). The different patterns of resource allocation within rural schools is not just because of the relatively fewer students in these schools - it is also due to the different patterns of teacher specialisation in rural schools compared to larger urban schools, which suggests that the nature of teachers workload varies between different types of schools (McKenzie *et al.* 1996, P.46).

McKenzie *et al.* found that in Australian Secondary Schools, years 11 & 12 were typically provided with a broader curriculum range than junior secondary students, and were taught in relatively small classes by comparatively senior teachers. These allocative decisions translated into relatively high levels of per student expenditure in years 11 & 12. In this sense, they argued, the junior year levels cross-subsidised the program in years 11 & 12 (McKenzie *et al.* 1996, Pp.51). This might not necessarily follow because although classes in years 11 & 12 are more expensive per student, we don't know how many classes year 11 and 12 students have compared to years 8-10. If it were exactly the same for both sectors, then McKenzie *et al.* would be correct, but there is evidence that senior secondary students are not engaged in face-to-face instruction as frequently as students in any other year levels (Abbot, 1999).

McKenzie *et al.* raised the question of "whether small schools provide a comparatively comprehensive curriculum in years 11 & 12 by means of a relatively narrow curriculum in the junior year levels?" This question could equally be asked of medium and large schools, and it is also affected by the premise outlined above. After allocating the non-teaching time of teachers (a little over 40%) to year levels on the basis of what subjects the teachers taught, they found that in schools with 300 or more students the level of cross subsidisation was the same for rural and urban schools. Below this, the cross subsidisation was around 40% - meaning that for every \$100 spent in years 8-10, \$140 was spent in years 11-12 (McKenzie *et al.* 1996, Pp.52-57).

Using the methodology of weighting teacher salaries to year levels based on class size, McKenzie *et al.* found that years 8-10 in rural schools were about 2% more expensive than in urban schools - when only considering teacher salaries. Years 11-12 were 27% higher in rural areas (1996, P.53). It is likely that any adjustment based on a methodology which took into account the differential in the number of lessons between junior and senior secondary, would reduce the 2% for years 8-10 and increase the 27% for years 11-12. There are very few schools where the cost per student is significantly higher than urban schools so in aggregate these higher expenditures are very small (McKenzie *et al.* 1996, P.60, Table 4.5).

An important paper from the United States by Monk, Brent, & Roellke, (1996) investigated "the resource flows at micro-levels of educational systems". Monk *et al.* distinguished between two major policy issues "1) concerns over productivity or efficiency in education; and 2) concerns over equity and adequacy in the distribution of educational opportunities".

Monk *et al.* warned that "the omission of these important pools of resources limits the ability to gain a comprehensive understanding of resource allocation phenomenon." This study provided a useful separation of "disposition" and "utilisation". Disposition refers to the intended allocation of resources such as a teacher being allocated to a class. Utilisation refers to "the allocation of student time and effort" such as the funding per student within a class of 20 students. For example English and mathematics have the highest "resource intensities," with 5.48 and 4.65 teachers per 1,000 district pupils, respectively. This gives a picture of the resources allocated to different curriculum areas, or the disposition. By examining how resources are utilised it can be shown that English receives 15.8% of the available teacher resources and 16.6% of the total number of student hours. Thus English receives a smaller share of the available teacher resource than it receives of the available student resource.

### Methodology

Four metropolitan and four country Government schools in South Australia were selected using a structured sampling process, which encompassed a range of school sizes and geographic locations.

Studies by McKenzie *et al.* (1996, P.53), Harrold (1998, Pp.150-162) and Monk *et al.* (1996) considered the allocation of staff resources to subjects, but not to individual students. These studies compared resource levels for students across different subjects, but did not allow a profile of the costs for individual students to be determined. These studies also appeared to have a methodological deficiency in that they did not consider that some students attend for fewer hours than others. This meant that comparisons across year levels could be flawed if some year levels were more likely to have either or both free (unsupervised) lessons or part-time students. This study seeks to extend these methodological approaches by considering all resources within schools. This study tests the assumption that because salary expenditures make up the vast majority of the resources within a school, they can be used as reliable approximations of total resource allocations to subjects and students.

