The Contribution of Catholic Schools to the Victorian Economy and Community

Report to the Catholic Education Commission of Victoria

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Foreword

I am pleased to present this research report, *The Contribution of Catholic Schools to the Victorian Economy and Community,* on behalf of the Catholic Education Commission of Victoria (CECV).

The research was commissioned in response to the Victorian Treasurer, the Hon. John Brumby's suggestion in mid 2003, that Catholic education demonstrate the contribution it makes to the well-being of the Victorian community and the economy. This was in the context of a discussion about the resourcing needs of Victorian Catholic schools. The CECV highlighted the long-standing and escalating concern amongst Catholic school communities about diminishing resources from the State Government since 1992. This stands in contrast to the record of the Australian Government which has progressively improved the funding of non-government schools as a proportion of the costs of educating a student in a government school. For the quadrennium 2005–2008, Victorian Catholic schools will receive an additional $116 million from the Australian Government.

The research is in the relatively new domain of social capital and its nexus with human capital. The intellectual journey brought senior Catholic education personnel into dialogue with colleagues in the Organisation for Economic Co-operation and Development (OECD), the World Bank and Harvard University. We commissioned a team of researchers at Victoria University under the leadership of Professor Peter Sheehan to undertake empirical analysis. While retaining academic independence, they probed the funding, operation and performance of Catholic schools, at the same time as unravelling the ecclesial and political environment in which they operate.

Catholic schools in Victoria have proven over successive generations that they play a deliberate and vital role in the creation of a community that is highly educated, skilled and cultured. They continue to give priority to activities involving active community service and issues of social justice, and they explicitly educate students for engagement in civic and public life while attending to their intellectual and faith development. High expectations and priority are placed on service to the community, and a firm commitment is made to nurturing school communities that not only encourage and celebrate intellectual achievement and academic excellence but also participation, leadership and achievement in other fields – sports, the arts, citizenship activities.

Catholic schools also strongly recognise their responsibility to facilitate and support the development of communities of people – students, families, staff – who share in and support the growth and well-being of one another.

This report provides strong evidence that Catholic schools are community providers of a public service. Catholic schools are by nature community schools, evidenced by their socio-economic spread, coverage of ethnic groups and geographic span. They contribute to the achievement of public goals of excellence and equity through a cost effective service. The study shows that after taking account of the family background of students, Catholic schools achieve better than average educational outcomes on a range of measures.

In addition to the benefits from better than average educational outcomes at lower costs, Victorian Catholic schools generated a net saving to the Australian community in 1999–2000 of about $440 million per annum, or about $2,450 per annum per student enrolled. For the Victorian Government, which would otherwise bear most of the costs of educating students now in Catholic schools, the net saving is greater. It is argued that there is a powerful case for a coordinated program to achieve the public goals of excellence and equity for all schools. Such a program includes a new agreement about the funding of Catholic schools, based on this shared commitment.

The CECV looks forward to ongoing dialogue with fellow educators and policymakers on the way forward to ensure quality education provision for all Victorian students irrespective of the schooling sector they attend. We envision an education future which nurtures the capabilities and aspirations of individual students, maintains the robustness of Australia's democratic institutions and strengthens the nation's capacity to engage in local, global, political and economic initiatives.

Susan Pascoe
Executive Director
Catholic Education Commission of Victoria

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Executive Summary

The emphasis in the Victorian Education Act of 1872 on education as 'free, compulsory and secular' was driven by the belief that education, and equal access to that education, was vital for the life of the colony, and that public education needed to be secular, to preserve its quality, objectivity and accessibility. In the knowledge-based economy of today the importance of education, and of equal access across social groups, is of enhanced importance. But religious schools have shown that they need not be socially divisive, that they can provide a rigorous, high quality education and that their graduates can contribute strongly to the community. The central public issues remain excellence in, and access to, education.

There is considerable evidence that school education in Australia, and in Victoria, is of high quality by international standards. But the level of social dispersion within our education system is also high by international standards and perhaps increasing. Indeed our work on variations within Census Collector Districts suggests that the level of dispersion may be a good deal greater than current measures suggest. Achieving more equitable outcomes, by improving performance at lower socio-economic levels, would greatly enhance our overall position as a knowledge economy.

The concept of social capital – resources embedded in social relations that can be accessed and used by individuals – plays a key role in this report. Educationally relevant social capital includes, for example, traditions and values; intellectual and cultural experiences shaped within social networks; and access to information sources and networks. Those who can access social capital relevant to learning will be in a much stronger position in education than those who cannot. Such social capital may be linked to the networks, traditions and life-styles of knowledge workers, but it can also be accessed in other ways, including through religious traditions and communities.

Key Findings on the Contribution of Catholic Schools

Catholic schools are very much community schools, closely reflecting in their mix of students the distribution of Australian society. Indeed in 2001 Victorian Catholic system enrolments were more evenly distributed across socio-economic deciles than government schools. But there are signs that this mix is changing somewhat, with a falling share of enrolments from poorer families and also from high-income families. In particular, single parent families and families with no parent employed are under-represented in Catholic schools. Rapidly increasing fee levels may be leading poorer families to choose government schools, while high-income families are moving from both government and Catholic schools to other non-government schools.

Catholic schools in Victoria utilize on average fewer resources than other schools. Recurrent expenditure per pupil in Victorian Catholic primary schools in 2002 was 21% lower than in the average government primary school, and 31% lower than non-government primary schools. Secondary schools are better resourced, but recurrent expenditure levels in Catholic systemic secondary schools was 6% and 33% lower than in government and other non-government secondary schools respectively in

2002. These differences are reflected in higher student-teacher ratios in Catholic schools, especially relative to other non-government schools. A contributing factor here has been the low rate of growth of Victorian Government grants, which have fallen from 21.6% to 16.3% of Catholic school income between 1992 and 2002. Low resource levels are placing many Catholic schools, especially primary schools, under increasing pressure.

Nevertheless, Catholic schools achieve higher than average educational outcomes. These higher than average outcomes are evident in AIM testing of factors such as literacy and numeracy at the primary level, in student retention rates to VCE, in VCE results and in post-school transition experience, and are more pronounced for lower than higher socio-economic groups. For example, mean VCE scores, adjusted for GAT, gender and performance are 4% higher than average in Catholic schools in the lowest decile, but slightly lower than average in the highest decile. Similarly, VCE students in Catholic schools have higher transition rates to university, especially in the less affluent half of the population. We take these higher than average outcomes for below average costs as evidence of educationally relevant social capital within the Catholic community, which is especially beneficial in lifting the performance of lower socio-economic groups.

Better outcomes for lower than average costs mean that Catholic schools are highly cost-effective. Even without valuing the better than average outcomes, we estimate that Victorian Catholic schools save the Australian community about $440 million per annum, or $2450 per annum per student enrolled. For the Victorian taxpayer, who would under present arrangements meet most of the costs of educating children currently in Catholic schools, the savings are considerably higher.

The Way Forward

There is a powerful case, and growing agreement, that the time is ripe for a new, coordinated program to achieve the public goals of excellence and equity for all schools. Such a program should bring together all schools that are willing to pursue these public goals, on the basis of shared agreement about them. Victorian schools have become more unequal in the thirty years since the Karmel Report, through economic change and through the concentration of social capital and financial resources. Given unequal access to social capital, more than the provision of a minimum national standard to all schools will be necessary. When social capital is diminished, producing acceptable outcomes requires a range of specialised and highly skilled resources, as well as a process of community strengthening and rebuilding.

Such a program will also imply a new agreement about the public funding of private schools, based on this shared commitment. This should involve a substantial increase in public funding for poorer Catholic schools (say to an overall funding level of 85% of a realistic national average for government schools), including a reversal of the falling share of Victorian Government funding evident over the past decade. But, in our view, such public funding should fall short of the full funding of Catholic schools which occurs in some other countries. Resources are urgently needed to strengthen government schools, and Catholic schools will retain their uniqueness and strength only to the extent to which they remain fully supported by the Catholic community.

Catholic education in Victoria needs to respond in its own right to the challenges of excellence and access. Such a response might involve, for example, increased redistribution of financial resources, especially additional resources, to poorer schools; specific programs to cater for children from some families, such as single parent families and families with neither parent employed; and increased attention to the skilled resources required to produce good outcomes in poorer schools.

Conclusion

Catholic education has played an important role in the development of the Victorian community over the last one hundred and forty years. The evidence reviewed in this report suggests that it continues to provide high quality educational outcomes, especially for those from lower socio-economic settings, at lower than average costs. While in several respects Catholic schools in Victoria are under severe pressure, they are also well placed to contribute strongly to new public initiatives to achieve excellence with equity in Victorian schooling.

1. The Context of the Report

The Historical Framework

Even before achieving self-government in 1851, a critical issue facing the new colony of Victoria was the education of its young people. Not withstanding the difficulties of life in an environment so far removed from the centres of learning in Europe, schools were soon established by the colonial authorities, by the Church of England and by groups of Catholics. In 1848 two distinct boards, the National School Board and the Denominational School Board, were established to develop and support government and religious schools separately. Thus the earliest schooling structure in the colony was a mixed school system, with public support for several types of schools.

With the establishment of the Parliament in 1856, the debate about education became heated and bitter. There was much support for the ideal of education as 'free, universal and secular'. This was seen by many as the best response to the needs of the new community, as a way of breaking free of the sectarian battles of Europe and of creating a unified and equal society out of the complex population mix left from the gold rush. The sectarian disputes were indeed alive and well in the colony, fuelled in part by exchanges between the Christian churches and also by the underlying tension of British-Irish relations. Catholic attitudes on education were partly formed by reflection on the national system of education in Ireland.

The upshot of these debates was that Victoria was the first colony to introduce an Education Act in 1872. This provided for basic education in primary schools to be free, compulsory and secular, although charges were levied for more advanced subjects, and led to the progressive elimination of funding for religious schools. Together with similar legislation in other colonies in Australia, it led the Catholic Bishops to decide to establish and maintain their own education system. So soon after 1872 a system was entrenched with the three types of schools that remain central today: government schools, Catholic schools and other non-government schools.

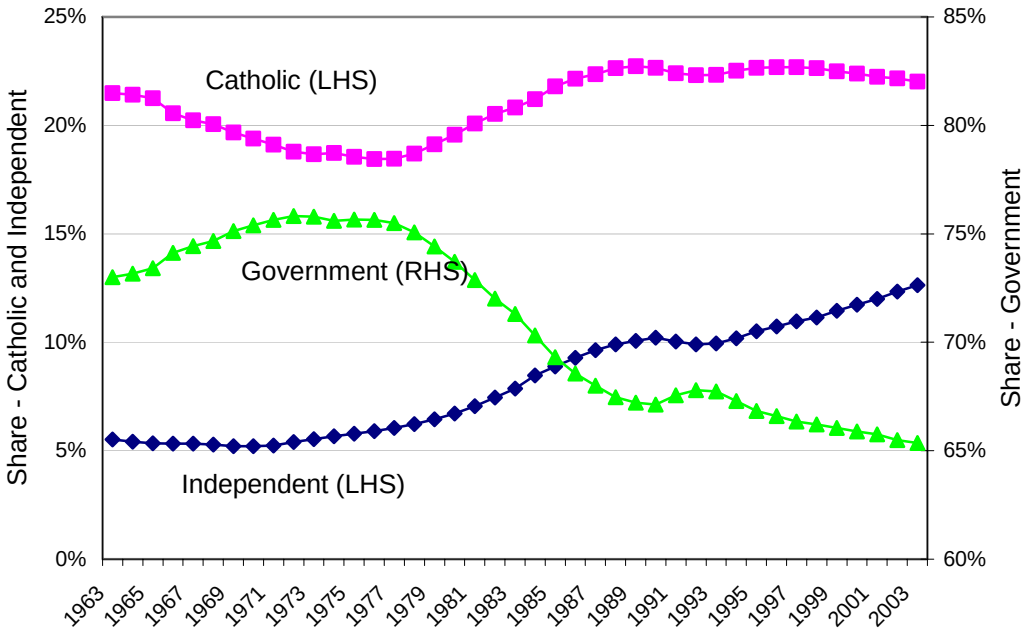
The Catholic decision was driven by a commitment to education that is religious in overall spirit and by a determination to provide education to the poor and needy within the flock. During the 1870s and 1880s the key decisions and actions were taken to build a comprehensive system of Catholic primary schools in Victoria. In establishing this system the Bishops reflected their underlying commitments in three decisions: to make the schools available to all Catholics, irrespective of income or position, and hence at low cost; to base them on religious orders rather than, as before, on lay staff; and to base them on the parish system (Selleck 1971). The use of religious orders, in particular, was a way to achieve both the religious and the social objectives.

The educational decisions of this time were a central turning point in Victoria's social history, and shaped much of what was to come. Whatever else might be said about the implications of this divergence so early in our history, the Catholic decision was courageous and the outcomes were remarkable. By the end of the 19th century there was an extensive system of Catholic primary schools, and some secondary schools, 'built from the pockets of the poor and middling in income'. By 1960 about 22% of all Victorian school children were educated in Catholic schools, with about 5% in

other non-government schools and 73% in government schools. All this had been achieved without any real support from the public purse.

During the 1960s, and more extensively after implementation by the Whitlam Government of the recommendations of the Karmel Report in 1974, non-government schools began to receive substantial support from governments, both Federal and State. The implications of this support for the two types of non-government schools have been quite different. It has allowed the Catholic schools to survive and maintain standards, in spite of other changes – the decline in religious orders, the transition from minority to mass involvement in higher education, the need for smaller class sizes, a decline in the level of religious commitment within the community and increasing demands on schools - that would have brought them to their knees. By 2003 the share of enrolments in Catholic schools remained virtually the same as in 1960, at 22% of all Victorian students, in spite of some variation over the period (see Chart 1).

Chart 1. Share of Total Victorian School Enrolments, by Type of School, 1963-2003



Source: Australian Bureau of Statistics (ABS), Cat. no. 4221 and related publications.

While the maintenance of Catholic schools has been an important consequence of government funding, an even more striking one has been the expansion of other non-government schools.[1] Enrolments in these schools, many but not all of which are high income, high fee schools serving families of high socio-economic status, rose from just over 5% of all Victorian enrolments in 1960 to 12.7% in 2003. The rise of this sector, and especially the emergence of an elite, 'fail-safe' sector, has had important

[1] Throughout this report we use 'non-government schools' to refer to all schools outside the government school sector, and use the terms 'other non-government schools' or 'independent schools' interchangeably to refer to all non-government, non-Catholic schools.

implications for both government and Catholic schools, and has been extensively analysed in Teese (2000, 2004) and Teese and Polesel (2003). This sector has also been the central focus of rapidly increasing private spending on education, a phenomenon also seen in many countries other than Australia. As the importance of knowledge for personal advancement has become even more apparent, many families have been willing to spend heavily in pursuit of what is perceived as the highest quality education for their children.

Educational Challenges in the New Century

The Knowledge Economy

In common with other countries, Australia is increasingly becoming a knowledge based economy, that is one in which the knowledge embodied in goods, services and social processes is the central driver of economic activity. Most goods, from drugs and computers to wine and food packaging, now derive their value not so much from the materials used but from the knowledge embodied in them. Many services, from health and professional services to holiday and travel services, have also become more knowledge intensive. Global competition in both goods and services on open markets is intensifying these processes, so that local producers must adjust their products to international standards or face the loss of their markets. Processes for effective participation in society also require increasing levels of education and knowledge.

At the national and regional level, being competitive in a knowledge-based economy requires excellence in knowledge production and diffusion, throughout the whole society. The impact of rising knowledge intensity and globalisation is felt in every firm and industry, and not just in a few high tech industries, as neither low labour costs nor access to raw materials remains a sufficient basis for competitiveness. In social terms, the level and quality of the knowledge that an individual possesses and can use effectively has become a more critical determinant of their life chances, both economically and socially. Indeed, as knowledge becomes more important the economic and social power of those able to access that knowledge is increasing, relative to others within the community. Thus increasing inequality, in terms of both earnings in full-time jobs and in terms of access to high quality jobs, appears to be a feature of the knowledge economy in many countries.

One graphic illustration of this trend is the composition of job growth in Australia in the 1990s (Table 1). Over that decade managers and professionals increasingly captured the best jobs, the full-time permanent ones, while the new jobs available to those with limited education and skill were largely part-time casual jobs. For managers and professionals full-time permanent employment increased by 387,000 over the decade, but fell by 438,200 for all other occupations. Part-time casual work for ‘other employees’ rose by 446,400, amounting to 74.4% of increased employment in these occupations and 90.6% of all of the increase in part-time casual employment. Increasing inequality in earnings in full-time jobs and the concentration of unemployment on those with less skill and education are other aspects of the same phenomenon.

