

**MAKING THE GRADE:
BENCHMARKING PERFORMANCE
IN AUSTRALIAN SCHOOLING**

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Abstract

The Industry Commission review of service provision in school education has the potential to improve the quality of information available for the monitoring and reporting of school performance. If the Industry Commission review is adequately to address issues of school effectiveness, it should avoid the tendency of previous efficiency reviews to focus on financial data to the exclusion of data on student achievement. This paper suggests how the Industry Commission should approach this task, recognising the lack of comparative data available on the outcomes of Australian schooling.

Introduction

The recent decision by the Council of Australian Governments (COAG) to ask the Industry Commission to examine the efficiency of service provision in school education has thrown the spotlight of public accountability on Australian schools. In undertaking the review for COAG, the Industry Commission has been asked to produce a set of performance indicators which will enable comparisons to be made between Australia's eight government education systems (Dawkins 1993).

Public accountability is about "giving an answer for the way in which one has spent money, exercised power and control, mediated rights and used discretions vested by law in the public interest" (Waterford 1991). Around \$10 billion of taxpayers' resources are spent annually on government schooling, yet there is virtually no information on how effectively these resources are used by State and Territory Education Departments (South Australia 1994). While the Federal government provides about ten per cent of government schools funding under Section 96 of the Constitution, the Commonwealth Auditor-General has been prevented from conducting efficiency audits of this expenditure under the provisions of the *Audit Act 1901*. (Spedding 1993)

The lack of accountability for the Commonwealth's share of expenditure on school education has lent support within some areas of government to the suggestion that the Federal Government should withdraw from funding government schools (Coulton 1994). Under this proposal, the Federal Government would convert its Section 96 grants (currently paid by the Department of Employment, Education and Training) to untied Financial Assistance Grants (FAGS) allocated by the Commonwealth Grants Commission. The withdrawal of Commonwealth involvement in schools funding is likely to set back any further attempts to improve the quality of information available on the performance of Australian schools. With the removal of the Commonwealth's role as an "honest broker", there would be little incentive for State and Territory

education authorities to tackle issues of educational accountability on a national level.

The likelihood of the Industry Commission review achieving its objectives depends on the cooperation of State and Territory education authorities. State and Territory Education Ministers and their officials have to judge whether it is in their interests to cooperate with a review which may expose areas of poor performance within their administrations. On the other hand, their failure to cooperate is likely to result in the Industry Commission review proceeding on the basis of inadequate data which Commonwealth and State Treasuries could seize upon as an excuse to reduce budget outlays on schools.

The purpose of this paper is to suggest how the Industry Commission should approach the complex task of measuring school performance in order to demonstrate both the efficiency and effectiveness of Australian schooling.

The Purpose of Benchmarking

The Industry Commission's brief differs greatly from previous cooperative activities initiated in the name of accountability by Education Ministers (such as the national curriculum frameworks) because it aims to produce benchmarks for schools expenditure. Benchmarking is a practice borrowed from the private sector where it refers to a company's examination of the costs, productivity and organisational features of more successful rival companies in order to define principles of best practice which can be used to improve its own performance. In the public sector, benchmarking is a mechanism through which governments can evaluate the efficiency of State-run monopolies by making comparisons between the performance of comparable organisations (Scales 1993).

As school education is funded largely from State and Territory budget allocations, government schools are seen to be part of State-owned monopolies which have little incentive to contain costs. By making public comparisons between each State's expenditure on schooling, the COAG members expect to introduce an element of

competition into Australian education which will drive down costs. This type of "yardstick competition" was recently introduced for Government Trading Enterprises by an Industry Commission review which developed performance indicators for many State-owned utilities such as electricity generation, and water supply (Steering Committee 1993).

A recent EPAC report estimated that budget cuts of over \$1.4 billion could be made by State governments if they were able to adopt "the Australian lowest cost practice" for providing school education services (Clare and Johnston 1993, p.64). The Industry Commission review was probably initiated by COAG in the expectation that it would produce benchmarks of expenditure which could be used by both Commonwealth and State Treasuries to force reductions in school education budgets. The extent to which the final report is used in this way will depend on the quality and breadth of its analysis of issues relating to school performance.

Efficiency and Effectiveness in Measuring School Performance

Education systems receive about 30% of their funding from the Commonwealth Grants Commission via State Treasuries, 10% of their funding from Section 96 grants paid by DEET to State Education Departments, and the remainder from State revenues. The Grants Commission allocations are based on a global fiscal equalisation formula, and Section 96 Grants are determined on the basis of a uniform per capita grant multiplied by the number of students in the system.