The approach has been to cost all resources used by the schools, which are called inputs. These were grouped into the following broad categories including salaries, utilities, maintenance and cleaning, cash grants and capital and land expenditures. Expenditures incurred by parents including in-kind support have not been quantified.

Expenditures were allocated to individual students. The per-student expenditures were then aggregated to calculate expenditures per subject and expenditures per year level. The methodology was to separate each input-expenditure into curriculum, administration, library, transport and grounds.

Figure 2 shows the relationship between inputs and outputs in this costing methodology. The majority of inputs are allocated to more than one output. (Note there is no significance in whether inputs are to the left or right of the outputs). The methods of calculating each input expenditure category and the way they are then allocated to outputs are now described.

### Findings - Teacher's Work

It is apparent that country teachers spent more time teaching classes (76%) than metropolitan teachers (68%). If we compare the total time for all staff who were able to teach in these schools, country staff taught 72% of the total lessons they could possibly teach, compared to 66% for metropolitan teachers. Country teachers had less preparation time scheduled within the school timetable and were less often assigned to other non-instructional duties compared to metropolitan teachers. These findings are similar to the findings of McKenzie (1993) McKenzie *et al.* (1996, P.50) and Grissmer *et al.* (1997), who all found that secondary teachers were allocated to teaching duties 60% of the time.

As schools get larger the economies of scale allow larger classes on average. Larger classes require overall less teaching staff to instruct than the smaller classes more common in country schools. As larger metropolitan schools require less of their teaching staff to be involved in face-to-face instruction, they are available for other duties. Metropolitan teaching staff were available for 4% more of their time for other duties than were country teaching staff. This is a valuable resource that could be used to organise Vocational Education and Training (VET) in schools and other programs to the benefit of metropolitan students.

### Class Sizes

The trend is for relatively smaller classes to be provided in country schools. The average class size can be calculated by weighting each class size category by the number of classes. This will provide the average class size without allowing for the reality that some classes are for 1 hour per week and others are for 5 hours per week. If we weight each class size category by the number of student hours for each class a more useful comparison of class sizes can be made. Figure 3 shows the average class size calculated by each method as well as the relative differences between these two calculations:

The differences using number of classes as a weighting shows a much smaller average class size in country

schools compared to metropolitan - 15 in the country compared to 20 in the metropolitan schools.

The ratio between the two methods of calculating class size also revealed a significant difference between country and metropolitan schools – which implies that small classes in metropolitan schools operate for less time on average than those in country schools. A large number of small classes in country schools operate for the same time as any other subject, whereas in metropolitan schools, these subjects operate for fewer hours each week on average.

### Input Costs

Country schools had relatively more capital and busing expenditures than metropolitan schools. This results in salaries being about 10% less in country schools as a percentage of total resources. The most striking difference between country and metropolitan schools is the difference between the proportion of total staff allocated to teaching duties as shown in Figure 4.

### Output Costs

The discussion relating to inputs simply described what resources were provided to schools. It did not provide any insights into how resources are deployed within schools. The outputs or activities examined in this study are defined as follows:

Teaching to students in formal lessons, preparing for lessons and undertaking activities directly related to the teaching and learning process. This may include a range of activities such as organising work placements, maintaining the agricultural assets of the school and supervising lunch and recess breaks and providing pastoral care. It includes time by school support officers allocated to preparing laboratory lessons and supporting students with disabilities

Includes all time spent by school principals not teaching or preparing for lessons. It includes time of other leadership positions allocated to administration and time of school support officers in running the office and book room functions. It also includes time spent by school support officers, assisting teachers by photocopying curriculum materials

### Library

Includes all time spent by teachers, teacher-librarians and school support officers in operating the resource center of each school. It does not include class lessons which are scheduled to the library.

### Student Transport

Includes school bus expenditures and conveyancing allowances paid to parents.

### Grounds

Includes all expenditures which relate to the upkeep of the grounds of each school. It does not include

maintenance of buildings or other infrastructure, nor the upkeep of agricultural assets.

#### Community Library

Includes all expenditures which relate to the upkeep of the grounds of each school. It does not include maintenance of buildings or other infrastructure, nor the upkeep of agricultural assets.