One consequence of economic and social trends in Australia over recent decades has been the emergence of a large number of families in which no parent is employed, and

where the members of the family rely primarily on income from social security. For example, in 1970 less than 3% of all income units with a head of working age were dependent on social security as their main source of income, but by 1997-98 this proportion had risen to 20% (Whiteford 2000). For Australia as a whole in 2000-01 there were 678,100 children under 15 years of age living in households without an employed parent, amounting to 17.4% of all children under 15 years of age. Of these about two thirds were living in single parent families and one third in two parent families with neither parent employed.

Table 1. Change in Employment, by Occupation and Job Type, 1990-2000

	Full-time permanent	Full-time casual	Part-time permanent	Part-time casual	Total
			Number ('000s)		
Managers and professionals	387.0	135.4	115.2	19.5	657.1
Tradespersons and advanced sales and service workers	-238.2	59.3	25.3	26.8	-126.8
Other employees	-200.0	138.4	215.1	446.4	599.9
Total	-51.1	333.1	355.6	492.6	1130.0

Source: ABS, cat. no. 6310.0, 1990 and 2000 issues, and unpublished data for 1990 provided by the ABS.

From the perspective of the knowledge economy, then, the level and quality of education available to all students is of critical importance, both for individual welfare and for national competitiveness. From this perspective the key issues facing Victorian education today are excellence and equal access.

Excellence and Equal Access

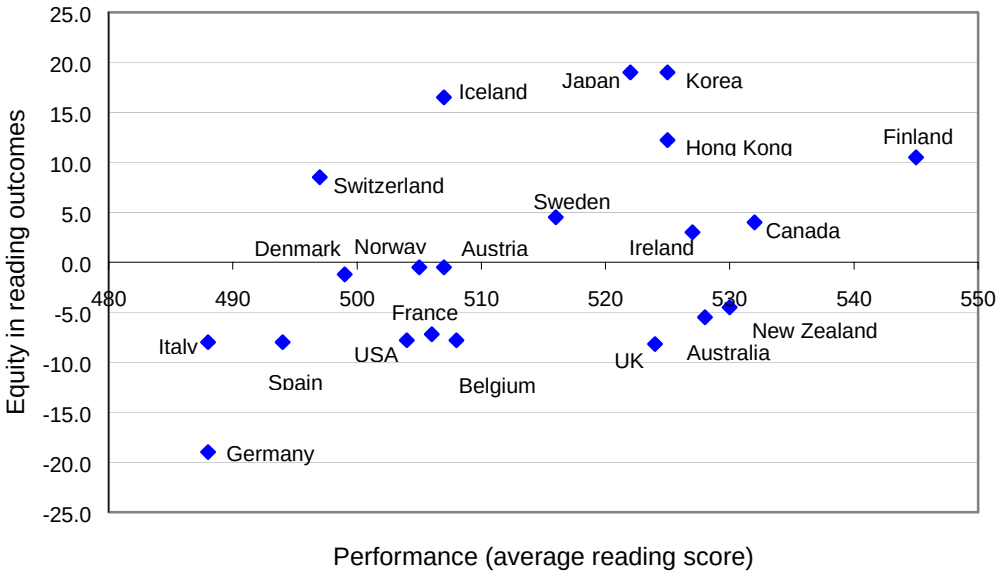
The proponents of the Victorian Education Act of 1872 were driven by three main beliefs: that education was vital for the life of the colony, that there should be equal access to education across all social groups and that public education should be secular. These beliefs emerged from their understanding of the realities of colonial Victoria as well as from broader debates of the middle of the nineteenth century. For example, their opposition to Church schools reflected fear that they would preserve the privileged position of the upper class as well as from concern, born of continuing disputation between science and religion, about the intellectual integrity of education within those schools. For the leaders of the Catholic community at that time, who had a strong commitment to education and who led the poorest social group, only the third was at issue. They shared the reformers' commitment to education and to equal access, differing only in their determination to ensure that education took place within an integrated religious context.

Looking at these issues from the perspective of the twenty-first century, two of the three issues – the vital role of education and the importance of equal access across social groups – remain of great and perhaps enhanced importance. But debates about the need for all education to be secular have declined, both in Australia and around the world. Religious schools have shown that they need not be socially restrictive, that

they can provide a rigorous, high quality education and that their graduates can contribute strongly to the community. The debate about non-government schools is now not about the secular or religious dimension but about the extent to which such schools can assist in, or obstruct, the achievement of the educational and social objectives of the community at large.

In spite of a good deal of controversy, there is considerable evidence that school education in Australia, and in Victoria, is of high quality by international standards. But the level of social division within the Australian and Victorian education systems is high by international standards and perhaps increasing. One example of this is provided by the results of the international measurements of reading literacy for 15 year-olds undertaken for the OECD PISA 2000, reported in 2003 (Chart 2) (Schleicher 2003). For all countries studied there is a pronounced social gradient, that is an increasing relationship between socio-economic status and reading performance. But the slope of this gradient differs across countries, and countries with a steep social gradient have high inequality in reading performance. Thus the chart shows, on the horizontal axis, the average reading score for the students in each of 21 countries. The vertical axis provides a measure of relative equity across countries in reading outcomes, in terms of the deviation from the OECD average for each country in terms of the slope of the social gradient (the score point difference associated with a one unit change on the PISA index of economic, social and cultural status). A deviation below the average (flat social gradient) is treated as positive, while a deviation above the average (steep social gradient) is treated as negative. Hence the vertical axis is a measure of the equity in reading outcomes across socio-economic groups in each country.

Chart 2. Performance and Equity in Reading Literacy, Selected Countries, 2003



Source: OECD PISA Study, *Literacy Skills for the World of Tomorrow* (Schleicher 2003).

Of the 21 countries shown, only three (Finland, Canada and New Zealand) have a higher average score than Australia, although Finland's score is well ahead of any other. In terms of equity, however, Australia has one of the lower ratings, with only Germany having a much lower equity rating. Indeed the difference between Australia and Finland, one of the leaders in the global knowledge economy, lies only in the social gradient, and hence in the extent to which performance is linked to socio-economic status. The performance of students at high SES levels is comparable in the two countries, so that if Australia had the same social gradient as Finland it would also be an international leader in overall reading literacy. Equity is not the enemy of excellence, and more equitable outcomes, attained by improving performance at lower SES levels, would greatly enhance our overall position as a knowledge economy.

Social Capital and Educational Outcomes

The Concept of Social Capital

The past two decades have seen an important trend, in many areas of study, away from the individualist or atomistic approach to society that was characteristic of neo-classical economics and of positivist philosophy and social theory more generally. This has led to a renewed understanding of the interdependencies between individuals and the institutions and structures that shape the communities in which they live, and also between individual firms and the institutions and structures of the regional or global economy. In economics, for example, there is new emphasis on the role of system-wide factors (such as institutions, values, networks for sharing knowledge or for other forms of cooperation, and incentive patterns) in shaping the performance of firms or of a given economy. This in turn leads to recognition of the role of history and of path dependence, and hence to the possibility that a given economy may become 'locked-in' to a high growth path or to a low growth path by such systemic factors.

In economic, social and educational theory, one important example of this trend is the concept of social capital. Many theorists have stressed the role that 'aspects of social structure, obligations and expectations, information channels, and a set of norms and effective sanctions' (Coleman 1988) play in influencing behaviour and social outcomes. These structures, attitudes, information channels and values have been increasingly recognised as assets of the communities that possess them, and hence have come to be referred to as social capital, extending the idea of physical capital and the human capital of an individual to the social capital of a community. This concept is now widely used not only by economic and social theorists but also by national and international agencies (e.g. Australian Bureau of Statistics 2004; Productivity Commission 2004; OECD 2001).

While there is a vast literature on social capital, there is no single agreed definition of this term, and it is indeed used in a broad variety of related ways. Here we follow Lin (2001) who defined social capital in the following terms:

> …social capital may be defined operationally as resources embedded in social networks and accessed and used by actors for actions. Thus, the concept has two important components: (1) it represents resources embedded in social relations rather than individuals, and (2) access and use of such resources reside with actors. (pp. 24-25)

In commenting on this and other definitions, Durlauf and Fafchamps (2004) draw out three key messages from the literature on social capital: that social capital generates benefits for the members of a group; that these benefits are achieved through shared trust, norms and values and their effects on behaviour; and that the shared trust, norms and values arise from informal forms of social organisation based on social networks and associations.

In this report we make use of the concept of educationally relevant social capital, by which we mean resources embedded in social relations that individuals can access and use to advantage in educational activities. These resources might include values and traditions emphasising the importance of knowledge and promoting forms of life and of discipline conducive to study; intellectual and cultural experiences within social networks that stimulate personal growth; access to information sources and informal networks that individuals can use for educational enrichment, and so on.

Social Capital and Socio-economic Structure

This study approaches its task from the perspective of the importance of social capital in education, in several dimensions. First, as explained in this sub-section, we interpret the widespread correlation between socio-economic status (SES) and educational outcomes as in large part representing the higher levels of educationally relevant social capital available in higher SES communities. Second, we look for evidence of social capital effects in sustained higher educational outcomes, after correction for socio-economic status, in particular community groups, and particularly in the Catholic community. Third, we examine the implications of the pervasive role of social capital in education for analysis and for policy.

As noted above, one of the most widely documented features of schooling in Australia, as in many other countries, is the existence of a pronounced social gradient, that is a high correlation between educational outcomes and socio-economic status. Children of families that are above average in terms of education, occupation and income tend to achieve above average educational outcomes, such as retention to Year 12, final year test and exam results and university entrance. Similarly, schools that educate the children of such families achieve better than average outcomes, and the overall educational results for the areas in which such families live are also better than average.

There are a number of reasons why such a result is to be expected. First, as Teese (2000) eloquently describes, the families of groups such as professionals, senior managers and academics tend to provide an environment in which the practices, disciplines and values of the educated person are embedded, and to be involved in extensive social networks and informal associations in which these practices, disciplines and values are reinforced. The judge's daughter may well be lost in the factory or on the farm, but she is likely to be at home in the world of the academic curriculum and will be able to draw on networks of experience and resources to help her to succeed in that world. The mechanic's son may well excel in many things, but he may start at a disadvantage in addressing a formal academic curriculum, and the networks in which he and his family are involved are less likely to be able to provide relevant forms of educational support. There will be, in other words, a substantial

difference in the social resources on which the two actors can draw to support educational activities.

One way of characterising this fact is that the family, and the immediate networks of friends, relations, colleagues and acquaintances in which the family is embedded, can be an important source of educationally relevant social capital, of 'resources embedded in social networks and used by actors for actions' in an educational context. Access to such social resources is unequally distributed across the community.

Second, given that families bring different attitudes, different social networks and different levels of financial and educational resources to the schooling process, there will inevitably be a tendency for the children with greater access to educationally relevant social capital to cluster together, and also for those from groups with lower access to such social capital to be found in clusters. Peer group effects are known to be strong in schooling, so that participation in a committed, high achieving group can enhance individual outcomes, while there can also be strong, anti-educational peer group effects. These peer group effects will also be set in the context of the accumulation of social networks and social resources that the families provide, and hence of intensified social capital effects. Thus self-reinforcing processes are likely to be set in train, with clustering and peer group effects reinforcing, in particular schools and locations, the advantages of the social capital associated with home background.

Third, if these advantages of high levels of relevant social capital are not sufficient, they are reinforced in many Victorian schools by higher levels of income and of expenditure per student in schools serving students from higher SES areas. In this context, it is not at all surprising that educational outcomes are highly correlated with socio-economic status, and that this finding is robust across different measures of outcomes and of socio-economic status, and across many countries. While this fact has been widely noted, its implications for the analysis of school performance have not been fully explored, nor has it been systemically reflected in educational policy within Australia or Victoria.

Beyond Socio-economic Structure

So far we have simply stressed the potential links between social capital and socio-economic status. But it is to be expected that specific communities, whether formed on religious, geographical or some other basis, will provide to their members 'resources embedded in social relations that individuals can access and use to advantage in educational activities', that is educationally relevant social capital.

One obvious example is the Jewish community. Given the extraordinary role that individuals of Jewish origin have played in the intellectual and cultural life of the West over the past two centuries, together with the close-knit nature of that community forged by persecution and mistreatment over a longer period, it is likely that individuals within this community can draw on powerful forms of educationally relevant social capital. This seems to be borne out in the very strong performance of Jewish schools, after correction for socio-economic status, in VCE examinations in Victoria. In terms of the percentage of students with VCE scores of 40 or above, in most recent years five Jewish schools have been ranked in the top ten schools in

Victoria (Boyle 2004). This is a result that cannot be explained in terms of socio-economic status or student selection alone.

Bryk et al (1993) highlight a number of features of Catholic schooling in America that are linked to social capital. The connection between teacher commitment and student engagement is made after an analysis of the nature of classroom life in Catholic schools. Other aspects of school life include the curriculum and communal organisation. The authors highlight the significance of Catholic schools as communities, including 'the boundary conditions that tend to induce institutional affiliation; the shared beliefs that bring coherence and lend meaning to daily school life; the organisational activities that enliven and validate these beliefs; and the institutional roles that formally affirm the broadly espoused commitment to school community' (p. 143).

Grace (1998), a British researcher, in calling for a more comprehensive approach to research in school effectiveness, argues that Catholic schools have much to offer. Catholic schools characteristically link academic outcomes with the wider spiritual, moral, personal, social and community outcomes, and their notions of individual good with that of the common good. A basic data source for research are the mission statements of Catholic schools which have stimulated new thinking about the pastoral and educational mission of Catholic schools in situations of high educational, social and economic challenge.

There are good reasons to expect similar, if less pronounced, educationally relevant social capital effects in Catholic schools also. Here we emphasise three such reasons. First, the Catholic Church operates within a long and powerful intellectual tradition, and many activities of the schools and their related communities take place within that tradition. In particular, there is a commitment to complex belief and value systems that are interpreted and explained within this framework. These belief and value systems imply a commitment to the role of knowledge in enhancing human life, and hence to forms of life and to patterns of discipline conducive to learning. This commitment is reinforced in many networks and activities, both within the parish and the school, and also through international links.

Secondly, the period since 1872 has seen a long struggle to establish and maintain a system of Catholic schools in Victoria. While drawing on the intellectual traditions of the Church, this has involved a special emphasis on providing access to the disadvantaged and on the role of education both in personal growth but also in material advancement. This emphasis - providing personal and material advancement through education to less privileged groups, within a religious context – was the driving motivation for many of the religious orders by whose efforts the Catholic system was built, and remains an important focus today.

Thirdly, the efforts and achievements of one hundred and forty years of Catholic schooling in Victoria impact on education today in the many ways in which the path of history influences the present. These include a wide variety of networks, from the parish and the local community to religious, professional and sporting groups, the presence of role models and traditions, and the sense of contributing to an important but unfinished educational work.

If this argument is correct, one would expect to find, in Catholic schools in Victoria, higher than average educational outcomes, after correcting for socio-economic status, available resources and other factors, with these higher than average outcomes particularly evident in lower socio-economic groups. As outlined below, this is precisely what we find, and we interpret this as confirmation of the importance of educationally relevant social capital within Catholic schools and the Catholic community.

Social Capital, Analysis and Policy

If the 'resources embedded in social relations that individuals can access and use to advantage in educational activities' are both unequally distributed throughout the community and an important determinant of educational outcomes, these facts have important implications for analysis and policy. In terms of analysis it will be important to develop tools and methods that permit the proper identification of social capital, its distribution through the community and its impact on outcomes. Such methods are far from being adequately developed at the present time, and some pertinent issues are discussed in the next section. Similarly these factors must be fully considered in terms of educational policy, which will be substantially transformed if the impact of the social capital that individuals bring to learning, and the inequality in access to that capital, are fully recognised. We return to these issues in the concluding section of this report.

Data and Analytical Methods

Deficiencies in the Quality and Availability of Data

Data issues of three types have limited the quality of the analyses that could be undertaken for this report. These relate to accurate and comparable figures for income and expenditure across school types, data on the various dimensions of educational outcomes across school types, and data on social capital.

Given the importance of schooling for Australia's future, and the amount of government funding that is provided to schools, the quality of the overall data for Australian schools is quite unacceptable. There are many issues with the comparability of data for different school systems (inclusion or exclusion of items such as insurance, superannuation and payroll tax, issues with the treatment of capital items, and so on), while the shift of the Australian Government from cash to accrual accounting in 2001-02 has further increased problems of comparability. A concerted, consultative national effort to improve the quality and comparability of the data is clearly required. Problems in the comparability of the expenditure data across systems also need to be borne in mind in shaping analysis and recommendations.

In terms of data on individual and school outcomes, there is now a good deal of detailed information collected by various agencies in Victoria. But, given issues of school and student confidentiality and the reluctance of various groups to make data available, little detailed de-identified unit record data is available in the public domain, and this makes comparative analysis across schools and systems difficult. The Centre for Post-Compulsory Education and Lifelong Learning at Melbourne University (CPELL), has assembled a wide range of school based data, for each of the

three sectors, from a range of public institutions over the past decade, and we are very grateful for their assistance in some of the analyses provided here. But, if there is to be a more robust and effective debate about the future of schooling in Victoria, a more comprehensive release of detailed data covering all schools systems into the public domain will be necessary.