School education is one of the largest financial outlays of all States and Territories, yet its funding levels are determined entirely by inputs, ie. the costs of running the education system. Input-driven funding models require the collection of accurate financial data on schools expenditure but not data on educational outcomes. As schools funding in Australia has always been determined by costs rather than outcomes, expenditure data has been deemed sufficient to meet public accountability requirements at both the State and the Federal level. However, the provision of data on educational

outcomes is essential if the Industry Commission is to establish benchmarks of system performance which reflect the effectiveness as well as the efficiency of schooling. If data on educational outcomes is not available, the Industry Commission review is likely to repeat the experience of other public sector experiments with performance indicators, whereby financial data is emphasised to the exclusion of non-financial performance information (Painter 1988; Alford 1991; MAB-MIAC 1992).

An efficiency audit which is based on financial data alone produces a distorted picture of a system's performance because it reflects the efficiency rather than the effectiveness of any given organisation. *In practice, efficiency is irrelevant to the performance of any organisation unless it can be demonstrated that the organisation is also effective in carrying out its charter, or achieving its goals.* As Peter Drucker points out in regard to management and performance,

"Effectiveness is the foundation of success - efficiency is a minimum condition for survival after success has been achieved. Efficiency is concerned with doing things right. Effectiveness is doing the right things" (Drucker 1974, p 45).

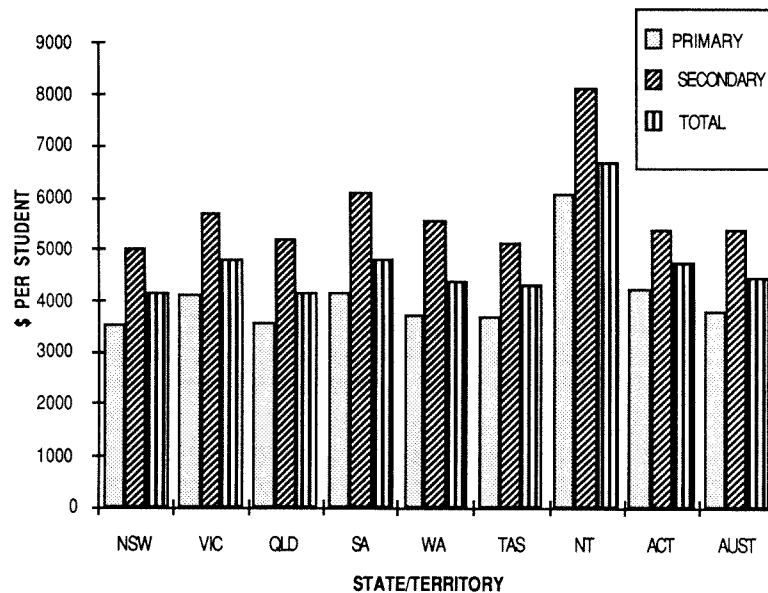
In a service industry like schooling, where effectiveness is reflected in students' educational achievements, financial data does not provide any indication of the performance of schools or systems. If the Industry Commission uses financial data to develop its indicators in isolation from information about school effectiveness, the most likely implication will be that cost cutting will be possible by reducing all States and Territories expenditure to the benchmark set by the lowest-spending State. Reductions in expenditure will inevitably be recommended if no information is available about the impact of budget cuts on educational performance.

Financial information has dominated recent reports which have recommended reductions in school education expenditure to benchmark levels (Clare and Johnston 1993, South Australia 1994). These reports exhibit the common feature of comparing the costs of

schooling between States and Territories without any accompanying data comparing educational outcomes.

An example of the type of efficiency indicator used by these reports is displayed in Figure 1, ie. the simple input: output ratio of average cost per student.

Figure 1. Expenditure per student in Government Schools, by level of Education, State and Territory, 1991-1992 (\$ per student)



Source: AEC (1993) *National Report on Schooling in Australia 1992*, Statistical Annex Table 19.

The data in Figure 1 could be interpreted as demonstrating that the New South Wales education system is the most efficient because it costs the least. However, to draw such a conclusion is not valid without information on New South Wales' relative effectiveness. Without effectiveness data we are not able to judge whether New South Wales' cost-efficiency is obtained at the price of lower educational performance. For example, as costs rise with years of schooling, New South Wales may manipulate such a simple indicator

by discouraging students from continuing in school through to Year twelve.