Includes all expenditures which relate to the provision of library facilities for the general public, which includes a proportion of library staff time - related to Saturday mornings and week nights.

#### Unallocated

A small amount of resources could not be allocated to particular activities, for reasons which relate to the costing methodology

The allocation of both total resources and salaries only to each of these outputs is shown in Figure 5.

The rationale for including student transport expenditures in the comparison of metropolitan and country schools is that transport is a substitute for the capital expenditures required to build a school. The using-up of capital resources is included in both metropolitan and country schools. It appears that transport costs are not substitutes for capital costs that would be incurred in metropolitan schools, but are in addition to capital costs associated with all schools. It is important to note that the comparison of capital inputs costs showed that metropolitan school capital costs were 2% less than for country schools. So far this analysis has examined output costs as a percentage of the total resources for each school. The following examines output costs from a per-student perspective.

#### Per-Student Output Cost

The allocations for community library do not relate directly to students in the schools. Figures 10 and 11 show the per-student allocations for metropolitan and country students respectively.

The per-capita allocations of resources to country students is greater than to metropolitan students, however the significant differences are not in curriculum delivery costs, but more in administration, grounds and transport outputs. If we compare the differences between total resources allocated to curriculum we see a greater difference than if we only compare salary expenditures. The allocation of total resources to administration is 18% on average. If we only consider salary expenditures we find that 15% of salaries are allocated to administration. This is not as high as the 40% 'administrative blob' referred to by Wenglinisky *et al.* (1997), which included the provision of meals, and not as low as the 10% found by Odden *et al.* (1995, P164) which included district level administration.

The differences between metropolitan and country schools are much less when we only examine salary resources. This emphasises the value in a methodology that allocates all resources. The impact of this comparison is summarised in Figure 12, which shows the additional allocations to country schools compared to metropolitan, using both salary and total resource approaches.

To interpret the numbers in Figure 26, consider Administration Expenditures - salary expenditures on administration are 24% greater in country schools whereas all resource expenditures are 31% greater. The difference in curriculum salary-expenditures per student for country and metropolitan students is close to zero. This is a surprising outcome arising from the inclusion of some primary students in three of the four country schools. This masks the true differential between country and metropolitan staffing costs per secondary student. To consider the differences in costs relating to secondary students only, it is necessary to fully allocate all resources in each school to the individual students. The 123% differential for all resources, less community library, becomes 133% once primary students are removed from the analysis.

#### Individual Student Expenditures

The total expenditures in each school have been allocated to individual primary and secondary students. Figure 13 shows the differences between country and metropolitan students using this analysis.

Figure 13 shows the difference between metropolitan and country schools where the vast majority of metropolitan students are allocated between \$3,000 and \$10,000 each. Country students have a much flatter distribution with a significant 'tail' of students being allocated more than \$10,000 and up to \$41,000. The most expensive individual students were senior secondary students undertaking the majority of their subjects in a school but via distance education. The highest cost individual also travelled by bus and her parents were paid a conveyancing allowance to travel to the bus stop.

#### Year Levels

The expenditures per student by year level are shown in Figure 14. This shows that years 9,10 and 11&12 are more expensive than year 8, in most schools and that overall years 11&12 are significantly greater in country schools than in metropolitan.

#### Subjects

The costs of individual subjects can be examined from different perspectives. The raw cost per subject analysis shows that that maths and science are generally more expensive to provide in the country schools. English and Society and Environment (SOCE) are less expensive to provide. Overall junior secondary subjects are 5% more

expensive to provide in country schools and senior secondary 6% less expensive. Overall there is not much difference between the expenditures at a per-subject level.

If we consider the subject cost per student we find that overall junior secondary subjects are 19% more expensive in country schools and senior secondary 69% more expensive compared to metropolitan schools. This is due to class sizes in junior secondary being 19% smaller in country schools and secondary classes 58% smaller on average. A more useful comparison is the cost per student hour as it takes account of both class size and time per week differences. This analysis found that junior secondary subjects are 11% more expensive to deliver per student per hour in country schools and senior secondary 74% more expensive. Almost all subjects are more expensive in the country using this measure. The few subjects where it is less expensive in the country include junior secondary agriculture and 'other' as well as geography and health and personal development in both junior and senior sectors. These represent a very small minority of the total subjects examined.