The third issue is data on educationally relevant social capital, and on social capital more generally. Little real data is available at the present time, although important steps are being taken to assemble data both within the Victorian Government and within the Australian Bureau of Statistics (ABS 2004). There is much to be said for a concerted effort by the Catholic Education Commission of Victoria to assemble some systematic data related to social capital and Catholic education in Victoria.

Measuring Social Position: The Implications of Variations within Census Collector Districts

One central debate in Australian education at present concerns the adequacy of the methods used by the Australian Government to measure the socio-economic status of the families that send their children to particular schools and school types. The current method involves a number of steps:

- identify the Census Collector Districts (CCDs, comprising some 200-250 families) in which the parents of students attending a given school live;[2]
- create a socio-economic score for each CCD, being an average of the education, occupation and disadvantage SEIFA (Socio-economic Indexes for Areas) indexes constructed by the Australian Bureau of Statistics for that CCD, using Census data;
- assign to each student the average value of the socio-economic score for the CCD in which he or she resides; and
- calculate for each school an SES score as the average of the CCD-based scores for each of students attending the school.

The Australian Government currently uses this method for allocating funds to non-government schools, including Catholic systemic schools.[3] The Catholic Education Commission of Victoria also uses this method, together with some other factors, to allocate Commonwealth and Victorian Government funds to schools.

While perhaps the most persistent criticism of this method has been that it neglects the accumulated assets and resources of schools, the most striking assumption in the method outlined above is that there is no systematic variation *within CCDs* in the circumstances of families, by type of school. That is, that Australian society is homogeneous at the small-scale level, so that at the level of the CCD there are no material differences between the families that send their children to government, Catholic and independent schools. This assumption is by no means self-evident, and it

[2] Either in terms of a sample for each school or, more recently, on the basis of as complete an enumeration of all students as is possible.

[3] In the current quadrennium on a deemed basis, but in the next quadrennium on a measured basis, subject to a guarantee that every school will receive funds at least equally to that flowing under the deemed SES level.

seems quite possible that the broader inequalities in Australian society persist at the small-scale.

This issue is an important one for research on the role of socio-economic factors in education also, and indeed for a wide range of economic and social research. Methods based on the assumption of homogeneity at the small scale, that is the CCD, are used in virtually all Australian studies of the impact of socio-economic factors on educational access and outcomes which use highly disaggregated data, including many drawn on in this report. These methods thus form the basis for our current understanding, in statistical terms, of the extent of social division in Victorian and Australian education. It therefore seems important to try to test the correctness or otherwise of this assumption and, if it is not correct, to explore the implications of deviations from it.

To undertake this assessment detailed data were obtained from the Australian Bureau of Statistics on 2440 individual CCDs in Victoria. The CCDs selected were those that had at least 10 students resident in the CCD attending each of government, Catholic and independent schools. Thus the selected CCDs had at least 30 students attending school, and at least 10 attending each type of school, although many CCDs have a larger number of students. This selection excludes many CCDs that have significant number of students attending one type of school, but did not have the required coverage of all school types. This emphasis follows from the purpose of this exercise, which is to test variations in SES characteristics across school types within CCDs.

For the 2440 CCDs data were obtained on the occupation, education and median income of the families in each CCD, classified by three types of school attended and by primary and secondary schools separately. That is, there are six data blocks for each CCD. The occupation and education variables refer to the 'reference person' in each household. The occupation data consist of the number of persons in each block with a given occupation, measured on a nine-point scale, while the education data consist of the number of persons in each cell with a highest level of completed education measured on a three-point scale (up to year 10, years 11 to 12 and non-school qualification other than certificate level).[4] The income data is the median income for each cell, but it is not clear that, given the small numbers in many cells and the broad income bands available, especially at the top end, the income data are usable. The analysis here concentrates on the occupation and education data.

For the occupation data a standard weighting scheme is used (with occupations assigned weights ranging from 9 for managers to 1 for labourers) to compute a weighted average score for each block. For the education data the weights used are 1 for highest level of completed education being year 10, 3 for years 11-12 and 5 for the post-school level. As the focus is on relativities within a CCD, for some of the analyses described below the weighted average occupation or education score for all reference persons in a given CCD is computed and set to 100 (separately for primary and secondary education). For each CCD the score for families sending children to government, Catholic and independent schools is calculated relative to the average of 100 for the CCD.

[4] The data is subject to a 'randomisation process' by the ABS to project individual confidentiality; it is assumed here that this randomisation process is done in such a way as to not distort the average relationships across CCDs being investigated here.

It seems appropriate to conduct the analysis for primary and secondary schools separately, as the socio-economic patterns may be quite different for these different levels of schooling, and secondary schools are the main focus here. However, this means that, for secondary schools for example, in many of the 2440 CCDs there will be no students attending secondary schools for one or more of the school types. Nor are all of the education or occupation variables available for every unit record in the sample. The upshot of this is that, for secondary schools, there are 1324 CCDs in the sample for which non-zero family occupational data are available for every school type, covering 33,874 families, and 1635 CCDs (covering 44,959 families) for which non-zero educational data are available for every school type. These are the final samples of CCDs used in the analysis reported below.

Given that the data we are working with is at a very small unit level, it is to be expected that there is considerable variation from CCD to CCD. It is also important to stress that our interest here is the average pattern within the CCD (the small scale distribution), rather than the overall average for any aggregate population (the large scale distribution, which we already know). Hence one form of analysis is based on a relativity index for each individual CCD. This index measures, for each variable, the average value of the variable for the families in that CCD sending their children to different school types, expressed as an index number with the average value for all families in the CCD set to 100.

To overcome the problem of variation across CCDs, three averages of these index numbers are presented below: the average for all CCDs in the sample (Table 2); the average for quintiles of CCDs, with CCDs ranked by a relevant socio-economic variable (Tables 2 and 3); and the average values for aggregates of 40 CCDs, again ranked in socio-economic terms (Charts 3 and 4).

Table 2. Variation Across CCDs in Education and Occupation

	Average value of school sector indexes across all CCDs			Increase over govt level (%)	
	Govt	Catholic	Independent	Catholic	Independent
Education	93.1	97.4	115.9	4.6	24.5
Occupation	94.8	99.4	111.9	4.9	18.0

Source: Estimates of the authors, based on unpublished ABS data.

Table 2 provides the unweighted average of the index numbers for all of the CCDs in the sample, for the education and occupation variables and for the three school types. This suggests that on average there is considerable variation within CCDs by school type, comparable to that in the large-scale structure. This is particular marked for independent schools, with the average education index for these schools being 24.5% higher than for government schools, with the average occupation index being 18% higher than for government schools. For both variables the average values for Catholic schools are fairly close to but below the overall average, but are still 4.6% higher for education, and 4.9% higher for occupation, than for government schools. This first indicator suggests that the assumption of homogeneity at the small scale is far from supported in our sample of CCDs.

Table 3. Variation Across Quintiles in Education, for School Types

(Quintiles of CCDs ranked by education)

	Average value of school sector indexes across all CCDs				Increase over govt level (per cent)	
	Government	Catholic	Other non-govt	SEIFA Index	Catholic	Other non-govt
Highest	88.8	101.6	125.6	116.6	14.4	41.4
Second	92.0	99.8	116.8	110.3	8.5	27.0
Third	93.6	95.8	113.9	105.4	2.4	21.7
Fourth	96.0	93.5	112.8	100.4	2.6	17.5
Fifth	98.4	99.6	114.3	96.8	1.2	16.2

Source: Estimates of the authors, based on unpublished ABS data.

We next move to some disaggregation, by ranking the CCDs by an appropriate SEIFA index and then calculating the average value of school sector indexes for five quintiles of CCDs. The results of these calculations are provided in Tables 3 and 4. For the education measure the degree of variation across school types is very pronounced in the highest SES CCDs, with the average index value for independent schools in the highest quintile being 41.4% above that for government schools. The differential between independent and government schools declines across the quintiles, but remains 16.1% in the lowest quintile. The differential between Catholic and government schools is substantial in the top two quintiles, but is relatively small in the other three quintiles. For both types of non-government school, then, within CCD variation on the education measure is much greater for CCDs with high socio-economic status than for those with low status.

Table 4. Variation Across Quintiles in Occupation, for School Types

(Quintiles ranked by economic resources)

	Average value of school sector indexes across all CCDs				Increase over Govt Level (per cent)	
	Government	Catholic	Other non-govt	SEIFA Index	Catholic	Other non-govt
Highest	95.0	98.6	106.3	116.9	3.8	11.9
Second	92.5	102.0	110.7	111.1	10.7	19.8
Third	100.7	101.7	116.4	111.0	1.7	15.5
Fourth	95.4	100.9	113.7	102.9	5.8	19.2
Fifth	90.2	93.8	112.1	93.4	4.0	24.4

Source: Estimates of the authors, based on unpublished ABS data.

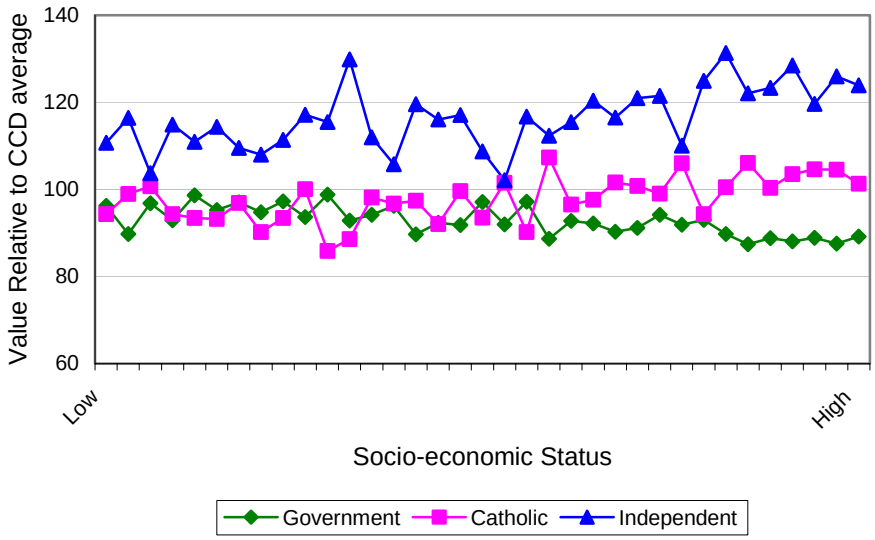
For the occupation measure, the differences between school sector index values are also pronounced, especially the differential between government and independent schools, although variation over the quintiles is somewhat different. This may in part reflect the use of the SEIFA economic resources index, rather than the education index, for the case of occupation. The largest independent/government differential (24.4%) is in the lowest quintile by economic resources.

Finally we examine the average values for groups of 40 CCDs. For this exercise all CCDs in the sample are ranked in terms of the specific SEIFA variable, and unweighted averages are calculated for successive groups of 40 CCDs. The results are shown in Charts 3 and 4. The average values for the groups of CCDs for each school sector are shown in the charts, with the CCDs being ordered in terms of the SEIFA index, from low SES at the left to high SES at the right of the chart.

These charts that the results noted above are replicated in terms of more disaggregated groups of CCDs. For all the CCD groups on an education basis (Chart 3), and for virtually all on an occupational basis (Chart 4), the average index value is higher for independent than Catholic schools, with the difference being most pronounced for high SES CCDs for the education variable and for low SES ones for the occupation variable. There is more variation in the relationship between the average values for government and Catholic schools. For higher SES groups, Catholic school students tend to come from families of higher than average CCD education than government school students, while no clear pattern is evident for lower SES groups. For the occupation variation there is no systematic pattern for Catholic students relative to government school students across the socio-economic distribution, but on average Catholic students tend to come from families with somewhat higher scores on the occupational scale.

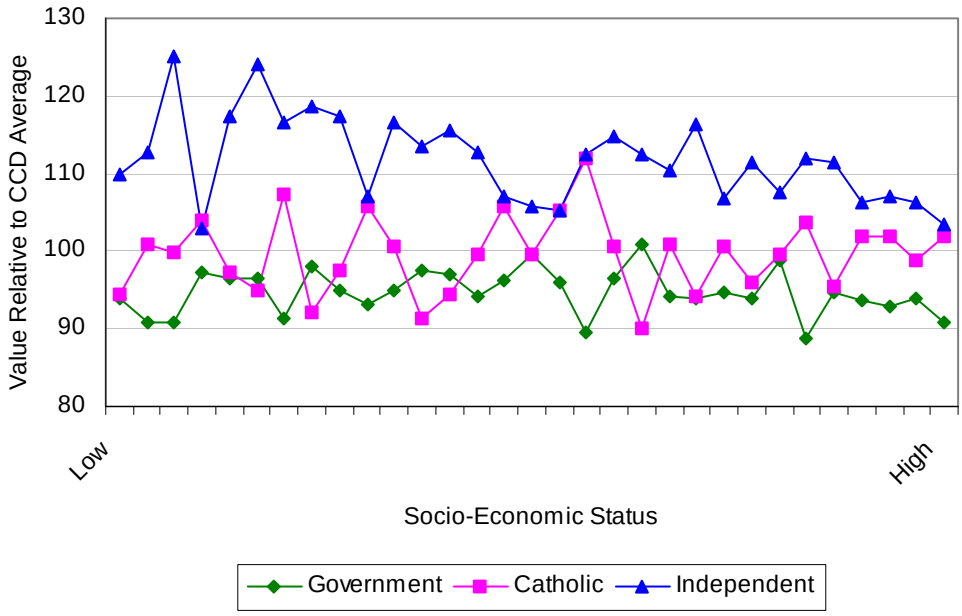
The data presented show that, for a large sample of about 40,000 Victorian families sending children to school, there is substantial variation within CCDs in the educational and occupational characteristics of the families whose children attend different types of school. These data are not consistent with the assumption, embedded in a wide range of research studies and policy initiatives, that social structure relating to educational behaviour is relatively homogenous at the small scale. A much more comprehensive analysis of these matters than has been possible here is clearly required. Here we use one form of simple analysis to assess the possible magnitude of these effects in terms of understanding social diversity in Victorian education, and draw some broad conclusions.

Chart 3. Relative Education of Households Sending Their Children to Different Types of Secondary Schools (values relative to CCD average; groups of 40 CCDs, ranked by SES)



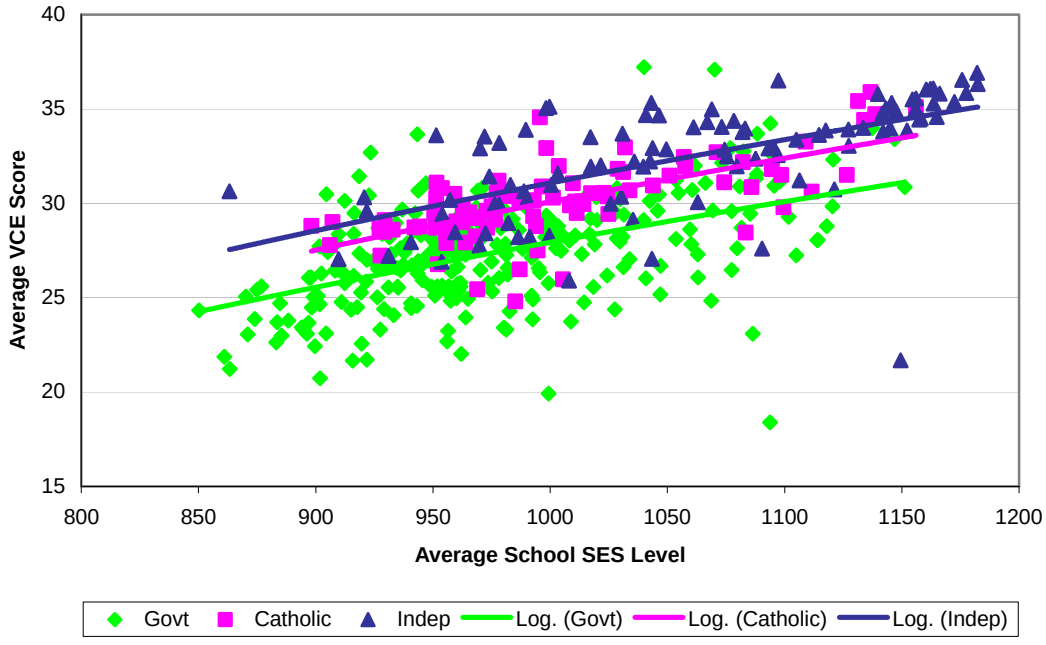
Source: Estimates of the authors, based on unpublished data provided by the ABS.