The South Australian Commission of Audit employed a similarly one-sided approach in its recent review of State government finances which recommended reductions in schools expenditure (South Australia 1994). After comparing South Australia's average student:teacher ratio with the national average, the Audit Commission recommended that 931 teachers should be shed from the South Australian education system, saving \$40 million per annum (South Australia 1994, Rec. 12.19). The report also noted that if South Australia's student:teacher ratio was reduced to the then New South Wales benchmark, 2000 teaching positions could be abolished in the interests of improved efficiency. (South Australia 1994, Section 12.5)

In the absence of comparative data on educational outcomes, the South Australian Audit Commission assumed a uniform level of educational effectiveness among all Australian education systems. While this may well be the case, it is equally possible that higher levels of educational expenditure produce higher levels of educational success. However, given the absence of data on educational outcomes, it is impossible for the relevant education authorities to argue that South Australia's higher expenditure reflects superior educational performance - a point made by the South Australian Commission of Audit. Increasingly, the ability of State education authorities to resist budget cuts will depend on their capacity to demonstrate the link between expenditure on schooling and school performance.

If State and Territory Education Ministers see that their interests are served by producing data on education outcomes, the Industry Commission review will be the first activity ever sponsored by all State and Territory Governments to develop a set of effectiveness indicators for Australian schools. If the education authorities prove unwilling to provide comparative data on education outcomes to the Industry Commission, the COAG review is likely to produce the same uni-dimensional analysis - and with the same funding implications - as the South Australian Commission of Audit.

Obstacles to Collecting Data on School Effectiveness

Producing indicators of educational effectiveness is a major challenge to State Education Ministers and their officials, as it inevitably involves interstate comparisons being made between schools and system's performance. Such approaches to comparative educational measurement have been resisted by education authorities in the past.

In 1989, for example, all State and Territory Education Ministers agreed to produce an annual National Report on Schooling which was intended to "inform the citizens of Australia about ... the performance of our schools" (AEC 1989) and to fulfil accountability requirements in respect of Commonwealth General Recurrent Grants for schools. The National Report has been produced every year since 1990. However, States and Territories have the right of veto over any information about their own system published in it. The National Report on Schooling therefore presents glowing accounts of every State and Territory's achievements, but contains no comparative data on educational outcomes.

The National Report's Statistical Annex is sixty-four pages long, and at least 75 per cent of its statistical tables convey information about costs, such as data on income and expenditure, staffing levels, student numbers and so on (AEC 1993). Although comprehensive, the expenditure statistics are highly aggregated and convey little information about the distribution of resources within systems. These financial statistics were the primary source of data used by the EPAC report and the South Australian Commission of Audit to suggest that schools expenditure could be reduced to benchmark levels (Clare and Johnston 1993, South Australia 1994).

The only data in the National Report relating to system performance are retention and participation statistics. Retention and participation statistics are not effectiveness indicators because they do not contain information about the quality of student learning. Nevertheless, as retention statistics reflect progress towards a specific policy goal of government they do have some use in

performance analysis. In the National Report, however, the retention and participation statistics for each State have been aggregated to limit the range of comparisons which could be made between States' and Territories' performance in this area of policy. For example, a table comparing Year 12 completion rates for students of high and low socio-economic status presents figures for Australia as a whole but does not include the rates for each group by State and Territory, even though it would have been necessary to compile State-level statistics in order to aggregate the national figures (AEC 1993, Table 11a).

Other statistics in the report which relate to educational effectiveness are aggregated nationally to prevent State by State comparisons, such as data on the destinations of school leavers and the number and proportion of Year 12 students enrolled in tertiary-accredited subjects (AEC 1993, Tables 13, 14, 15).

Incomplete reporting of performance information is a phenomenon so familiar to government auditors that one commentator has even called for a strict regulatory framework governing the reporting of performance information for public accountability (Clark 1994). However, given the ease with which statistics are manipulated, such a framework is unlikely to eliminate all the possible loopholes likely to be employed when government authorities lack the political will to expose the performance of their organisations to public scrutiny.

It is possible that the threat of invidious comparisons based on financial information alone will provide sufficient incentive for State and Territory education authorities to produce data on educational outcomes for the Industry Commission. If States and Territories are willing to cooperate with this exercise, the difficult task remaining will be to apply a performance indicators framework to the complex issue of measuring school effectiveness.

A Performance Indicators Framework for Schooling

Developing performance indicators for schooling is made difficult by the fact that school education is not a simple production process.

Industries which resemble a simple production process exist to produce a particular commodity, like electricity, and the processes involved in producing the desired outcome are easily identified. The production of school education, on the other hand, has multiple objectives, multiple inputs and outputs and multiple outcomes. Moreover, the way in which education's many inputs (eg. teachers, classrooms, students etc.) work to produce educational outcomes, (ie. the education production function) remains the subject of considerable dispute (see Cohn & Geske 1990, ch. 7).

The complexity of education production should not preclude the development of performance indicators for schooling. Nevertheless it is important to acknowledge the limitations of a performance indicators framework for evaluating school performance. Failure to recognise these limitations is likely to result in distortions in the practice of teaching and learning in schools.