#### **Comparison of Within-School to System Resource-Allocation Policy**

A separate analysis of the implicit resource allocation policy by the South Australian Department of Education Training and Employment found in 1997/98 that the allocations for year levels was significantly different to the apparent policy within schools. This is the case for both metropolitan and country schools as shown in Figure 15

Figure 15 presents evidence of two mis-allocations of resources. First the allocations to year levels do not accord with school practice nor the educational theory relating to year level funding (Caldwell, 1996; Odden and Picus, 1992 ; Caldwell, 1993; Cooper, 1992, Gammage, 1999, p.1)

The second issue is that there are apparent differences in how country and metropolitan schools allocate resources internally, that are not reflected in the resource allocation methodology.

It appears that secondary schools are generally allocated more resources than necessary for senior secondary years. Both metropolitan and country schools re-allocate these resources back to the junior secondary years. However the capacity for country schools to do this is less than metropolitan schools, because retention of students to years 11 and 12 is less in country schools.

This reflects a relative disadvantage for country secondary schools. It is also inefficient for a system to allocate resources to junior secondary students based in part on senior secondary student numbers.

#### **Conclusion and Summary**

The methodology used in this study shows that consideration of total resource allocation will yield different findings to analysis based on salary expenditures only. The key differences are that salary expenditure tends to overstate the amount of resources allocated to curriculum delivery and support, and understate administration and transport. More importantly the differences between metropolitan and country schools are much less if we only examine salary resources.

Overall years 9,10 and 11&12 are more expensive than year 8, and the expenditure per student in years 11&12 is significantly greater in country schools than in metropolitan. The comparison of costs per student shows that junior secondary subjects are 19% more expensive in country schools and senior secondary 69% more expensive compared to metropolitan schools. This is due to class sizes in junior secondary being 19% smaller in country schools and senior secondary classes being 58% smaller on average. It appears that small classes in metropolitan schools operate for less time on average than those in country schools. A large number of country small classes operate for the same time as any other subject, whereas in metropolitan schools, these subjects operate for fewer hours each week on average.

The differences in costs between country and metropolitan schools are not uniform across all subject areas – some subjects are less expensive in country schools others more expensive. However if we look at the cost per student per hour of subject delivery we find that junior secondary subjects are 11% more expensive to deliver per student per hour in country schools and senior secondary 74% more expensive. Almost all subjects are more expensive in the country using this measure. The few subjects where it is less expensive in the country include junior secondary agriculture and 'other' as well as geography and health and personal development in both junior and senior sectors. These represent a very small minority of the total subjects examined.

There is evidence of a mis-allocations of resources. Schools allocate relatively fewer resources to senior secondary years than what is implicit in the systemic allocation of resources to schools. School practice is thus more aligned with educational theory relating to year level funding discussed earlier in this paper.

The mis-match of system resource allocation with what schools actually do creates an equity issue between country and metropolitan students. The system assumes that senior secondary students require significantly more resources than what schools actually require. Schools re-allocate these surplus resources back to junior secondary students in both country and metropolitan areas. Country schools tend to have relatively lower retention to year 12 and thus have less surplus resources to re-allocate compared to metropolitan schools. This reflects a relative disadvantage for country secondary

schools. It is also inefficient for a system to allocate resources to junior secondary students based in-part on senior secondary student numbers.

#### References

Abbott, J. (1999) Report on the assessment of the cost of vet in schools – Ernst & Young report to Ministerial Council of Education Employment Training and Youth Affairs (MCEETYA) Taskforce on VET in schools (Unpublished).

Caldwell, B.J. (Chair) Victoria. Education Committee (1996b) *The school global budget in victoria best practice in matching funding to student learning needs final report of the school global budget research project*. Victoria, Australia.

Caldwell, B.J. (Chair) Tasmania. Review Committee (1993) *Review of resource allocation within the Tasmanian education system*. Document 3: Description and Effects of the Proposed Resource Allocation Model and Supporting Documents. Tasmania, Australia.