Chart 4. Relative Occupation of Households Sending Their children to Different Types of Secondary Schools (values relative to CCD average; groups of 40 CCDs, ranked by SES)



Source: Estimates of the authors, based on unpublished data provided by the ABS.

Chart 5. VCE Scores and SES Status, by School and School Type, 2003



Source: Based on data provided by the Victorian Curriculum and Accreditation Authority.

As stressed throughout this report, the close association between socio-economic status and educational outcomes is evident in a wide range of data, even if its interpretation is somewhat controversial. One such set of data is that provided in Chart 5, which shows the average VCE score (on the vertical axis) and the average socio-economic status of the students (on the horizontal axis) for 445 Victorian secondary

schools in 2003. Also shown, for each of the three school types, are trends lines (specified in logarithmic terms). Each of the three trends lines show up pronounced upward slope, implying higher VCE outcomes for schools with students from higher socio-economic backgrounds. The trends lines are at different levels for the different school types, implying that VCE outcomes tend to be higher, for a given SES level, in some types of school than others.

Clearly many factors affect average VCE outcomes in a given school other than SES level and school type, such as gender, location, student ability and school resources, and these factors are considered elsewhere in this report. While not discounting these factors in any way, it is possible to make some broader assessment of the potential impact of within CCD variation by estimating the simple relationship between VCE scores, SES status and school types and exploring how much those relationships could change if within CCD variation was correctly recognised. We use equation (1) to capture this relationship:

$$(1) \qquad \ln VCE_i = \alpha + \beta \ln SES_i + \gamma CD + \delta ID,$$

where CD and ID are dummy variables for Catholic schools and independent schools respectively, $\ln VCE_i$ is the natural log of the average VCE score for school *i* and $\ln SES_i$ is the natural log of the average SES for school *i*. We use the log linear form, which means that the coefficients on the dummy variables can be interpreted in percentage terms. Equation (1) is estimated by simple least squares and the results are as follows:

$$\ln VCE = \underset{}{-2.107} + \underset{(5.2)}{0.786 \ln SES} + \underset{(13.4)}{0.078 CD} + \underset{(7.6)}{0.107 ID} + \underset{(10.0)}{} \qquad \text{Adj } R^2 = 0.54$$

It is notable that an indicator of socio-economic status and school types dummies explains 54% of the variance in VCE scores across Victorian secondary schools. These results imply that, after correcting for the impact of socio-economic status students in Catholic schools on average achieved a 7.8% higher VCE score, and those in independent schools a 10.7% higher VCE score, than those in government schools.

There are many issues involved in moving from our above findings about *within-CCD* variation in our sample of families to revised estimates of SES status across CCDs for families sending their children to different types of school. For example, our sample covers all those CCDs in Victoria in which at least ten families send children to each type of school, and the relationships may differ in other types of CCD. To test the possible magnitude of these effects, however, we made two adjustments to the data, both showing considerably lower variation than the average relationships detailed above. These adjustments are:

- Adjustment 1: Reduce the SES score of all Government schools by 2% and increase that of independent schools by 5%, while leaving Catholic schools unchanged.
- Adjustment 2: Reduce the SES score of all Government schools by 4% and increase that of independent schools by 10%, while leaving Catholic schools unchanged.

Both adjustments are less than the average figures shown in Table 5, and take account of the fact that Catholic schools are close to the average level, while generally lower than it, and of the impact of other factors such as those referred to above. For each of these two adjustments we vary the SES data as indicated and re-estimate equation (1) with the revised data.

The results of this exercise are shown in Table 5. With adjustment 1 the implied impact of being at an independent school, relative to a government school, falls in half, to 5.4%, while on adjustment 2 the implied impact is entirely eliminated. Given that no changes have been made to the SES measure for Catholic schools, the implied change in impact is less for these schools, but falls as government school SES is more accurately measured. In both adjustment cases the impact of being in a Catholic school is greater than that of being in an independent school.

Table 5. Implied Impact of School Type on VCE Scores, after Correction for SES, 2003, Different SES Measures

SES Measurement Method	Variation Relative to Government School Score (%)	
	Catholic	Independent
Unadjusted SES	7.8	10.7
Adjustment 1: Government schools – 2%; Independent schools + 5%	6.1	5.4
Adjustment 2: Government schools – 4% Independent schools + 10%	4.5	0

Source: Estimates of the authors, based on ABS data. It should be stressed that these calculations do not control for other factors affecting student achievement across school types, such as gender, location and student ability, and are intended only to illustrate the potential scale of the impact of variations in SES measures.

These calculations are indicative only, and no reliance can be put on the specific magnitudes shown. But they do show that variations in the measurement of socio-economic status, of the dimensions suggested by our analysis of within CCD variation, could have a profound impact on our understanding of social dispersion in Victorian schools. While in this, as in other regards, Catholic schools are close to the community average, independent schools on average draw their students from families of much higher SES, and government schools on average from families of somewhat lower SES status, than existing measures suggest.

Social Capital or Student Ability and Quality Teaching?

There is a body of literature, which has been influential in Australia, which seeks to identify the contribution of student ability or prior achievement, of schools and of effects specific to classes and/or teachers to student outcomes. These models have been developed primarily in the context of school improvement and feedback programs, and are used by the Victorian Curriculum and Assessment Authority in their VCE feedback to schools (VCAA 2004). They have, however, also been the basis of an influential argument that the role of teachers (and within-classroom variation more generally) is paramount in explaining variations in ability-corrected student outcomes, and that the role of schools is relatively minor. The prominence given to this view is

somewhat surprising given that, as far as we can discover, the detailed empirical analysis on Victorian secondary data has not been provided in the publicly available academic literature.

For example, drawing on a range of studies with both primary and secondary schools and students, Rowe (2004) has argued that, given controls for student ability and/or prior achievement, the effects of schools on student achievement is relatively minor, while that of within-classroom factors, and of teachers in particular, is of major importance. Using the measure of the proportion of residual variance explained, he and his colleagues find the magnitude of class/teacher effects and school effects as summarised in Table 6. For literacy, class/teacher effects explain about 40% of the residual variance (45.4% for primary and 37.8% for secondary schools), while school effects account for only about 8%. That is, class/teacher effects are some five times more important than school effects. For numeracy the class/teacher effects account for over 50% for both school sectors, while the school effects range from 4.1% to 8.4%.

Table 6. The Magnitude of Class/Teacher and School Effects, 90 Victorian Primary and Secondary Schools (adjusted for 'intake' characteristics and prior achievement)

	Class/Teacher Effects (share of residual variance)	School Effects (share of residual variance)
	(%)	(%)
Literacy		
Elementary	45.4	8.6
Secondary	37.8	7.4
Numeracy		
Elementary	54.7	4.1
Secondary	52.7	8.4

Source: Rowe (2004).

On this basis Rowe (2004) argues that 'the finding of large class/teacher effects and small to insignificant school effects is primarily a reflection of variations in teacher and teacher quality', that it is a myth that schools can be effective in terms of learning experiences other than through the quality of teaching, and that placing substantial emphasis on 'biological and social determinism' is not supported by evidence-based research.

While few would dispute the importance of teaching and teacher quality, this view seems puzzling in terms of very well documented link between socio-economic status and educational outcomes, and is in contrast to our emphasis on the role of social capital, in part linked to socio-economic status. In its terms, the high correlation evident across Victorian secondary schools between socio-economic status and mean VCE scores (correlation coefficient of 0.68 – Table 7) is presumably to be interpreted in terms of the higher ability of the students entering higher SES schools, the effects on performance of clustering high ability students together and better quality teaching within those schools. Thus this view shifts attention away from social factors on to student selection and teacher quality. It is therefore important to place the analysis undertaken in this report relative to this tradition.

In the secondary school case, these analyses use a multi-level modelling framework of the following form:

$$(2) \qquad Y_{ij} = \beta_0 + \beta_1 x_{1ij} + \beta_2 x_{2ij} + \beta_3 x_{3ij} + \beta_4 Z_j + u_{0j} + e_{0ij},$$

where β_0 is the overall intercept, the terms x_{1ij}, x_{2ij} and x_{3ij} are the scores for student *i* in school *j* on the three components[5] of the General Achievement Test (GAT) taken in the middle of the final VCE year, Z_j is the weighted average score for school *j* in the three GAT components, u_{0j} is the school level residual and e_{0ij} is the residual at the student level (Rowe, Turner and Lane 2002). Here the three GAT measures for the individual student are interpreted as measures of the students' 'ability' in each of these dimensions, while the average GAT score for the school is an average ability measure for the school. The inclusion of this latter variable is justified on the basis of research suggesting that individual students tend to perform better when their peers are more able (Rowe, Turner and Lane 2002). The residual variance that is analysed in terms of the school level residual u_{0j} and the student level residual e_{0ij} is that remaining after the effects of the four GAT variables have been incorporated.

There are undoubtedly a number of technical issues that should be addressed in considering the implications of such a regression exercise. But from our point of view the most important one is the interpretation to be placed on the GAT variables in this analysis. At the school level there is an extremely close correlation between mean GAT score and VCE mean score for 2003 (correlation coefficient 0.92 – Table 7), and at the individual level the correlation coefficient between VCE and GAT scores is 0.72. But this means that most of the variance in either school average VCE scores or in individual scores is explained by the GAT measures, and hence that the main explanatory factors lie in these measures[6].

Table 7. Correlation Matrix: Mean School Scores for VCE, GAT and SES, Victorian Secondary Schools, 2003

	VCE	SES	GAT
VCE	1		
SES	0.68	1	
GAT	0.92	0.62	1

Source: Estimates of the authors, based on data from the Victorian Curriculum and Accreditation Authority.

In the light of the high correlation between GAT scores and VCE results, and also between GAT scores and the average SES status of schools, it is implausible in our view to interpret GAT scores purely as a measure of student ability. This interpretation implies that ability is the overwhelming determinant of VCE scores and

[5] The three components are Written Communication; Mathematics, Science and Technology; and Arts, Social Science and Humanities.

[6] In statistical analyses of the form of equation (2) reported above (Table 7) in relation to VCE scores for 2003, a version of (2) without the GAT variables, but including variables for gender, school size and a school type, explained 22.1% of the total variance (2.7% of that between students and 66.4% of that between schools). A parallel equation including the GAT variables explains 52.6% of the total variance (36% of the between student variance and 90.3% of the between school variance).

that there is a very high correlation between socio-economic status and ability. This interpretation does not support the Rowe et al view either, for rather than highlighting the primacy of teachers it leads to the conclusion that the overwhelming determinant of VCE scores is ability, and that teachers are only important in terms of their contribution to a small residual variance.

From a social capital perspective, we suggest that three separate factors are likely to influence GAT scores:

- the 'inherent' ability of the student;
- the social capital and related resources that the student can access from sources and networks outside the school; and
- school based factors, include the social capital of the school.

If each of these plays a part in influencing a student's level of general performance then the results of the earlier analysis are invalidated, and it is not possible to draw the conclusions claimed about the primary role of teaching and the irrelevance of social factors.

The Role of This Report

This report examines the contribution of Catholic schools to the Victorian economy and society from a perspective consistent both with knowledge economy trends and with the emerging realities of Victorian education. That is, that the central challenges facing Victorian education are those of excellence and equity – to maintain and enhance outcomes for students from high SES families, while sharply improving outcomes for students from lower SES families. In terms of public policy, the issues that have bedevilled much of the debate since the 1850s – religious and secular, public or private ownership, funding by taxpayers or from private sources – are much less relevant than the ability of different types of schools to contribute in a cost-effective manner to achieving these vital public purposes.

Thus our underlying questions are how Catholic schools currently contribute to the achievement of excellence and equity in Victorian education and how that contribution might be enhanced, while preserving their distinctive character as Catholic schools. These questions are pursued in the overall context outlined above, and especially a realisation of the likely importance of social capital and community networks in influencing outcomes and in shaping policy options.

2. Key Findings: The Contribution of Catholic Schools

In this section we outline our main findings on the first question – how Catholic schools currently contribute to the achievement of excellence and equity in Victorian education.

As discussed previously, many approaches to measuring the social composition of regions or educational systems make use of the average characteristics of the small-scale regions (CCDs) in which students live. These methods are also used here, as described below, but they need to be interpreted in the light of the earlier analysis of within CCD variation. In short, the upshot of the earlier analysis is that assigning each student the average characteristics of the CCD is likely to overstate government school SES scores and substantially understate many independent school scores, but to involve little overall error for Catholic schools. We also make use of data on individual families derived from the unit household records collected in the Census of 1996 and 2001. The approaches adopted are described briefly below.

(i) The first approach makes use of the CCD data, both in terms of socio-economic measures and in terms of number of students attending different types of school. In this approach the socio-economic measures are defined over CCDs and not individuals or families, making use of a range of the ABS SEIFA indexes. Analysis of the distribution across ranked groups of CCDs can then be used to assess the socio-economic composition of the students attending Catholic schools, and of their families. The full school type breakdown, dividing non-government schools into Catholic and independent, is available only for the Census years 1996 and 2001.

(ii) The second approach uses unpublished data from the ABS Censuses for 1996 and 2001, based on the unit household unit records. It provides information on the families of students attending government, Catholic and independent schools (separated into primary and secondary), focusing on employment status, family type, income and number of children. The socio-economic measures being used here are family income, employment and family type, but no geographic disaggregation within Victoria is available.

(iii) Another approach to these issues has been implemented by Teese and Walstab (2004), in a report prepared for the Catholic Education Commission of Victoria. They examine the changing socio-economic composition of students completing Year 12 for selected years from 1975 to 2002, based on the socio-economic characteristics of the CCDs in which they live.

Each of these approaches has strengths and limitations, and provides a different window on the changing socio-economic composition of the student population within school systems. For example, the first two methods can address primary and secondary populations as a whole, but are largely limited to 1996 and 2001. The Teese and Walstrab analysis is limited to students completing year 12, but has the real advantage of giving a much longer time frame, from 1975 to 2002. Taken together they provide an overall interpretation of the social composition of Victorian schools, with special reference to Catholic schools.

The Schools and Their Students

1) *Catholic schools are community schools.*

In 2003, there were 480 schools listed in the Victorian Catholic school system. A geographical analysis tool has been developed for 479 of these systemic schools, with 177,583 students. This maps the catchment areas for the schools and profiles their socio-economic status, by measuring them against the SEIFA indices for both 1996 and 2001, and compares them to the Victorian averages, as well as comparing the school's SES against the average for the state. However, of the 177,583 students from 479 schools, data on only 153,828 students from 445 schools was usable for this study, for a range of reasons.

The SEIFA indices used for the 1996 and 2001 are:

- Advantage
- Education
- Disadvantage
- Economic Resources

Further information on these indices can be found on the ABS website under SEIFA (ABS SEIFA 1996, 2001).

Table 8. Measures of the Socio-economic Status of Students in Victorian Catholic Schools (Victorian average for each index set to 100)

SEIFA Index	Advantage	Education	Disadvantage	Economic resources
Primary	99.9	99.7	101.1	99.7
Secondary	99.9	99.3	101.4	100.0
Primary/Secondary	105.7	105.8	105.2	105.0
All sectors	100.0	99.8	101.2	99.9

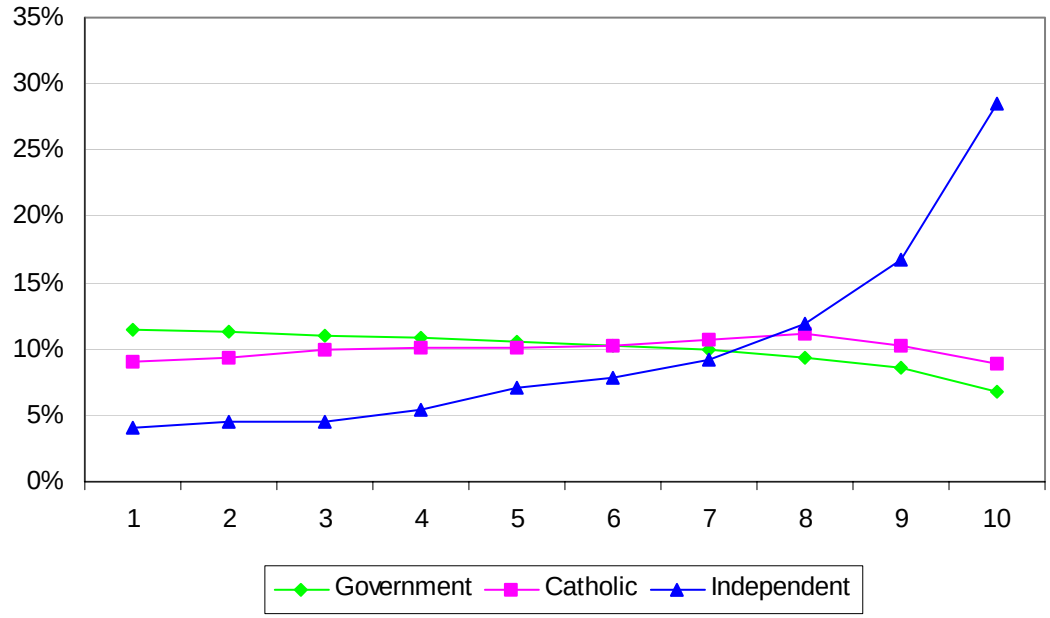
Source: Estimates of the authors, based on data from Catholic Education Commission Victoria (CECV).