A Model of School Education Production

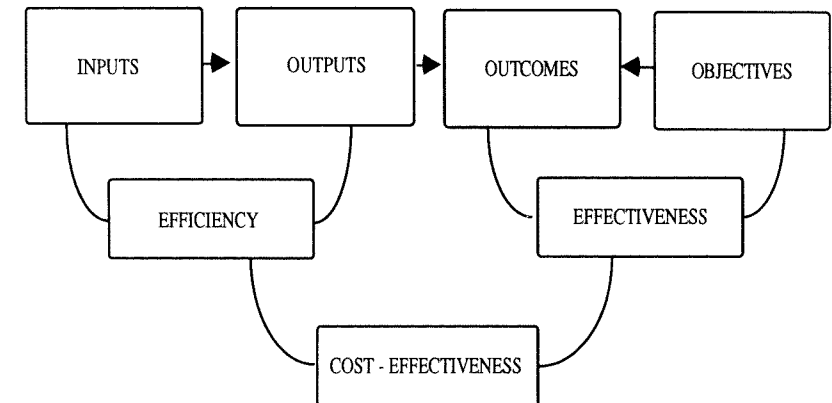
To develop performance measures for Australian schools, the Industry Commission will need to develop a model of education production which identifies the inputs, outputs, outcomes, and objectives of schooling. A useful starting point might be to employ a generic input-output model (see Figure 2) to define the important elements in each stage of school education production.

The model in Figure 2 is based largely on the input-output model adapted by the Federal Department of Finance for use in public sector performance evaluations (DOF 1986). Simple input-output models were originally developed to monitor performance in the private sector. The DOF model improves on simplistic input-output models by emphasising the importance of measuring effectiveness in terms of outcomes. The model also demonstrates the primary importance of identifying system or program objectives, as a prerequisite to evaluating effectiveness.

In spite of the emphasis placed on effectiveness indicators by government authorities, this issue remains a problem for many sectors of government activity. A recent review by the Department

of Finance of the quality of performance information provided by Federal Government Departments observed that "for all types of program, outputs rather than outcomes are reported, reflecting a continuing preponderance of process-oriented objectives". (MAB-MIAC, 1992 p.353)

Figure 2. An input-output model



Definitions

Inputs : are any resource which is used in the production process, usually expressed in terms of a monetary value.

Outputs : are the product produced by a system or program.

Outcomes : are the impact of the whole production process on the system's clients.

A performance indicator : is any information about the performance of an enterprise or system of management.

An efficiency indicator : refers to the ratio of inputs to outputs in a production process, usually expressed in terms of a cost per unit of output (eg average cost per student). An *efficient* system is one which minimises the cost (input) per unit of output.

An *effectiveness indicator* : measures the extent of success in achieving the objectives of the system or program. An *effective* program is one which the program's outcomes fulfil the program's objectives.

Cost - Effectiveness : is the unit cost of the program outcome.

A possible cause of this deficiency is the assumption that quantitative information is more valid than qualitative assessments of program or system performance. A further possible explanation is the difficulty of defining clear objectives for Government programs, given the political, legal and historical constraints within which public servants operate (Alford 1991). Another reason could be the "stakeholder effect" where government officials are reluctant to develop systems which may expose areas of poor performance, particularly if funding decisions are likely to be made on the basis of the information provided (Murnane 1987).

These difficulties should not, however, be acceptable excuses for ignoring public accountability obligations, in schooling or any other area of government. As one parliamentary committee summarised the issue:

"The performance of many programs can only be measured in subjective, qualitative terms. The Committee presumes that all program managers must have some notion of whether they are doing well or badly, some standard by which they can say they are doing the job they have set out to do as reflected in the objectives of their particular programs. All that the Parliament requires is that these sorts of measures should be set down so that sensible judgements can be made about whether programs are meeting their objectives." (Senate Estimates Committee E, 1989, p.2 cited in MAB-MIAC 1992)

One lesson which has become clear from public sector experiments with performance evaluation is the importance of identifying clearly the objectives of a system or program, even those which

appear to defy quantitative measurement, as an essential precursor to developing performance indicators.

The Objectives of Australian Schooling

School Education serves a range of purposes, some of which overlap with other government programs and services. While school performance is usually identified with students' academic success, all schools, even those which place great store by academic achievement, insist that the purpose of education is to develop well-rounded individuals capable of making a contribution to Australian society. This view is reflected in a national statement of objectives for schooling, endorsed by Australia's eight State and Territory Education Ministers in 1989. The "Common and Agreed National Goals for Schooling in Australia" (reproduced in Appendix 1) are a useful starting point for developing performance indicators because they encompass a very broad range of educational objectives and they have received nationwide endorsement.