Cooper, R.S. (1992) School resource allocation formulas. In G. Burke, F. Ferrier, P. McKenzie, L. Maglen and C. Selby Smith, (Eds.) (1993) *The Economics of Education 1992*. Centre for the Economics of Education, Monash University. Australian Government Publishing Service Canberra, 105–114.

Gammage, P. (1999b) The Once and future child, a revised version of a paper presented at the University of Oulu, Finland, in May 1999.

Harrold, R. (1998) *Resources in Education*. Melbourne, Australia, ACER Press.

Manski in Market Approaches to Education Vouchers and School Choice by Elchanan Cohn 97

McKenzie P. Harrold R. & Sturman A. (1996) *Curriculum Provision in Rural Secondary Schools* ACER Monograph No. 48, ACER Victoria Australia

Monk, D.H., Brent, B.O. & Roellke, C.F. (1996) Teacher resource use within New York State secondary schools. *Developments in School Finance 1996*. National Centre for Educational Statistics, U.S. Department of Education [Online]. Available: <http://nces.ed.gov/pubs97/97535e.html> [2000, September 20].

Odden, A.R. & Picus, L.O. (1992) *School finance a policy perspective*. University of Southern California McGraw Hill Inc.

Odden A., Monk D., Nakib Y. & Picus L. (1995) The story of the education dollar. No academy awards and no fiscal smoking guns *Phi Delta Kappan* Oct 95 Vol 77 No.2 pp161-168

Wenglinsky, H. (1997) School district expenditures, school resources and student achievement: Modeling the production function analysis. *Developments in School Finance, 1997 – Does Money Matter?* National Centre for Educational Statistics, U.S. Department of Education [Online].

Available:  
<http://nces.ed.gov/pubs98/dev97/98212h.html#note20>  
[2000, September 20].

Figure 1: Class Size adjusting for unsupervised lessons

School Size	Average class size years 7-10	Average class size years 11-12	Class Size ratio	Contact hour adjustment - years 11 & 12	Adjusted Class Size ratio
Small	21.1	12.6	1.67	19.38	1.09
Medium	23.5	16.1	1.46	24.77	0.95
Large	24.5	18.1	1.35	27.85	0.88

Source: from McKenzie (1992, P.175) The contact hour adjustment simply multiplies the average class size for year 11 and 12 students by 1000 hours and divides by 650 hours.

Figure 2: Linking Inputs to Outputs

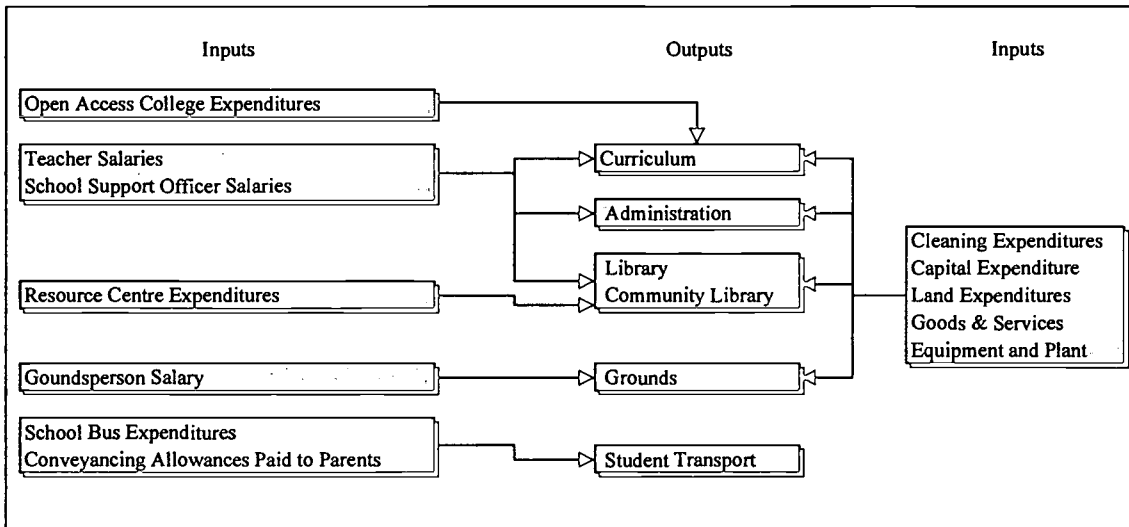


Figure 3: Calculation of Average Class Size by Different Methods

School Number	School	A - Average Class Size Weighting by No. of Classes	B- Average Class Size Weighting by Student Hours	Ratio of A:B
	Metropolitan	19.99	22.02	91%
	Country	14.98	20.84	72%
	All Schools	18.58	21.75	85%