Table 8 shows the estimated value of the various SEIFA indices for Catholic primary and secondary schools, and also for the small group of schools that have both primary and secondary intakes. The value shown is relative to the Victorian average for all schools set equal to 100 for each SEIFA measure. The table brings out clearly how close Catholic primary and secondary schools are to the Victorian average, for all measures. As one might expect, the small number of primary/secondary schools serves families of a substantially higher socio-economic status

Next we turn to an analysis of the data from 2001 Census, using figures on enrolments in each school system from each CCD and ranking CCDs by the Socio-Economic Index of Relative Disadvantage (see also Mukherjee 1999). The CCDs are then divided into deciles of approximately equal school student populations, with the lowest socio-economic group ranked as 1 and the highest ranked as 10. The results are shown in Chart 6. If a given school drew its student population equally for all socio-

economic strata, this would show in Chart 6 as a horizontal straight line at 10%, indicating that 10% of the system's students were in each decile.

Chart 6. Proportion of Systems Enrolments, Victoria, 2001



Source: Estimates of the authors, based on unpublished ABS data.

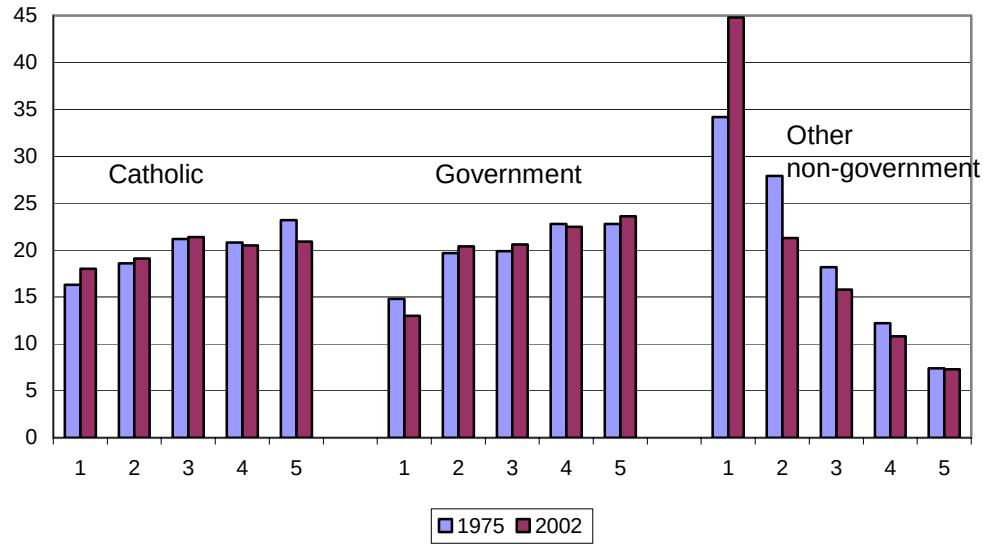
As shown in Chart 6, Catholic enrolments are very close to being distributed in this way in 2001, with almost 10% in each socio-economic decile, even though they are somewhat under-represented at both ends of the distribution (9.1% of enrolments in the lowest and 9% in the highest decile). Government schools vary from equal proportions at the top and bottom ends of the distribution, with 11.4% of students in the lowest decile and only 6.8% in the top decile. Independent school enrolments are heavily skewed towards higher SES groups, with 4.1% of their enrolments in the lowest decile and 28.6% in the highest decile.

Chart 7, based on the work of Teese, Polesel and Mason (2004) shows the distribution of VCE enrolments by five quintiles of socio-economic status for the three school type, for 1975 and 2002. This form of analysis means that if enrolments were equally distributed over the quintiles 20% of enrolments would be in each quintile. In the chart the quintiles are arranged in descending order of socio-economic status, from left to right, for each school type. Thus the figures for Catholic schools for the highest quintile (1) show the proportion of Catholic school VCE enrolments, for 1975 and 2002 respectively, drawn from families in the highest SES quintile. It should be stressed that here the quintiles refer to the distribution of socio-economic status of VCE students and their families, not to that of the population as a whole.

It is evident that VCE enrolments in both Catholic and government schools are skewed towards the lower SES families, with a massive concentration of enrolments from high SES families in independent schools. In 2002, 13% of government school enrolments, and 18% of those in Catholic schools, were from the highest SES quintile, by

comparison with 45% in independent schools. At the other end of the scale, 20.9% of Catholic school and 23.6% of government school enrolments were in the lowest quintile, by comparison with 7.3% for independent schools. Changes evident over the 1975-2002 period include the sharp increase in the concentration of independent schools at the highest quintile of SES (from 34.2% to 44.8%) and an increased concentration of government schools on the lower SES quintiles.

Chart 7. Distribution of VCE Enrolments by Socio-economic Status and School Type, 1975 and 2002 (SES status by quintiles: high (1) to low (5))



Source: Teese, Polesel and Mason 2003.

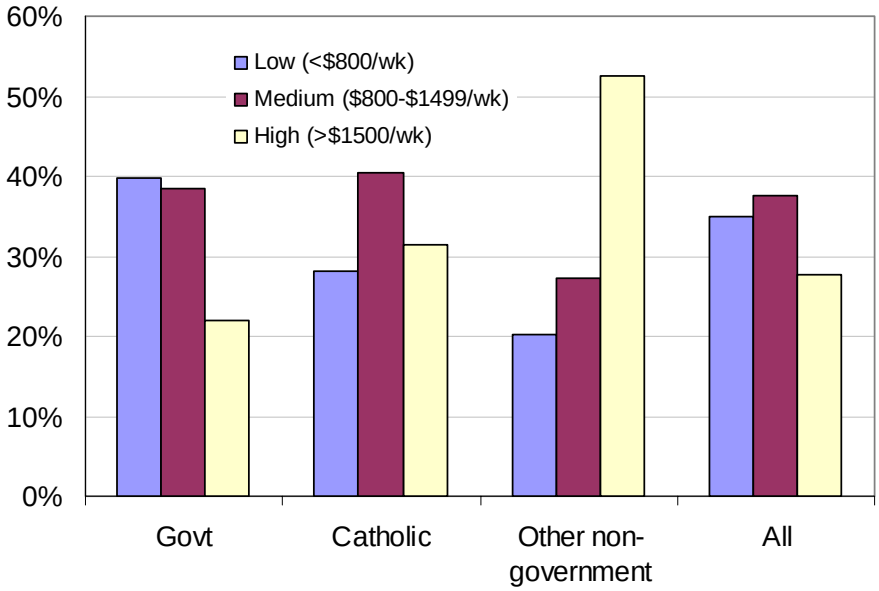
At the VCE level, then, Catholic schools remain closely representative of the overall community. Over the period 1975-2002 changes in the social pattern of their VCE enrolments was modest, but showed a pattern of reduction in students from the lowest SES quintile and increasing proportions in the top two quintiles.

Finally, we examine the social distribution of students and their families in terms of family income as recorded in the 2001 Census. The data summarised in Chart 8 classifies students attending different school types by the income of their families, in three broad bands. This chart shows that Catholic students are still more representative of the population than those in other school types, but that they have a significantly lower share of low income families than the population as a whole, than might be expected in term of the indicators noted above. Only 28% of Catholic school students come from families with incomes of less that $800 per week, by comparison with 35% for all families with children at school and 40% for government school families. This may partly reflect the relatively low coverage of single parent families, and families with no employed adult, in Catholic schools, which is discussed further below.

These data once again highlight the sharp contrast between government and independent schools. For government schools 40% of families have incomes of $800

or less and only 22% have incomes above $1500 per week, whereas for independent schools only 20% have incomes below $800 per week while 52% have more than $1500 per week.

Chart 8. Percentage of Australian Primary and Secondary Students in each Family Income Range who Attend Government, Catholic or Other Non-government Schools (excluding those with income not reported), 2001



Source: Based on unpublished data from the ABS.

2) *Students from certain types of needy families are under-represented in Catholic schools.*

The findings from Chart 8 suggesting that Catholic schools have a lower proportion of low income families than government schools, can be explored further by a more detailed examination of the Census data. In Table 9 we provide data on couples with children less than 15 years of age and/or one or more dependent students and single parents, by income, employment status and by the type of school to which they send their children. To simplify an already complex analysis we divide families into only two income brackets – below $1000 per week or above $1000 per week. On this basis Table 9 suggests a number of interesting insights:

- Catholic and independent schools are heavily focused on couples where both parents are working, and within that group particularly those with family incomes above $1000 per week. Over half of all students in Catholic and independent schools came from families with both parents working and with family income of $1000 per week or more, while for government schools the figure was only 35.2%.
- By contrast, couples with no person employed are heavily concentrated in government schools.

- Catholic and independent schools are underrepresented in terms of single parents, especially those with family incomes below $1000 per week and not employed.

One overall measure of the social polarisation in the Victorian education is to compare the proportion of system enrolments provided by couples with one or both partners employed and family incomes over $1000 per week ('advantaged families') with those provided by single parents and couples with no partner employed, with an income of less than $1000 per week ('disadvantaged families'). Independent schools cater primarily for advantaged families, and 67.8% of their enrolments come from such families, and only 13.7% from disadvantaged families. Government schools, by contrast, draw only 43.8% of their enrolments from advantaged families and 29.0% from disadvantaged families. In this comparison Catholic schools are more like independent than government schools, deriving 61.7% of their enrolments from advantaged families and only 16.2% from low income single parent or non-employed couple families. Given the growing importance of both single parents and family with no person employed in Australian society, this raises some important issues for Catholic schools.

Table 9. Student Profile of Secondary Schools, Victoria, 2001, by Family Status and Employment (per cent of students in school type)

	Couples with children less than 15 years, and /or dependent students			Single parents			Total
School type	Both emp	One emp	None emp	Emp	Not Emp	Total	
Family income $1000 pw or above							
Government	35.2	8.6	1.0	2.5	0.4	2.9	47.7
Catholic	51.9	9.8	0.9	3.0	0.3	3.3	65.8
Independent	55.4	12.4	0.8	3.7	0.4	4.1	72.7
Family income below $1000 pw							
Government	11.2	12.1	6.9	11.3	10.8	22.1	52.3
Catholic	10.0	7.9	3.3	8.4	4.5	12.9	34.2
Independent	7.5	6.0	2.5	6.9	4.3	11.2	27.3
Total							
Government	46.4	20.7	7.6	13.8	11.2	25.0	100
Catholic	61.9	17.7	4.2	11.4	4.8	16.2	100
Independent	62.9	18.4	3.3	10.6	4.7	15.3	100

Source: Based on unpublished data from the ABS.

3) *The socio-economic composition of the Catholic student body is also changing gradually, in particular towards a lower representation of lower socio-economic groups within the community.*

Given the various complexities in the data, it is not easy to make any generalisations about changes in the social composition of the students of Catholic schools. But it does seem clear that the share of lower socio-economic groups in Catholic schools is

falling gradually, and there are also some signs that high income Catholic families may be increasingly choosing independent schools. We review here three pieces of evidence relevant to this conclusion.

Over the longer time frame, the composition of VCE enrolments shown in Chart 7 reveals a decline in the share of VCE enrolments in the lowest two SES quintiles, and especially the lowest, over the period 1975-2002, with some rise in the share in the top two quintiles. Even so, in 2002 the Catholic share in the lowest quintile remained over 20%, by comparison with an independent school share of only 7%.

Looking at a much shorter period, that between the Census periods of 1996 and 2001, we can examine the change in the distribution of enrolments across SES deciles and school systems. Thus the numbers reported in each SES decile/school type cell of Table 10 show the change in the percentage of total Victorian enrolments located in that cell between 1996 and 2001. The well-known increasing share of enrolments in independent schools, at the expense of those in government schools and to a lesser extent in Catholic schools, in evident in the overall movement. That increase has been evenly spread across the SES deciles, with a substantial increase in the lowest two deciles, presumably reflecting the establishment of a number of low fee independent schools. The declining share in government schools is particularly marked in the higher SES deciles, with significant falls in each of deciles 5-10.

Table 10. Change in Shares of Victorian Total School Enrolments, 2001 from 1996, by School Systems (ranked by index of disadvantage, per cent changes)

Ranking	Govt	Catholic	Other
Lowest	-0.21	0.05	0.18
2	0.10	-0.23	0.14
3	0.03	-0.08	0.06
4	0.07	-0.14	0.06
5	-0.17	-0.04	0.19
6	-0.08	-0.09	0.17
7	-0.19	0.05	0.14
8	-0.26	0.13	0.16
9	-0.14	-0.02	0.12
Highest	-0.09	0.02	0.08
Total	-0.94	-0.32	1.27

Source: Based on Census data from the ABS.

For Catholic schools there has been a concentration in the upper middle class, with an increasing share of enrolments in deciles 7 and 8, with an overall substantial loss of share in the bottom five deciles, Indeed in deciles 2-4 there was a significant fall in the Catholic share of enrolments, at the expense of both government and independent schools.

Analysing the change in families sending children to school by income provides another perspective on the changing social composition of Victorian schools. We

estimate that there were an additional 8,611 families sending children to school in Victoria in 2001 by comparison with 1996, and the breakdown of these additional families by family income and school type is provided in Table 11.

Table 11 again brings out the main trends noted above in another way. Two features are again most striking. The first is the decline in families with incomes above $1500 per week sending children to government schools, and the concentration of the children of such families in independent schools. The second is the increasing concentration of children of families with less than $500 per week on government schools – 73.2% of all additional families from this income group sent children to government schools – at the expense of both Catholic and independent schools.

Table 11. Change in Number of Families Sending Children to Different Types of School, 1996-2001 (by family Income)

Family Income	Government	Catholic	Other non-govt	Total
		Number of Families		
Less than $500	1089	231	168	1488
$500-$999	1286	548	698	2532
$1,000-$1,499	1237	783	468	2488
$1500 and over	-1222	463	1735	975
Total	3229	2218	3164	8611
		Share of Change for School Type (%)		
Less than $500	33.7	10.4	5.3	17.3
$500-$999	39.8	24.7	22.0	29.4
$1,000-$1,499	38.3	35.3	14.8	28.9
$1500 and over	-37.9	20.9	54.8	11.3
Total	100	100	100	100
		Share of Change for Income Bracket (%)		
Less than $500	73.2	15.5	11.3	100
$500-$999	50.8	21.6	27.5	100
$1,000-$1,499	49.7	31.5	18.8	100
$1500 and over	-125.3	47.5	177.8	100
Total	37.5	25.8	36.7	100

Source: Estimates of the authors, based on unpublished data from the ABS.

4) *The ethnic and religious composition of the student body is changing.*

Other changes are occurring in Victorian Catholic schools also, in addition to changes in social composition in terms of various socio-economic measures. Here we note changes in the ethnicity and religion of the children attending Catholic schools.

Table 12. Proportion of Students by Birthplace and Religion, Victorian Catholic Schools, 1995-2004

Year	Australian born	Roman Catholics
1995	91.2	83.9
2000	93.4	80.2
2001	93.8	79.7
2002	94.1	79.0
2003	94.3	78.8
2004	94.4	78.0

Source: Derived from data from the CECV.

Data on the ethnicity of students by school type is difficult to access from official sources, and data available from the CECV provides only the birthplace of the students. In dealing with students this can be somewhat misleading, as children of even recent migrants may be born in Australia. However, the data by student birthplace suggest that an increasing proportion of students in Victorian Catholic schools are Australian born, this proportion rising from 91.2% in 1995 to 94.4% in 2004. This trend could reflect an increasing proportion of migrants to Victoria being from countries with a low proportion of Catholics and/or the impact of the reduced involvement of low income families in Victorian Catholics schools noted above.

Table 13. Proportion of Students by Religion, Victorian Catholic Schools, 2004

	Proportion of Students by Religion (per cent)		
	Primary	Secondary	Total
Roman Catholics	78.8	77.0	78.0
Other Christians	9.7	13.9	11.6
No Religion	6.0	4.9	5.5
Buddhist	1.7	1.3	1.5
Other Catholics	1.4	0.9	1.2
Hindus	0.5	0.3	0.4
Muslim	0.4	0.4	0.4
Other Non-Christian	0.2	0.3	0.2
URD	1.3	0.9	1.1
Total	100	100	100

Source: See Table 12.

By contrast, the proportion of students in Victorian Catholic schools that report their religion as Roman Catholic has fallen from 83.9% in 1995 to 78.0% in 2004. Thus by 2004, 15.4% of students report adherence to a religion other than Roman Catholicism and 6.6% report no religious adherence. This increasing religious diversity of Catholic schools raises important issues about their mission and spirituality, issues that we touch on briefly at the conclusion of this report.