As a broad statement designed to encompass all possible objectives for schooling, the National Goals are too unstructured to incorporate into an input-output model. It is possible to summarise the goals into four main areas of educational objectives which would provide the basic structure for assessing school and system performance. Based on the national goals, an Australian performance indicators framework for schools would need to produce measures of students' progress towards the following objectives:

1. Acquisition of functional literacy and vocational skills
2. Acquisition of discipline-based ("academic") knowledge
3. Attainment of personal maturity, physical health, confidence and social skills.
4. Shared values and an appreciation of Australian society, economy and culture.

Instruments for Measuring Education Outcomes

Attempts to measure student outcomes in any of the above four fields will invite controversy within sections of the education

community. Such controversy is inevitable, given the need to select a limited number of instruments to measure outcomes in each field.

In the field of "functional literacy", for example, there is widespread disagreement among experts over the best measure to assess literacy outcomes (DEET 1991 Ch. 3; House of Representatives 1993 Ch. 4). Heated arguments will also arise over the issue of assessing vocational skills, given the difficulties of definition and the extent to which some critics question whether these skills can be measured at all.

The ever-present debate in the media about external examinations for Year 12 highlights the permanent controversy over appropriate forms of assessment of discipline-based knowledge identified in Field 2. However, as all States and Territories implement some form of public assessment of Year 12, valuable data already exist to enable assessment of performance in Field 2 within a performance indicators framework.

Psychologists have developed a range of instruments for assessing the aspects of personal development included in Field 3; however, the quality of the data will be affected by the method in which it is collected. It is unlikely that attempts to measure outcomes in Field 3 will avoid becoming embroiled in the controversy within the discipline of psychology over research methods and validation of results.

Assessing achievement in Field 4 is probably the most difficult of all, given the reluctance of any government to define acceptable "shared values" or desirable qualities of citizenship. A recent Senate Committee inquiry into "Education for Active Citizenship" relied on quiz-type questions of the "Who is the Prime Minister?" variety to assess the extent to which Australian children appreciated Australia's political and social context (Senate Standing Committee 1989)

These difficulties in arriving at definitive measures of the outcomes of schooling reinforce the need for caution in the selection and reporting of performance information. The key factor which should

be emphasised in developing performance indicators is that no statistic can convey everything about the performance of a school or system. The usefulness of performance indicators is simply to provide an *indication* of where a system appears to be performing well or poorly, and not to provide a *summation* of a system's or program's achievements.

Students: The Most Significant Input

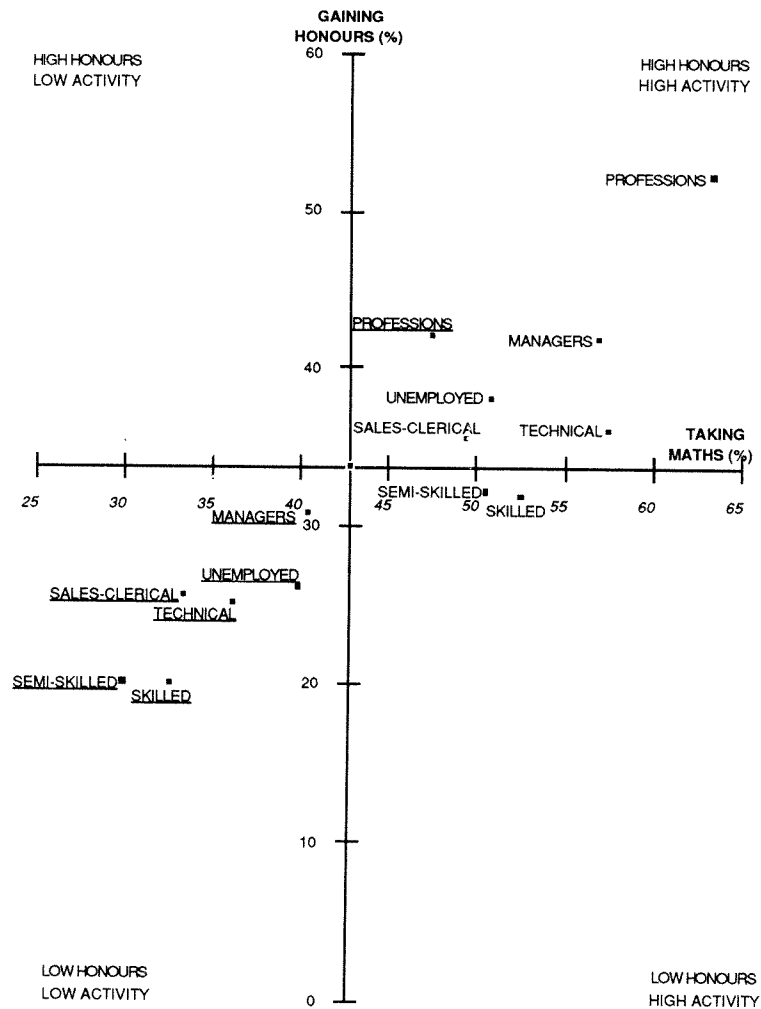
To obtain an accurate measure of school effectiveness, it is necessary to take into account one of the most significant "inputs" into the production process, namely the prior educational endowment of the student. Research over a long period of time has established that the nature of this endowment is dictated largely by social background variables such as family income and parents' occupation (see Cohn and Geske 1990, ch. 7).