BEST COPY AVAILABLE



**Figure 4: Comparison of Input Salaries**

	Metropolitan	Country	All Schools	Metropolitan	Country	All Schools
Teaching	\$10,796,811	\$3,597,676	\$14,394,487	80%	69%	77%
Administration & Leadership	\$1,905,828	\$1,047,749	\$2,953,577	14%	20%	16%
Library	\$449,848	\$257,070	\$706,918	3%	5%	4%
Grounds	\$131,273	\$143,176	\$274,450	1%	3%	1%
SSO	\$184,563	\$88,150	\$272,713	1%	2%	1%
Community Library	\$-	\$54,926	\$54,926	0%	1%	0%
<b>Total</b>	<b>\$13,468,324</b>	<b>\$5,188,747</b>	<b>\$18,657,071</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Figure 5: Comparison of Output Expenditures using All Resources and Salaries Only**

	All resources	Salary Resources Only	All resources	Salary Resources Only
Curriculum	\$ 21,472,780	\$15,815,225	74%	80%
Administration	\$ 5,081,944	\$ 2,953,577	18%	15%
Library	\$ 1,212,242	\$ 706,918	4%	4%
Student Transport	\$ 637,831	\$ -	2%	0%
Grounds	\$ 310,083	\$ 274,450	1%	1%
Community Library	\$ 121,506	\$ 54,926	0%	0%
Unallocated	\$ 41,220	\$ 9,220	0%	0%
<b>Total Recurrent Expenditure</b>	<b>\$ 28,877,607</b>	<b>\$19,814,316</b>	<b>100%</b>	<b>100%</b>

The differences are that salary expenditure tends to overstate the amount of resources allocated to curriculum delivery and support, and understate administration and transport. The above analysis is now examined for metropolitan (Figure 6) and country schools (Figure 7) separately.

**Figure 6: Output Analysis for Metropolitan Schools**

	All resources	Salary Resources Only	All resources	Salary Resources Only
Curriculum	\$14,475,589	\$10,972,154	78%	82%
Administration	\$3,218,709	\$1,905,828	17%	14%
Library	\$732,335	\$449,848	4%	3%
Student Transport	\$1,480	\$-	0%	0%
Grounds	\$157,123	\$131,273	1%	1%
Community Library	\$-	\$-	0%	0%
Unallocated	\$19,243	\$1,433	0%	0%
<b>Total Recurrent Expenditure</b>	<b>\$18,604,478</b>	<b>\$13,460,536</b>	<b>100%</b>	<b>100%</b>

Curriculum expenditures account for a greater percentage of total resources in metropolitan schools than for country schools. This is largely explained by student transport and community library expenditures accounting for 7% of country school resources.

**Figure 7: Output Analysis for Country Schools**

	All resources	Salary Resources Only	All resources	Salary Resources Only
Curriculum	\$6,997,192	\$4,843,071	68%	76%
Administration	\$1,863,236	\$1,047,749	18%	16%
Library	\$479,907	\$257,070	5%	4%
Student Transport	\$636,351	\$-	6%	0%
Grounds	\$152,960	\$143,176	1%	2%
Community Library	\$121,506	\$54,926	1%	1%
Unallocated	\$21,977	\$7,787	0%	0%
<b>Total Recurrent Expenditure</b>	<b>\$10,273,129</b>	<b>\$6,353,780</b>	<b>100%</b>	<b>100%</b>

Figure 8 shows the allocation of inputs to outputs on a per-student basis:

**Figure 9: Per-Student Allocations of Outputs - All Schools**

	All resources	Salary Resources Only
Curriculum	\$5,099	\$3,756
Administration	\$1,207	\$701
Library	\$288	\$168
Student Transport	\$151	\$-
Grounds	\$74	\$65
Community Library	\$29	\$13
Unallocated	\$10	\$2
<b>Total Recurrent Expenditure</b>	<b>\$6,858</b>	<b>\$4,705</b>
<b>Total less community Library</b>	<b>\$6,829</b>	<b>\$4,692</b>

**Figure 10: Per-Student Allocations of Outputs - Metropolitan Schools**

	All resources	Salary Resources Only
Curriculum	\$4,959	\$3,759
Administration	\$1,103	\$653
Library	\$251	\$154
Student Transport	\$1	\$-
Grounds	\$54	\$45
Community Library	\$-	\$-
Unallocated	\$7	\$0
<b>Total Recurrent Expenditure</b>	<b>\$6,374</b>	<b>\$4,611</b>
<b>Total less community Library</b>	<b>\$6,374</b>	<b>\$4,611</b>

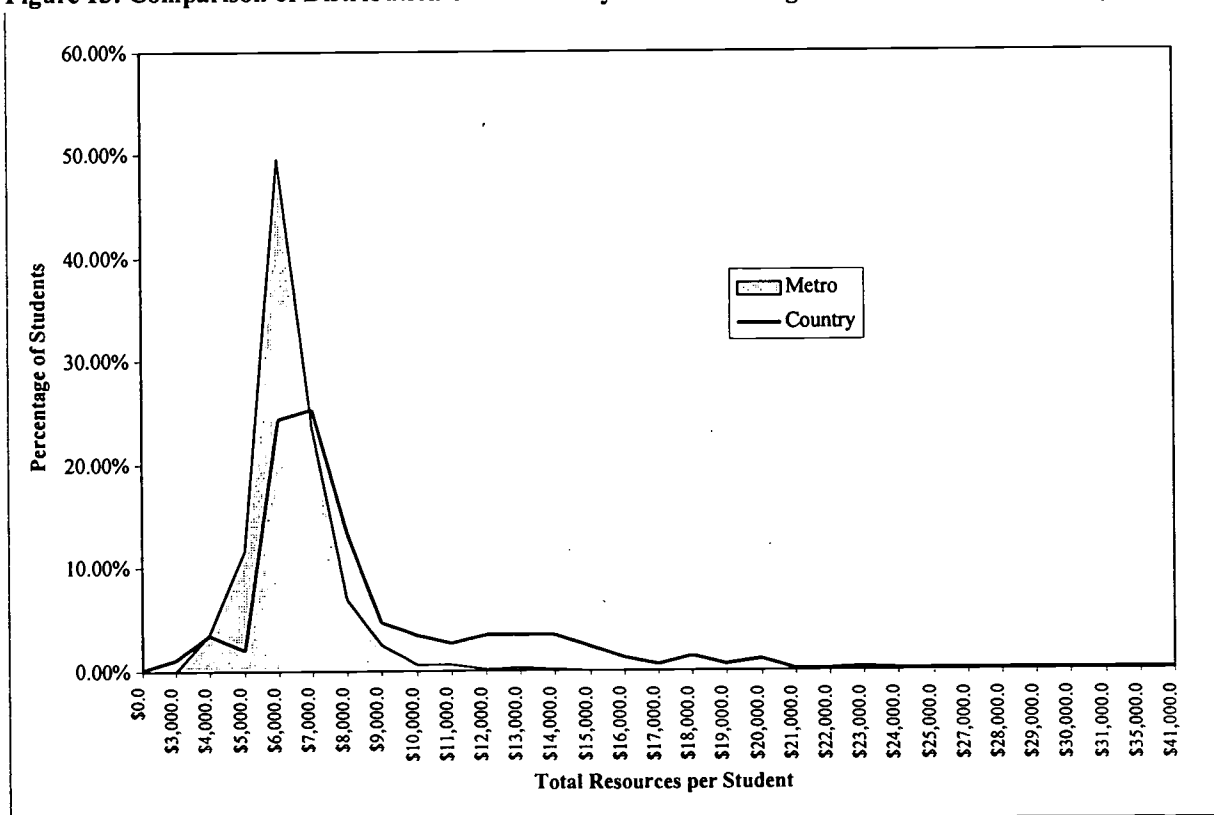
**Figure 11: Per-Student Allocations of Outputs - Country Schools**