5) *Rapidly rising fees have contributed to declining enrolments from needy families in Catholic schools.*

The effect of fees on enrolments of children from low income families in Victorian Catholic schools was considered in the study on *The Affordability of Catholic Schools in Victoria,* by Monash University (Monash University – ACER et al. 2004). This effect can be seen by the changes in the number of students receiving the Education Maintenance Allowance (EMA) attending these schools. In Catholic primary schools, where there has been a 25 per cent or more increase in schools fees, students receiving the EMA have declined by almost 14 per cent between 1998 and 2002 (Table 14). Schools where fee increases were in the 15 to 24 per cent range saw a decline of 14.5 per cent in EMA enrolments in these schools. However, where there was less than 15 per cent increase, there was no change in the number of students receiving the EMA.

In Catholic secondary schools, the number of students receiving the EMA declined by 15.9 per cent in schools where there was an increase of 40 per cent or more in fees. The number receiving the EMA declined by 11.4 per cent in schools where fees had increased by 20 to 39 per cent. There was only a 6 per cent decline in students receiving the EMA where fees had increased by less than 20 per cent.

Table 14. Students in Catholic schools receiving the Education Maintenance Allowance (by change in school fees)

Rate of increase in fees	1998	1999	2000	2001	2002	% change
Primary						
25% or more	3562	3481	3198	3275	3073	-13.7
15 to 24%	4918	4741	4341	4586	4205	-14.5
Less than 15%	5473	5263	5410	5646	5475	0.0
Secondary						
40% or more	2322	2230	2089	1963	1953	-15.9
20% to 39%	3537	3284	3296	3062	3135	-11.4
Less than 20%	4170	4191	3949	3915	3921	-6.0

Source: Monash University – ACER et al. 2004.

This strong inverse correlation between the rate of fee increase and the rate of change of students from families receiving the Education Maintenance Allowance provides powerful evidence of increasing fees being one of the factors in the reduced coverage of low income families in Victorian Catholic schools.

Resources

6) *Catholic schools have significantly lower educational resource levels per student than other schools, especially in primary schools, although the relative position has improved over time.*

Catholic schools in Victoria utilize on average fewer resources than other schools. Table 15 provides the best information that we have been able to assemble on recurrent expenditure per pupil in primary and secondary schools in Victoria and Australia, by school type. While these figures are the best available to our knowledge, some issues of comparability remain. For example, the government figures are on an accrual basis, while the Catholic data are largely (especially at the primary level) on a cash basis. Also, the government school figures exclude the user cost of capital, while the figures for both Catholic and independent schools include interest payments on both capital and operating debt. Details of sources and some of the definitional issues are provided in the footnotes to Table 15.

Table 15. Recurrent Expenditure by Type of School, All Schools, Victoria and Australia, 2002 ($ per student)

	Victoria	Australia
Total		
Catholic	6242	6204
Other Non-Government	9871	8918
Government	7371	7812
Primary		
Catholic	4803	4887
Other Non-Government	6923	6218
Government	6094	6509
Secondary		
Catholic	7726	7537
Other Non-Government	11528	10402
Government	8189	8664
Combined Primary & Secondary		
Catholic	10028	7777
Other Non-Government	9960	10862
Government	n.a.	n.a.

Notes:
1. Different reporting times for Catholic (Jan) and Government schools (June).
2. Government schools, excluding user cost of capital.
3. Catholic schools – both cash and accrual – primary Catholic mainly cash.
4. Data on Catholic and other independent schools includes data on special schools.
   a. Excludes amounts related to boarding facilities, and direct payments by the Commonwealth to students and/or parents.
   b. Includes debt servicing of loans for capital and operating purposes.
   c. Expenditure of system offices is allocated across the schools in proportion to enrolments
   e. When figures have been rounded, discrepancies may occur between the sums of component items and totals.
   f. In 2001, only total boarding and tuition costs were separately identified in the Financial questionnaire, individual expenditure items relating to tuition costs in boarding schools have been estimated based on expenditure ratios from previous years.

Sources: CECV, from DEST and *Report on Government Services* (Productivity Commission 2004, Table 3A.7).

It spite of these data difficulties, it is clear that recurrent expenditure per pupil in Victorian Catholic primary schools in 2002 was much lower than in other schools, being 21% lower than in the average government primary school, and 31% lower than

non-government primary schools. Secondary schools are better resourced, but recurrent expenditure levels in Catholic systemic secondary schools was 6% and 33% lower than in government and other non-government secondary schools respectively in 2002. The exclusion of capital charges from government school figures and their inclusion for Catholic schools may reduce the extent of apparent resourcing differences between the two types of school. Recurrent expenditure levels in the five combined primary and secondary Catholic schools are comparable with similar independent schools in Victoria.

The resources of schools lie primarily in their staff, and are funded by their income. Reflecting the expenditure data, Catholic schools have significantly lower resource levels in both these areas. Schools within the Catholic sector have fewer staff per student than both the government and the other non-government school sectors, particularly in Victoria. Overall, in 2001, the student to staff ratio in Victorian Catholic schools was 16.0, compared to 11.1 in Victorian Anglican schools and 14.7 in Victorian government schools (Table 16).

Table 16. Student Staff Ratio, by Type of School, Victoria and Australia, 2001

	Victoria	Australia
Total		
Catholic	16.0	15.9
Anglican	11.1	12.4
Government	14.7	14.8
Primary		
Catholic	18.8	18.8
Anglican	11.7	14.9
Government	16.6	16.8
Secondary		
Catholic	13.5	13.4
Anglican	10.8	11.3
Government	12.5	12.4

Source: ABS Cat. no. 4221.

Catholic schools have long had more students per staff member than either the Government or the other non-government schools. The overall staff to student ratio has been falling in Catholic schools as in other schools, with the number of students per staff declining from 17.0 in 1999 to 15.5 in 2003. This compares with the decline from 15.0 in 1999 to 14.3 in 2003 in government schools. Until 2001, data for other non-government schools was presented as Anglican and other. Since then it has been presented as non-government independent and hence not strictly comparable. In 1999, the overall staff to student ratio in Anglican schools was 11.0. In 2003, this ratio was 11.7 in independent schools.

The situation with staff to student ratios is exacerbated in Catholic primary schools, where in 1999, there were 19.9 students to each teacher, compared to 17.2 in government schools. In Anglican schools the staff to student ratio in Victorian primary schools in 1999 was 12.9. However, there has been some improvement since

then, with the staff to student ratio in Catholic primary schools declining to 18.1 in 2003, compared to 16.2 in government primary schools at the same time. In all independent primary schools, this ratio was 13.6 in 2003. Catholic secondary schools had 13.6 students per teacher in 1999, compared to 12.6 in government schools and 10.9 in Anglican secondary schools. This ratio had declined to 13.1 in Catholic secondary schools in 2003, compared to 12.1 in government secondary schools. In independent secondary schools this ratio was at 10.8 in 2003.

It follows from these trends that income per student, which is the primary source of the funding of expenditure, is much lower in Catholic schools than in other non-government schools (Table 17). It has also been lower in Victorian Catholic schools than in all Australian Catholic schools, since 2001 in each level of education, except for the combined primary and secondary schools. However, there has also been some improvement in the situation in recent years (Table 18). In Victorian Catholic schools such income increased from $4501 in 1996 to $6916 in 2002, an increase of 53.7%, while in the other non-government schools in Victoria the increase was 44.5%, from $7842 in 1996 to $11,359 in 2002.

Table 17. Total Income per Student by Type of School, Victoria and Australia, Catholic Schools, 2000-2002 ($ per student)

	Victoria	Australia
Total		
2000	6037	6279
2001	6558	6822
2002	6916	7084
Primary		
2000	4523	4902
2001	5024	5416
2002	5270	5580
Secondary		
2000	7759	7827
2001	8132	8294
2002	8599	8663
Combined Primary & Secondary		
2000	9310	7582
2001	10895	8437
2002	11358	8716

Note: These include fees and grants used for capital purposes.
Source: NCEC reports.

Table 18. Total Income per Student by Type of School, Victoria, 1996-2002

	1996	1997	1998	1999	2000	2001	2002	Per cent change 1996-2002
Catholic	4501	4691	5207	5560	6037	6558	6916	53.7
Other non-govt	7842	8330	8651	9055	9703	10713	11359	44.8

Source: MCEETYA and CECV.

Growth in income per student has been the strongest in the combined primary and secondary school sector. This is not however representative of trends in the sector as a whole, as income per student grew by 54.6% for Catholic primary schools, increasing from $3408 in 1996 to $5270 in 2002, while for secondary schools the increase was 46.3%, from $5876 to $8599 (Table 19).

Table 19. Total Income per Student by Level of Catholic School, Victoria, 1996-2002

	1996	1997	1998	1999	2000	2001	2002	Per cent change 1996-2001
Primary	3408	3513	3953	4161	4523	5024	5270	54.6
Secondary	5876	6087	6637	7125	7759	8132	8599	46.3
Combined Primary & Secondary	6310	7234	8331	8957	9310	10895	11358	80.0

Source: See Tables 17 and 18.

7) *Grants to Catholic schools from the Australian Government have risen strongly, but those from the Victorian Government have stagnated, over the past decade.*

As evident in Table 20, there are four main categories of income for Victorian Catholic schools – fees and charges, private donations and income, State Government grants and grants from the Australian Government. Overall, fees and charges represent around 23 per cent of total income in Catholic schools, but they vary quite markedly with the level of schooling. In 2002, fees and charges represented 13.9% of total income at the primary level, 25.5% at the secondary level and 54.3% for the combined primary and secondary schools (Table 21). The capacity of different types of Catholic schools to raise increased fee income also differs markedly. In particular neither the primary nor secondary systemic schools can match the capacity of the combined primary and secondary schools, in which fees and charges rose from 49.6% to 54.3% between 1992 and 2002.

Table 20. Components of Income, Victorian Catholic Schools, 1992, 1997 and 2002, total, percentages

Total	1992	1997	2002
Fees and charges	22.5	23.8	22.9
Private Donations/Income	5.6	4.8	4.5
Total Private income	28.1	28.6	27.4
State Grants	21.6	19.6	16.3
Commonwealth Grants	50.3	51.8	56.3
Total Income	100	100	100

Source: NCEC reports.

Similar trends are apparent in terms of private donations and other income, which includes contributions from parish and other church sources to support schools. Overall, such donation and other income provided 4.5% of total Victorian Catholic school income in 2002 –about $314 per student – but only the combined primary and secondary schools have succeeded in increasing private income as a share of total income (Table 21). For primary schools, in particular, the share of donations and other income in total income has fallen from 6.9% in 1992 to 4.8% in 2002, as parish communities have been unable to provide increasing financial support. Thus, other than in the combined schools, total private income (fees and charges plus private donations and other income) has declined significantly as a share of total income in both primary and secondary schools, especially since 1997.

Table 21. Components of Income, Catholic Schools, 1992, 1997 & 2002, percentages

	Primary			Secondary			Comb Primary & Secondary		
	1992	1997	2002	1992	1997	2002	1992	1997	2002
Fees and charges	14.1	15.3	13.3	25.7	26.8	25.4	49.7	53.8	54.3
Private Donations/Income	6.9	5.9	4.8	4.7	3.9	3.9	5.3	5.4	6.9
Total Private income	21.0	21.2	18.1	30.5	30.6	29.3	55.0	59.2	61.2
State Grants	22.7	20.9	17.3	21.6	19.5	16.5	14.8	12.2	10.7
Commonwealth Grants	56.3	57.9	64.6	47.9	49.9	54.2	30.2	28.6	28.1
Total Income	100	100	100	100	100	100	100	100	100

Source: NCEC Reports.

Grants from the Victorian Government represented 21.6% of total income in Victorian Catholic schools in 1992, and 19.6% in 1997 (Table 20), but by 2002 they had fallen to 16.3 per cent of income. Similar trends are evident in both primary and secondary schools, was a fall of about 5 percentage points in the share of State Government grants in both sectors over this period.

All these factors have meant that Catholic systemic schools, both private and secondary, have become increasingly reliant on grants from the Australian Government. These grants are the major source of income for Catholic schools, representing around 56% of total income, while fees and charges are the main source of income for both the Catholic combined schools (providing 61% of total income (Table 21) and for other non-government schools, for which sector they represent around 64% of total income. For Catholic schools, Commonwealth Grants as a proportion of total income have increased from 50.3% in 1992 to 56.3% in 2002 (Table 20). In other non-government schools the share of these grants in total income has increased from 16% to 22% in the same period.

However, overall, the average annual increase in per student Commonwealth grants to other non-government schools has been much stronger than it has been in Catholic schools. Since 1996, Commonwealth grants to Catholic schools have increased from $2354 per student in 1996 to $3684 per student in 2001. In other non-government

schools these grants have increased from $1254 in 1996 to $2225 in 2001. While in absolute terms the increase for Catholic schools is larger, these changes represent an annual average rate of 9.4% in Catholic schools compared to the annual average rate of increase of 12.2% in independent schools.

Some detail on grants to Catholic schools by the Australian Government and by State Government is provided in Table 22. It highlights in particular the anomalous position of these grants in Victoria. For example, in Catholic schools nationally, state grants represent around 19.3 per cent of total income, and in New South Wales they represent 20 per cent of income, compared to 16.3 per cent in Victoria.

More specifically, the level of State Government grants to Catholic schools in Victoria (at $914 per capita for primary schools and $1415 per capita for secondary schools) are for both sectors the lowest of any of the States and also have shown the lowest growth rate for any of the States over the period 1996 to 2002 (Table 22). The magnitude of the difference in funding is very significant. If in 2002 Victoria Catholic schools received funding from the State Government equal to the average level of the other five States ($1477 per student or an additional amount of $348 per student), the additional annual funding would have been in excess of $60 million.

This situation clearly needs to be addressed if Victorian schools are to survive and prosper, and to contribute effectively to the State's overall educational goals.

Table 22. Commonwealth and State Government Grants to Catholic Schools, by State, 1996 and 2002 ($ per student)

COMMONWEALTH GRANTS BY STATE

	NSW	VIC	QLD	WA	SA	TAS	NT	ACT	AUST
Catholic Primary Schools									
1996	2010	1983	1916	2006	1883	1768	2198	1996	1976
2002	3207	3405	3299	3175	3541	3519	3637	3086	3301
Percentage change	59.6	71.7	72.2	58.3	88.1	99.0	65.5	54.6	67.1
Catholic Secondary Schools									
1996	2830	2941	2755	2967	3171	3004	na	2760	2880
2002	4266	4661	4551	4407	4735	4587	4831	4139	4454
Percentage change	50.7	58.5	65.2	48.5	49.3	52.7		50.0	54.7
Combined Primary & Secondary Schools									
1996	2099	1898	2445	2882	2377	2406	na	2516	2339
2002	3417	3185	3978	4350	3670	4016	4057	3779	3713
Percentage change	62.8	67.8	62.7	50.9	54.4	66.9		50.2	58.7
Total Catholic Schools									
1996	2336	2354	2268	2439	2256	2276	2605	2328	2335
2002	3658	3892	3807	3760	3773	3983	4016	3579	3769
Percentage change	56.6	65.3	67.9	54.2	67.2	75.0	54.2	53.7	61.4

STATE GRANTS BY STATE

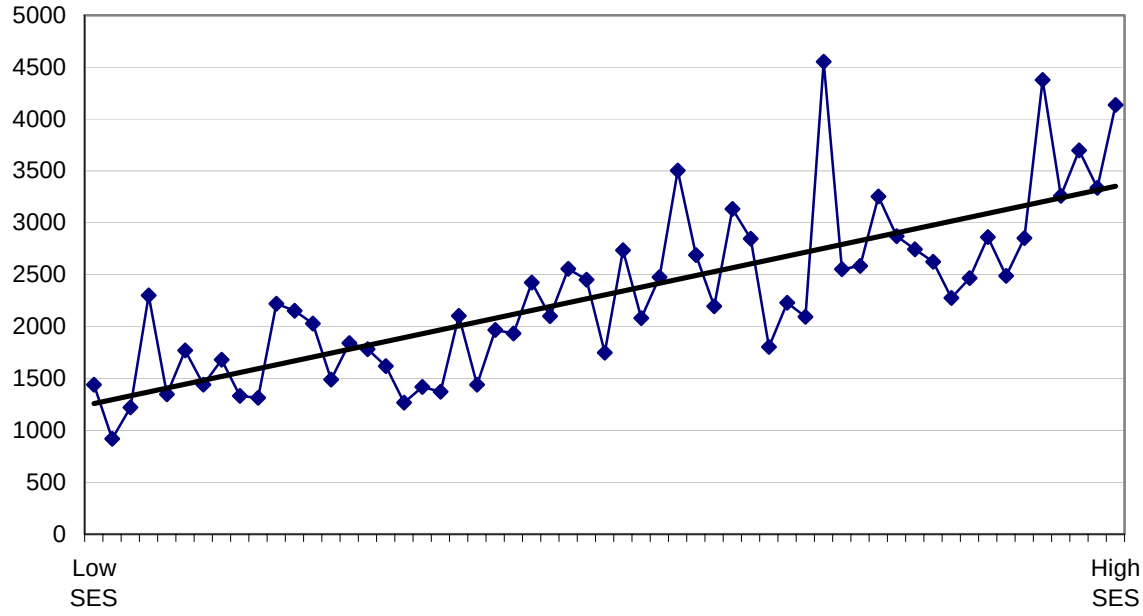
	NSW	VIC	QLD	WA	SA	TAS	NT	ACT	AUST
Catholic Primary Schools									
1996	856	702	915	820	925	769	1266	851	821
2002	1213	914	1288	1447	1214	1322	1731	1084	1161
Percentage change	41.7	30.2	40.8	76.5	31.2	72.0	36.7	27.4	41.4
Catholic Secondary Schools									
1996	1351	1122	1383	1325	1152	1233	na	1250	1277
2002	1770	1415	1794	1988	1557	1763	2402	1585	1676
Percentage change	31.0	26.1	29.7	50.0	35.2	43.0		26.8	31.2
Combined Primary & Secondary Schools									
1996	1097	835	1137	1106	929	933	na	1284	1054
2002	1524	1217	1520	1761	1259	1407	1726	1443	1459
Percentage change	38.9	45.7	33.7	59.2	35.5	50.8		12.4	38.4
Total Catholic Schools									
1996	1072	872	1101	1016	962	941	1748	1064	1009
2002	1469	1129	1487	1668	1283	1478	1865	1323	1384
Percentage change	37.0	29.5	35.1	64.2	33.4	57.1	6.7	24.3	37.2

Source: NCEC Reports.