The variable of social background, usually measured by a proxy index of socio-economic status (SES) is significantly correlated with students' educational performance, yet it is a factor over which most public schools have no control. As the aim of developing performance indicators is to assess the effectiveness with which schools *use the resources within their control* to produce good educational outcomes, schools serving students from different social backgrounds should not be judged by the same performance criteria.

A school in the Western suburbs of Sydney, for example, which improves the participation and pass rates in mathematics of its students from a low base, would have added more value to its clients than a school in the Eastern suburbs which simply maintained the already high achievement rates of students from professional family backgrounds. However, if social background factors are not taken into account in measuring student outcomes, the Eastern suburbs school would be judged more effective. An illustration of the impact of background characteristics on educational outcomes in mathematics is provided by the work of Professor Richard Teese of Melbourne University and one of his diagrams is reproduced in Figure 3.

Figure 3. Mathematics Enrolment Rates and Honours Rates by Student's Occupational Background and Gender, Victoria 1990

(Female values are underlined)



Source: Teese, R. "Evaluating School Systems: Provider versus Client Perspectives on Performance" Paper presented to Schools Council Conference, *Public Investment in School Education: Costs and Outcomes*, Canberra March 1994

Figure 3 illustrates two measures of educational outcomes in mathematics for students from different social backgrounds. First, it plots the proportion of Year 12 students from different social backgrounds taking mathematics as a subject in Year 12 (on the x axis) and second, it illustrates the relative educational success of the various social groups by measuring the proportion obtaining honours grades in the subject (y axis). The plot demonstrates that male students from professional families participate in maths at a much higher rate (63%) than females whose parents are semi-skilled (30%), and that such males earn honours grades at over double the rate (52%) of females from semi-skilled backgrounds (20%).

Data for sub-groups of the population such as that presented in Figure 3 is the type of information needed for a performance indicator which measures effectiveness in terms of the extent to which a school or system "adds value" to its clients.

Reporting Performance Information

The plot developed by Professor Teese which was reproduced in Figure 3 above is an illustration of a performance indicator which could be employed by the Industry Commission review. It conveys information about both the participation and the achievement of population sub-groups in the acquisition of discipline-based knowledge (Field 2). To establish benchmarks, the relevant data for each State and Territory would be plotted on the same chart. To demonstrate progress over time, several years' data points for individual States could be plotted on the same chart (ie. movement by a sub-group towards the North-Eastern corner of the chart would represent an improvement).

This type of information would contribute to one small element of a performance indicators framework for schooling - the element relating to the acquisition of discipline-based knowledge. While discipline-based knowledge can be measured in a range of different ways, Year 12 results are a convenient data source because they are collected annually and are resistant to manipulation by schools or

systems. Institutional data sources of this kind should be accessed as much as possible to minimise the costs of producing performance indicators, especially as most of the other outcomes (ie. for Fields 1, 3 and 4) would need to be measured through the more expensive mechanism of sample surveys.

There are many ways of presenting performance information, of which Figure 3 provides merely one example. The most important feature of any indicators framework is that statistics are reported for separate sub-groups of the population in a consistent way which illustrate changes over time and differences between States and Territories. (Clark 1994). Aggregated indicators of the type presented in the National Report on Schooling, provide no information about the relative performance of different student groups and can disguise significant changes in patterns of educational performance.

For example, it is possible that improvements on some indicators will occur only as a result of gains made by certain groups while other groups make no progress or fall behind. The disaggregation or decomposition of data series enables the distributional effects of policies to be examined, and provides a basis for comparing "like with like" when examining the performance of different schools and systems.

This applies to indicators of efficiency as well as effectiveness. Aggregated financial data - such as that reflected in the input-output ratio of average cost per student - result in poor quality benchmarks because they offer no information about the distribution of resources to schools and students. If data on education outcomes is produced, disaggregated financial information would make it possible to draw links between levels of educational expenditure and school effectiveness. Efficiency indicators should therefore illustrate the distribution of resources within systems if they are to assist policy makers in making judgements about the most cost-effective means of producing education outcomes.