	All resources	Salary Resources Only
Curriculum	\$5,416	\$3,749
Administration	\$1,442	\$811
Library	\$371	\$199
Student Transport	\$493	\$-
Grounds	\$118	\$111
Community Library	\$94	\$43
Unallocated	\$17	\$6
<b>Total Recurrent Expenditure</b>	<b>\$7,951</b>	<b>\$4,918</b>
<b>Total less community Library</b>	<b>\$7,845</b>	<b>\$4,875</b>

**Figure 12: Comparison of Additional per-Student Allocations for Country and Metropolitan Schools**

	All resources	Salaries
Curriculum	109%	100%
Administration	131%	124%
Library	148%	129%
Grounds	220%	246%
<b>Total Recurrent Expenditure</b>	<b>125%</b>	<b>107%</b>
<b>Total less community Library</b>	<b>123%</b>	<b>106%</b>

**Figure 13: Comparison of Distribution of Students by Resource Categories in Metro and Country Schools**



**Figure 14: Cost per Student by School and Year Level**

School	8	9	10	11&12	Sum 8-12
Country	\$ 7,465	\$ 7,972	\$ 8,396	\$ 10,434	\$ 8,768
Metro	\$ 6,068	\$ 6,119	\$ 6,341	\$ 6,748	\$ 6,367
Total	\$ 6,381	\$ 6,592	\$ 6,773	\$ 7,601	\$ 6,920
Country	100%	107%	112%	140%	117%
Metro	100%	101%	105%	111%	105%
Total	100%	103%	106%	119%	108%

**Figure 15: Comparison Between Secondary Year-level Funding Relativities**

Year Level	Implicit Corporate Resource Allocation	Case- Study Relativities All Schools	Case- Study Relativities Country Schools	Case- Study Relativities Metro Schools
8	100%	100%	100%	100%
9	100%	103%	107%	101%
10	100%	106%	112%	105%
11	218%	119%	140%	111%
12	218%	119%	140%	111%

U.S. Department of Education  
 Office of Educational Research and Improvement (OERI)  
 National Library of Education (NLE)  
 Educational Resources Information Center (ERIC)  
 ERIC REPRODUCTION RELEASE

I. Document Identification:

Title: *Issues Affecting Rural Communities (II)*  
 Author: *J.C. Montgomery & A.D. ~~Kitchener~~ Kitchenham (eds.)*  
 Corporate Source: *Malaspina University - College*  
 Publication Date: *JUNE, 2001*

II. Reproduction Release:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, Resources in Education (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please check one of the following three options and sign the release form.

*JCM* ✓ Level 1 - Permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g. electronic) and paper copy.

Level 2A - Permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only.

Level 2B - Permitting reproduction and dissemination in microfiche only.

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

Sign Here: "I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Signature: *J.C. Montgomery*

Position: *editor*

Printed Name:

*J.C. Montgomery*

Organization:

*Malaspina University College*

Address:

*900 Fifth St.  
Nanaimo BC Canada  
V9R 5S5*

Telephone No:

*(250) 741 2555*

Date:

*June 18, 01*

## III. Document Availability Information (from Non-ERIC Source):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:

*Rural Communities Research & Development Centre**Malaspina University College*

Address:

*900 Fifth St  
Nanaimo BC Canada V9R 5S5*

Price per copy:

*\$ 40.00 CAD*

Quantity price:

*~~\$~~ 37.00 7 100  
copies.*

## IV. Referral of ERIC to Copyright/Reproduction Rights Holder:

If the right to grant this reproduction release is held by someone other than the addressee, please complete the following:

Name:

Address:

## V. Attach this form to the document being submitted and send both to:

Velma Mitchell, Acquisitions Coordinator  
ERIC Clearinghouse on Rural Education and Small Schools  
P.O. Box 1348  
1031 Quarrier Street  
Charleston, WV 25325\_1348

Phone and electronic mail numbers:

800/624 9120 (Clearinghouse toll-free number)  
304/347-0487 (Clearinghouse FAX number)  
mitchelv@ael.org