8) *While the Catholic Education Office undertakes some redistribution of government funds, resource levels per student in secondary schools are still higher in high SES schools than in low SES schools within the Catholic system in Melbourne.*

With government funding now such an important part of the revenue base of Catholic systemic schools, and with most of those funds received as block system grants, how those funds are allocated to individual schools by the Catholic school authorities is an important issue. Given its own commitments to poorer schools, and the intention of governments, the CECV does distribute these funds on a progressive basis, providing higher funding levels to schools with greater need.

Chart 9. Total Fees per Student Catholic Secondary Schools within Melbourne, by SES, 2002 (excludes the high income combined primary & secondary schools)

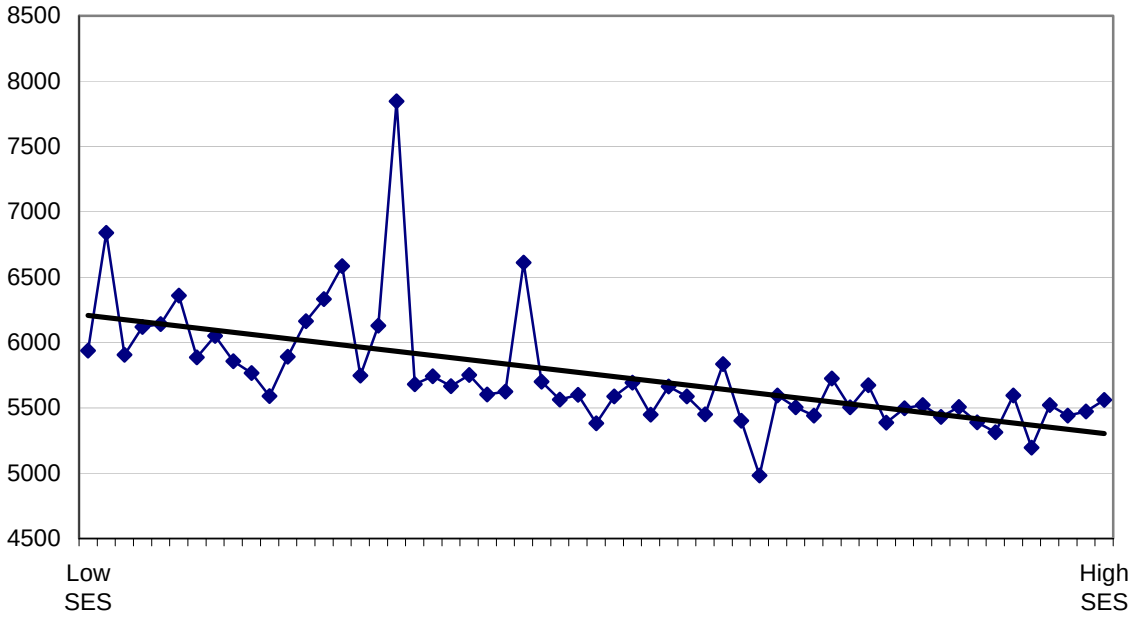


Source: CECV, from DEST Financial Questionnaire, 2002.

For secondary schools, however, it appears that the extent of the redistribution undertaken is not sufficient to equalise total income across schools by socio-economic status, and to offset the capacity of schools in with students from higher SES areas to raise more private income. On average secondary schools within the Melbourne region had an average income of $8,308 per student. Ranked by SES, income per student in these schools increased from a low of $7,487 to $10,115 in the highest SES. However, this comparison is heavily influenced by a small number of high fee, high income schools, so we undertook an analysis of all Catholic secondary schools within Melbourne, excluding these high income schools. The results are summarised in Charts 9-11. These charts show various components of total income for 57 Catholic secondary schools within Melbourne, ranked from left to right in terms of socio-economic status, together with an estimated trend line through these points. The use of the trend line serves to abstract from the inevitable special factors that influence allocations to a particular school in a given year, and focus on the underlying logic.

Chart 9 shows collected fees per student for the 57 schools, and illustrates the ability of higher SES schools to collect higher fee income. Whereas the average fee collection was about $1300 per student per annum for schools at the lowest SES level, for schools at the top end (even excluding the highest fee schools) it was about $3600 per student per annum. Chart 10 shows, on a similar basis, the extent of the redistribution undertaken by the CECV. For the lowest SES schools, government grants per student average some $6200 per annum, whereas at the highest SES level they average about $5500 per annum.

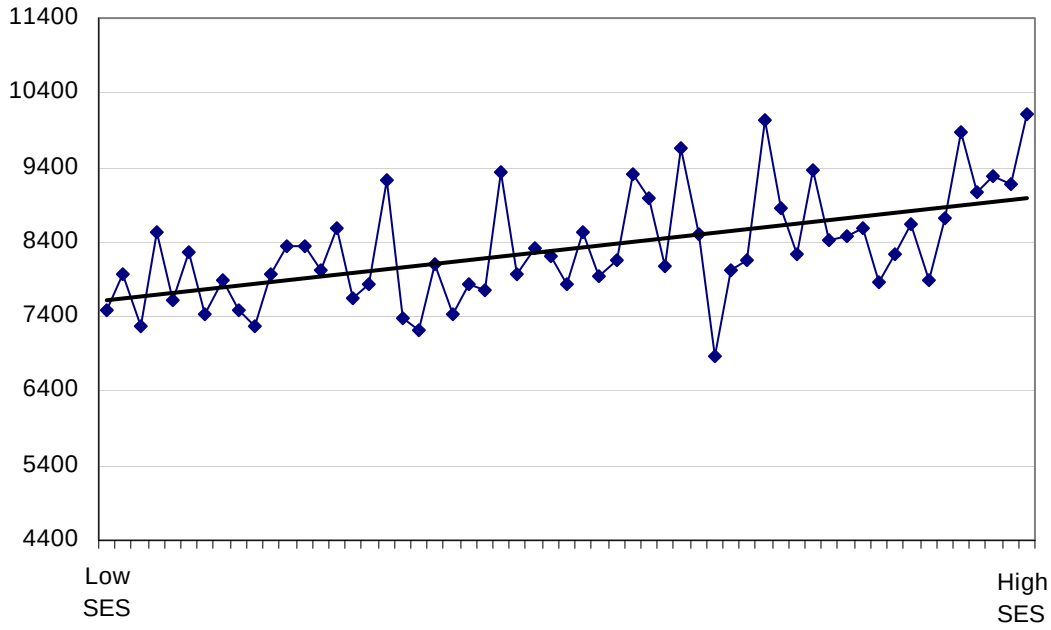
Chart 10. Total Government Grants per Student, Catholic Secondary Schools, within Melbourne, by SES, 2002 (excludes the high income combined primary and secondary schools)



Source: CECV, from DEST Financial Questionnaire, 2002.

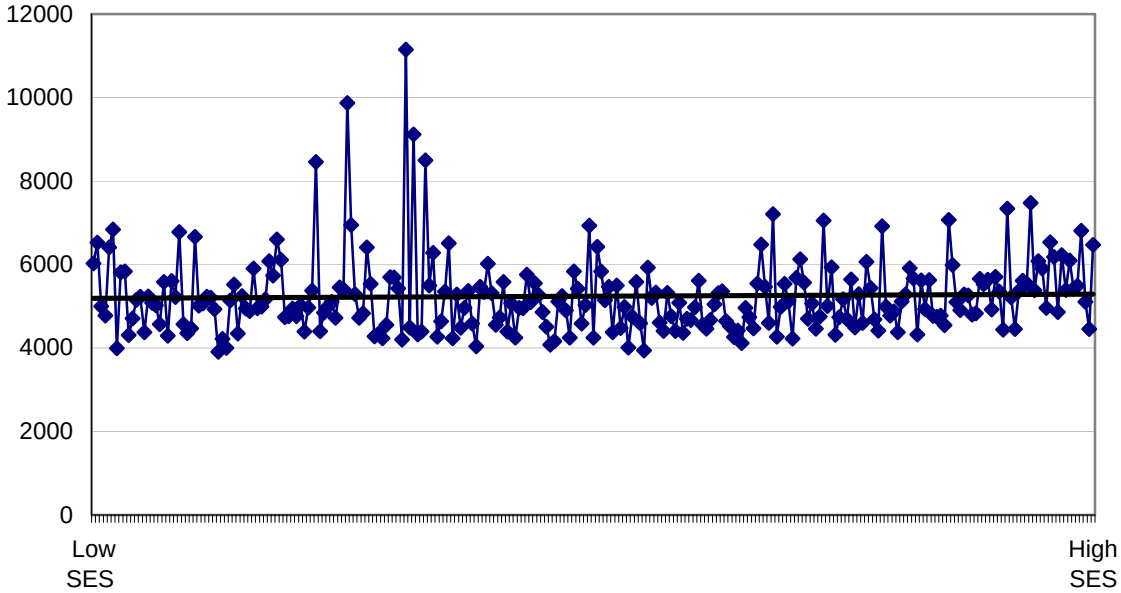
Finally, Chart 11 brings these together by showing total school income per capita on the same basis. It makes clear that the redistribution undertaken by the CECV is not sufficient to offset the differentials in ability to raise private income, and that income per student is some $1000 greater in schools at the highest than those at the lowest SES. Of course, if the argument made elsewhere in this report – that increased resources are necessary to compensate for deficiencies in social capital in poorer schools and regions – is accepted, a redistribution which goes beyond income equalisation would be called for.

Chart 11. Income per Student, Catholic Secondary Schools, within Melbourne, by SES, 2002 (excludes combined primary & secondary schools)



Source: CECV, from DEST Financial Questionnaire, 2002.

Chart 12. Total Income per Student, Catholic Primary Schools, within Melbourne, by SES



Source: CECV, from DEST Financial Questionnaire, 2002.

A similar analysis was conducted for primary schools within Melbourne, with different results. For primary schools the differences across SES groups in fee income

are smaller relative to the redistribution undertaken by the CECV, so that the trend line for total income per capita is flat across the SES distribution (see Chart 12).

9) *Over the past decade the demands on Catholic schools, as on all schools, have increased greatly*.

The overall demand on all schools has increased over recent years. This demand arises from a range of factors. As Australia, in line with other countries, becomes a knowledge-based economy, it also requires increasing levels of education for its young people, for their effective participation in society. The level and quality of education that a person acquires increasingly determines their prospects, both socially and economically. Hence, schools are under greater pressure to provide high quality education. There is renewed pressure both from government and parents to increase retention rates and achieve higher outcomes. Parents, in particular, are demanding broad based curriculum, expanded vocational training programmes and reduced class sizes. Although government schools have been able to introduce an upper limit of 21 students in preparatory grades, this has not been possible in Catholic schools. Among Catholic schools in 2003, the average size of classes containing Preps was 23.5, and of the classes containing Prep, Year 1 or Year 2, there were 71 (4.1%) with 30 or more students. In addition, the Catholic sector has not had the capacity to match the improvement in student/staff ratios in the Government sector, although some advances have been made. Some Catholic schools have indicated that they might instead be forced to consider the option of increasing student-teacher ratios again.

The Australian Government has set national goals for outcomes to be realised by schools, both at the primary and the secondary levels, and there is greater pressure on these institutions to be accountable by meeting nationally set criteria. At the state level, the demands put on schools are evident by the requirement for progress and is to be demonstrated through specific performance targets, which include:

- Victorian primary school children will be at or above national benchmark levels for reading, writing and numeracy by 2005.
- 90% of young people in Victoria will successfully complete year 12 or its equivalent by 2010.
- The percentage of young people 15-19 in rural and regional Victoria engaged in education and training will rise by 6% by 2005.
- The proportion of Victorians learning new skills will increase.

At the same time Australian society is becoming less cohesive, with many families facing serious social disadvantage and a significant proportion of children living in families in which no adult is employed. These and other factors are leading to an overall increase in the welfare needs of students in Catholic schools, as in other schools.

A study by the Australian Youth Research Centre at the University of Melbourne (2004), undertaken for the Catholic Education Commission of Victoria, indicated that a wide range of welfare issues are reflected in the classrooms in Victorian Catholic schools. These included:

- poverty, family violence, family break up, and mental health or drug abuse problems in families in the home or community context;
- disabilities, illness, and nutrition in the area of student well being;
- depression, anxiety, attention deficit hyperactivity disorder and other conduct-related mental health problems of students;
- bullying and negative classroom behaviours amongst students;
- problems arising from student use of alcohol, adolescent risk-taking and sexual preference issues;
- learning problems related to literacy and numeracy, learning disabilities;
- the negative impact of new technologies, such as the internet and the use of mobile phones to harass others, and the impact of media; and
- staff mental health, which included staff burnout or fatigue and reduced time to focus on curriculum and pedagogy.

These important welfare needs coexist in all schools with the increasing push for excellence and equity. With limited financial and staff resources, this combination of factors have impacted strongly on Catholic schools in Victoria.

10) *The increase in retention rates, the decline of the religious orders and the limited ability of Catholic communities to support schools financially also have also placed increased pressure on Catholic schools.*

Many other factors have placed increasing pressure on Catholic schools in recent decades, and made it more difficult for the Catholic community to sustain these schools without increase support from public funds. One simple example is the decline of the religious orders, and hence of the highly subsidised teaching and leadership expertise that they provided. The number of full time religious staff in Catholic schools in Victoria has declined by 341, from 429 in 1989 to 88 in 2003. The stipend paid to religious staff in 2003 was $26,225, with an additional allowance of $2,622 for religious primary principals. This can be compared with the average teacher cost in 2003 of around $61,100 (including on costs) in Melbourne secondary schools and $58,600 in primary schools. The direct cost to Catholic schools of replacing these 341 members of religious orders with lay staff is about $12 million per annum, at 2003 values.

Educational Outcomes and Social Capital

11) This report has stressed that educational outcomes must be assessed only after taking account of socio-economic and other factors. After taking account of these factors, Catholic schools achieve better than average outcomes on a range of measures, with the increment over average outcomes being particularly pronounced for students from lower socio-economic backgrounds.

There is an extensive body of literature for the USA, and some literature for Australia, looking at the distinctive contribution of Catholic schools, measured in terms of various types of educational outcomes, after taking account of socio-economic and

other relevant factors. In the USA the literature was sparked by seminal contributions from Coleman and his colleagues (e.g. Coleman et al. 1982; Coleman and Hoffer 1987), and has continued in terms of a substantial debate to the present time. Important references are Evans and Schwab (1995), Sander and Krautmann (1995), Neal (1995, 1998), Grogger and Neal (2000), Jepsen (2003) and Dee (2003). The Australian literature is much less extensive, but includes Williams and Carpenter (1982, 1990), Vella (1999) and Le and Miller (2003). To our knowledge there has been no literature specifically addressing the issue for Catholic schools in Victoria.