The Potential Misuse of Performance Indicators

Given the complexity of the education production process and the multiplicity of inputs and outcomes, it is important to exercise caution in the selection and publication of performance information. Simplifying education production to the extent necessary to compare educational outcomes by means of a few salient indicators runs the risk of ignoring significant areas of school performance and conveying misleading messages about what is important in schooling.

For example, in "high stakes" testing environments, where financial decisions are made on the basis of test results, practitioners are likely to distort their behaviour in order to meet the demands of the indicator to the detriment of their real job. This phenomenon, called "goal-displacement activity" tends to occur in any workplace where a limited range of performance indicators is used as a basis for decision-making, rather than as a starting point for investigation of policy issues (Winston 1994). In schooling, the most common distortion is to "teach to the test", or to drill students in test-taking skills, although in extreme cases, some students are not allowed to sit the test or cheating is encouraged to ensure that test results are high (Paris *et.al.* 1991).

Such activities are not only unproductive, but they affect the validity of test results, and undermine their usefulness as indicators of performance.

"High stakes" testing is most likely to occur in education systems when a narrow statistical indicator measuring only cognitive aspects of school performance (ie. basic skills acquisition) assumes the unwarranted status of an evaluation tool. A survey of teachers in a high stakes testing environment in the United States revealed a widespread belief that the State-mandated Iowa Test of Basic Skills was "routinely inappropriately used to evaluate administrators, teachers, and schools with quite harmful effects" (Smith 1991). Examples of the misuse of test results included abandoning curriculum packages and questioning the competence of teachers on

the basis of one year's results, and making invalid comparisons between schools serving different client groups (Smith 1991).

To guard against the creation of a "high stakes" testing environment, the Industry Commission review must ensure that:

- effectiveness indicators are developed which reflect the wide spectrum of objectives for education, not just cognitive outcomes;
- indicators compare "like with like" by reporting performance information for different sub-groups of the population; and
- the published report conveys the limitations of performance indicators for policy decisions and emphasises the need for qualitative investigations of policy issues which are raised by the statistics.

The challenge for those developing performance indicators for schools is to recognise the limitations of simple statistics as an accountability instrument and to guard against the misuse of indicators by the careful selection, detailed analysis and sensitive reporting of performance information.

Conclusion

The primary purpose of the Industry Commission review is to produce efficiency indicators which could be used to influence funding decisions at the State and Federal levels. If the review is successful in developing indicators of both effectiveness and efficiency for schools, policy makers may have a better understanding of the links between resource outlays and student outcomes in education. The quality of policy debate about schools funding issues is also likely to improve.

While the potential of performance indicators to enhance public accountability for schooling has yet to be realised, the demand for improved monitoring of school performance is unlikely to disappear from the public sector agenda. It would be ironic if the driving

force behind the Industry Commission review, namely the Federal Government, was to decide that the goal of improving public sector accountability was insufficient justification for continuing the Commonwealth's involvement in schooling.

APPENDIX 1.

COMMON AND AGREED NATIONAL GOALS FOR SCHOOLING
IN AUSTRALIA

- 1 To provide an excellent education for all young people, being one which develops their talents and capacities to full potential, and is relevant to the social, cultural and economic needs of the nation.
- 2 To enable all students to achieve high standards of learning and to develop self-confidence, optimism, high self-esteem, respect for others, and achievement of personal excellence.
- 3 To promote equality of education opportunities, and to provide for groups with special learning requirements.
- 4 To respond to the current and emerging economic and social needs of the nation, and to provide those skills which will allow students maximum flexibility and adaptability in their future employment and other aspects of life.
- 5 To provide a foundation for further education and training, in terms of knowledge and skills, respect for learning and positive attitudes for life-long education.
- 6 To develop in students:
 - a the skills of English literacy, including skills in listening, speaking, reading and writing;
 - b skills of numeracy, and other mathematical skills;
 - c skills of analysis and problem solving;
 - d skills of information processing and computing;
 - e an understanding of the role of science and technology in society, together with scientific and technological skills;

- f a knowledge and appreciation of Australia's historical and geographic context;
 - g a knowledge of languages other than English;
 - h an appreciation and understanding of, and confidence to participate in, the creative arts;
 - i an understanding of, and concern for, balanced development and the global environment;
 - j a capacity to exercise judgement in matters of morality, ethics and social justice.
- 7 To develop knowledge, skills, attitudes and values which will enable students to participate as active and informed citizens in our democratic Australian society within an international context.
 - 8 To provide students with an understanding and respect for our cultural heritage including the particular cultural background of Aboriginal and ethnic groups.
 - 9 To provide for the physical development and personal health and fitness of students, and for the creative use of leisure time.
 - 10 To provide appropriate career education and knowledge of the world of work, including an understanding of the nature and place of work in our society.

REFERENCES

- Alford, John (1991). "Can performance control promote public sector efficiency, effectiveness and quality?", Paper presented to the *National Conference on Improving Public Sector Management*, Griffith University Brisbane July. Mimeo.
- Australian Education Council (1989) *Hobart Declaration on Schooling*
- Australian Education Council (1993) *National Report on Schooling in Australia 1992. Statistical Annex*
- Australian Education Council (1989) "Common and Agreed National Goals for Schooling in Australia" cited in AEC, *National Report on Schooling in Australia 1991*, p. 17.
- Clare, R and Johnston, K (1993) *Education and Training in the 1990s*. EPAC Background Paper No. 3. Canberra: AGPS. p 64.
- Clark, Colin (1994) "A framework for the external reporting of performance" Paper presented to *The 1994 Annual Public Sector Accounting and Financial Management Conference, Sydney, 30-31 March*
- Cohn, E. and Geske, T.G. (1990) *The Economics of Education*, 3rd Edition. London: Pergamon Press.
- Coultan, M. "Fahey seeks State Powers Shake-up", *Sydney Morning Herald*, 21 July 1994, p.4.
- Dawkins, J S. (1993) *Speech to the Metal Trades Industry Association*, 25 October. Mss.
- Department of Employment, Education and Training (1991) *Australia's Language. The Australian Language and Literacy Policy. Companion Volume to the Policy Information Paper*. Canberra: AGPS

- Department of Finance, (1985) *Program Budgeting Issues: No. 5 Indicators of Performance*. Canberra: DoF, Mimeo.
- Department of Finance (1986) *Performance Indicators: A Workshop Manual*. Canberra: DoF, Mimeo.
- Department of Finance (1990) "Developing and Disciplining the Use of Performance Information", Paper by Resources Management Improvement Branch, DOF September. Mss.
- Drucker, P (1974) *Management*. London: Pan
- Hanushek, E. A (1986) "The Economics of Schooling: production and efficiency in public schools" *Journal of Economics Literature*, 24(3) pp1141-1177.
- Hanushek, E. A (1989) "The Impact of Differential Expenditures on School Performance", *Educational Researcher* May18(4) pp. 45-51.
- House of Representatives Standing Committee on Employment, Education and Training (1993) *The Literacy Challenge*. Canberra: AGPS.
- House of Representatives Standing Committee on Finance and Public Administration (1990) *Not Dollars Alone*. Canberra: AGPS.
- MAB-MIAC (1992) Taskforce on Management Improvement. *The Australian Public Service Reformed. An evaluation of a decade of Management Reform*. Canberra: AGPS.
- Marginson, S (1993) *Education and Public Policy in Australia*. Sydney: Cambridge University Press
- Murnane, R. J. (1987) "Improving Education Indicators and Economic Indicators: The Same Problems?" *Educational Evaluation and Policy Analysis*, Summer 9(2) pp. 101-116.
- Painter, M. (1988) "Public Management: Fad or Fallacy?" *Australian Journal of Public Administration* 47(1) pp.1-3.

Paris, S.G., Lawton, T.A., Turner, J.C., & Roth, J.L. (1991) "A Developmental Perspective on Standardized Achievement Testing" *Educational Researcher* June-July 20(5) pp. 12-20.

Scales, B. (1993) "Lifting the Veil on GTEs", *Directions in Government*, September pp. 17-21.

Senate Standing Committee on Employment, Education and Training (1989) *Education for Active Citizenship in Australian Schools and Youth Organisations*. Canberra: AGPS

Smith, M.L. (1991) "Put to the Test: The Effects of External Testing on Teachers", *Educational Researcher* June-July 20(5) pp8-11.

South Australia (1994) Commission of Audit *Charting the Way Forward. Improving Public Sector Performance*. Report of the South Australian Commission of Audit, April. Adelaide: Government Printer.

Spedding, D. (1993) *The Auditor-General Report No. 6 1993-94. An Audit Commentary on Aspects of Commonwealth-State Agreements* Canberra: AGPS.

Steering Committee on National Performance Monitoring of Government Trading Enterprises (1993) *Government Trading Enterprises Performance Indicators 1987-88 to 1991-92*. Canberra: Industry Commission.

Teese, R. (1994) "Evaluating School Systems: Provider versus Client Perspectives on Performance" Paper presented to Schools Council Conference, *Public Investment in School Education: Costs and Outcomes*, Canberra March.

Waterford, J. (1991) "A Bottom Line on Public Service Accountability", *Australian Journal of Public Administration*, 50(3) September, pp 414-417.

Winston, J. A (1994) "Adjusted Performance Indicators to Improve Performance Information" Draft Discussion Paper presented to *The 1994 Annual Public Sector Accounting and Financial Management Conference*, Sydney, 30-31 March

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