This literature typically uses student longitudinal or cross-section data, and seeks to isolate the effects of Catholic schools after controlling for socio-economic variables, other variables such as gender and race, ability (in some cases) and the selection problem (the fact that a biased sample of students may be selected into private schools). While there are dissenting voices, the broad finding of both the USA and Australian studies is that Catholic schools do indeed achieve higher outcomes, at least in some circumstances, than would be predicted after taking account of all socio-economic and other relevant factors. Many American studies find this affect to be substantial, especially in relation to urban areas and particular in relation to minority groups within such urban areas, and some argue that it is confined to such groups and areas. In the Australian literature, Vella (1999) finds strong positive effects of Catholic schools, while Le and Miller (2003) find mixed effects, depending on the specification and role of the variable used to measure student ability.

It has not been possible to undertake, in the context of this report, a systematic analysis of these issues using data for Victorian schools and students. However, we do present here three pieces of evidence for our conclusion that Victorian Catholic schools achieve better than average outcomes on a range of measures, with the increment over average outcomes being particularly pronounced for students from lower socio-economic backgrounds. These consist of a review of results from analysis of the 2002 Achievement Improvement Monitor (AIM) state-wide testing program of students' literacy and numeracy achievement at years 3 and 5; the results of a multi-level regression analysis undertaken for this report by Dr Stephen Lamb of the Centre for Post-Compulsory Education and Lifelong Learning at Melbourne University, using detailed data on VCE results by student and school for 2003;[7] and a brief analysis of the post-school transition data from the 2002 On Track Survey. These are reported in findings 12-14 below.

12) *Catholic schools perform better than average in the AIM testing undertaken at years 3 and 5.*

In tests based on the Curriculum and Standards Framework (CSF) and undertaken as part of the state-wide AIM testing program, Catholic schools show higher proportions in the expected and better than expected performance levels, when compared to all students in Victoria. These results are displayed graphically in Chart 13. The data are reported in five levels, of which level 3 is the expected level. In the charts the two lower than expected levels have been amalgamated, as have the two better than

[7] The authors of this report would like to express their gratitude to Dr Lamb for undertaking these analyses, and to make clear that he should not be held responsible for the use to which they are put here. This is entirely our responsibility.

expected level. The analysis here does not correct for socio-economic status or for other characteristics of the students or the schools.

The central point is that, in virtually all of the test areas and for both years 3 and 5, Catholic schools have lower proportions than the state as a whole in the lower than expected levels, and correspondingly higher proportions in the expected or higher than expected levels.

In reading there is a significant proportion in the below expected level, but it is lower than the levels for all schools. Also the proportion of students in the below expected category declines quite markedly by year 5, and remains lower than the total for all schools among Catholic school students. Catholic schools had higher proportions in above expected results in both year 3 and in year 5 in reading. Catholic schools have a marginally lower performance in year 5 in the expected category than all schools in year 5. In actual numbers, the overall number of students in Catholic schools in year 3 was 13263 compared to 58473 in all schools. In year 3, there were 2467 students in Catholic schools that were below expected levels compared to 13039 in all schools. There were 6738 students in the expected level in Catholic schools in year 3 compared to 28652 in all schools and in the above expected levels there were 4058 in Catholic schools compared to 16782 in all schools. In year 5 there were a total of 13245 students in Catholic schools compared to 57835 in all schools. Of these 570 students in Catholic schools were at the below expected level compared to 3586 in all schools; 5311 in Catholic schools were at the expected level compared to 23770 in all schools and 7364 in the above expected level compared to 30479 in all schools.

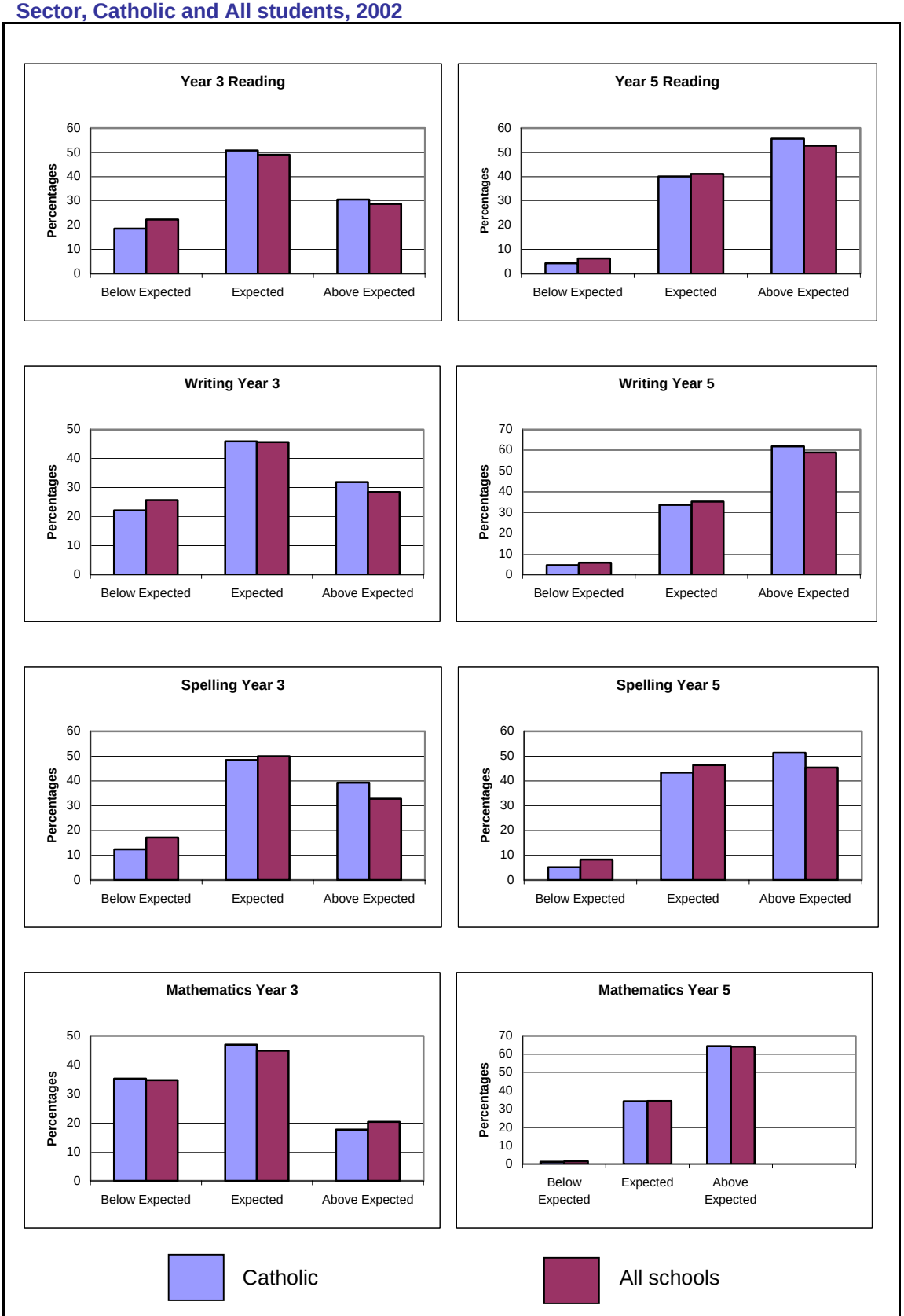
In writing tests again the picture is similar, with higher proportions in both Catholic and all schools in the below expected category in year 3 than in year 5. Catholic schools had lower proportions in this category in both year 3 and year 5. Catholic schools had higher proportions in the above expected category in both year 3 and year 5. In the expected category they had the same as all schools in year 3 and slightly lower in year 5. For writing, there were 13323 students in year 3 in Catholic schools compared to 58698 in all schools. Of these 2944 students were in the below expected level in Catholic schools compared to 15085 in all schools; 6115 were at the expected level in Catholic schools compared to 26825 in all schools; and 4250 were at the above expected level in Catholic schools compared to 16729 in all schools. There were a total of 13296 students in Catholic schools in year 5 for the writing assessment compared to 58031 in all schools. Of these 598 were in the below expected level in Catholic schools compared to 3308 in all schools; 4481 in Catholic schools were at the expected level compared to 20485 in all schools; and 8217 were in the above expected level compared to 34238 in all schools

In spelling tests, the performance of Catholic school students was similar, with lower proportions of students in the below expected category than all schools and higher in the above expected category in both years 3 and 5. There were 13257 students in year 3 for the spelling tests compared to 58409 in all schools and 13252 in year 5 in Catholic schools compared to 57820 in all schools.

In mathematics, however, there was a slightly higher proportion of students in the below expected category in year 3 than in all schools and lower than in the all schools in the above expectation category. However, in year 5 there was a slightly higher

proportion of Catholic school students in the above expected category and slightly lower in the below expected category than in all schools. There were 13309 students in Catholic schools in year 3 compared to 58878 in all schools and 13273 in Catholic schools in year 5 compared to 58065 in all schools. In year 3, 4685 were in the below expected level in Catholic schools compared to 20431 in all schools; 6255 in Catholic schools were at the expected level compared to 26436 in all schools and 2356 were in the above expected level compared to 12011 in all schools. In year 5, there were only 159 students in the below expected level in Catholic schools compared to 871 in all schools; 4566 in the expected level compared to 20032 in all schools and 8548 in the above expected level in Catholic schools compared to 37220 in all schools.

Chart 13. Results Expressed as Percentages of Students in CSF Levels by School Sector, Catholic and All students, 2002



Source: AIM Technical Report, VCAA, 2002.

Improving Literacy and Numeracy in Catholic Schools in Melbourne

In 1997 the Commonwealth, State and Territory Education Ministers agreed to a national plan aimed at improving the literacy and numeracy skills of young Australians. Specific Commonwealth funding was provided to systems to support the implementation of this plan. In response the CEOM developed a system-wide strategy, Literacy Advance, to support schools in raising the literacy standards of all students, in particular those most at risk of falling behind. At the same time, the Literacy Advance Research Project was established (conducted by the Australian Council of Education Research), to gather evidence over time of the impact of this significant initiative.

The Early Years (P-2) has been a central focus from the initial implementation of the strategy, in recognition of the critical importance of building strong foundations in literacy during the first two years of school. In recent years, while the focus on P–2 has continued, the strategy has been further developed in Years 3–4 and in what is widely referred to as the 'Middle Years' of schooling – Years 5–9.

CLaSS (Children's Literacy Success Strategy) is the most widely used literacy approach in the early years in Melbourne Catholic schools. In 1997 Professor Peter Hill and Ms Carmel Crevola, then based at the Centre for Applied Educational Research at the University of Melbourne, were commissioned to develop the CLaSS design for the Catholic sector. By 2004 over 90% of Catholic schools in Melbourne have adopted the CLaSS approach.

Amongst its features CLaSS strongly encourages schools to develop effective school-community partnerships. Schools report a high degree of support for CLaSS by parents and other adult members of their parish communities, who are assisting with the reading component of the program and other associated 'parent helper' tasks. It is gratifying for all concerned to see an increasing number of people involved in this way, as there is extensive research evidence about the vital role that parents and adults can and do play in children's literacy development.

Phase Three of the Literacy Advance Research Project was published earlier this year. Titled *Five Years On: Literacy Advance in the Primary Years*, the study has highlighted the importance of a strong reading foundation in the Prep year and initial achievement in Year 1, each of which are strong influences on student literacy growth in later years. The research also identified several key challenges for achieving real, sustained improvements in literacy achievement, a major one being the continuing need to assist students who experience difficulties in literacy beyond Year 1 to ensure that the gains they have achieved are maintained.

Since 1998 the efforts of primary and secondary Catholic schools have been consistently rewarded through the receipt of National and State Awards in recognition of the gains in literacy outcomes made by their students. Further, data from the 2002 Achievement Improvement Monitor (AIM) state-wide testing program of students' literacy and numeracy achievement at Years 3, 5 and 7 indicate that students in Catholic schools have met or exceeded the state benchmark levels in each area tested (Reading, Writing, Spelling, Number and Mathematics) at each of the three year levels (see Chart 13).

13) *After correcting for socio-economic and other relevant factors, Catholic schools achieve higher VCE results than Victorian schools as a whole, as do independent schools. Given our earlier analysis of within CCD variation, the independent school estimates may be influenced by misspecification of the socio-economic status variable, but this is unlikely to be the case for Catholic schools. There is also evidence that the beneficial impact of Catholic schools is particularly pronounced in lower SES groups.*

The analyses reported here make use of a multi-level modelling framework similar to (3) above, but augmented to include socio-economic status at both the student and school level, gender at both levels, school size and school type dummies. Thus the full equation is

$$(4)\ Y_{ij} = \beta_0 + \beta_1 x_{1ij} + \beta_2 x_{2ij} + \beta_3 x_{3ij} + \beta_4 Z_{1j} + \beta_5 Z_{2j} + \beta_6 Z_{3j} + \beta_7 Z_{4j} + \gamma\, CD + \delta\, ID + u_{0j} + e_{0ij},$$

where β_0 is the overall intercept, the terms x_{1ij}, x_{2ij} and x_{3ij} variables taking values for student *i* in school *j* for gender, socio-economic status and GAT score, the Z_j variables are school level variables for mean GAT score, mean SES, percentage female and size respectively, CD and ID are dummy variables for Catholic and independent schools respectively, u_{0j} is the school level residual and e_{0ij} is the residual at the student level.

The first step is to use this framework to provide estimates of mean VCE scores by SES decile, by gender and by school type and after adjustment for GAT. This provides one way of assessing the impact of school type, after taking account of all the relevant variables. The results of this analysis are presented in Table 23, and the percentage difference in mean scores for students in Catholic schools relative to all Victorian students by SES decile is shown in Charts 14 and 15.

For males, the corrected mean scores for Catholic school students are higher than those for all students in the seven lowest deciles, but somewhat lower in deciles 8-10. In the lowest SES deciles, the effect is particularly pronounced, with mean Catholic scores being 4% above that for all students in the lowest decile, and 2.75% above in the second lowest decile.

For females the corrected mean decile scores for students attending Catholic schools are higher than those for all students in nine out of ten deciles, and again with stronger effects at lower levels of SES.

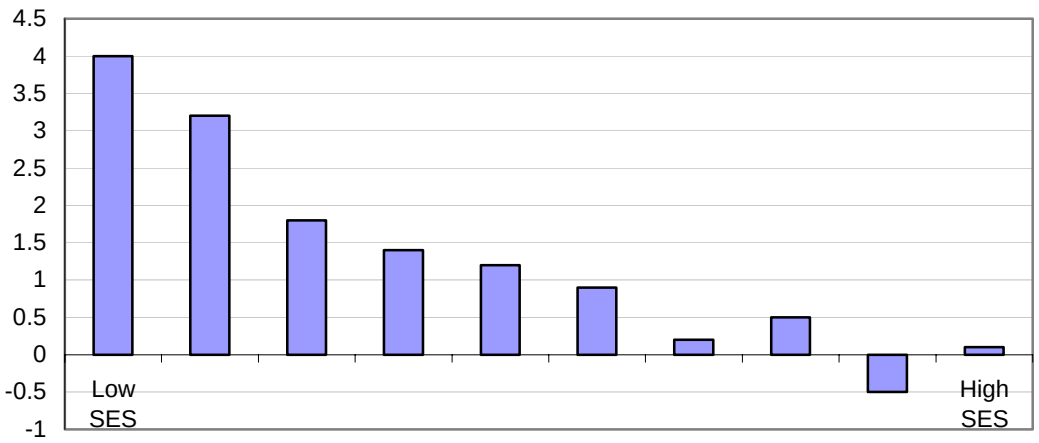
These results are strongly reminiscent of the findings in the US literature, and indicate that Catholic schools have substantially beneficial effects on VCE performance, especially in the lower half of the socio-economic distribution.

Table 23. Mean VCE Score, by SES Decile, School Type and Gender, Adjusted for GAT, 2003

SES Decile	Government	Catholic	Independent	Total	Catholic/ Total (per cent)
Males					
Low	27.6	29.1	30.0	28.0	4.0
2	28.5	29.6	30.7	28.8	2.7
3	28.8	29.6	31.6	29.2	1.4
4	28.9	29.9	31.2	29.4	1.8
5	29.1	29.9	31.5	29.5	1.2
6	29.3	30.0	31.6	29.8	0.8
7	29.9	30.4	31.8	30.3	0.3
8	30.4	30.2	32.0	30.7	-1.7
9	30.7	31.0	31.9	31.1	-0.4
High	31.4	32.4	33.1	32.4	-0.1
Females					
Low	27.7	29.2	29.8	28.1	4.0
2	28.5	29.8	30.9	28.9	3.2
3	28.9	29.8	31.4	29.3	1.8
4	28.9	29.8	31.6	29.4	1.4
5	29.3	30.1	31.7	29.7	1.2
6	29.5	30.2	31.5	29.9	0.9
7	30.0	30.5	32.0	30.4	0.2
8	30.2	30.9	32.0	30.8	0.5
9	30.9	31.2	32.2	31.4	-0.5
High	31.0	32.1	32.7	32.1	0.1

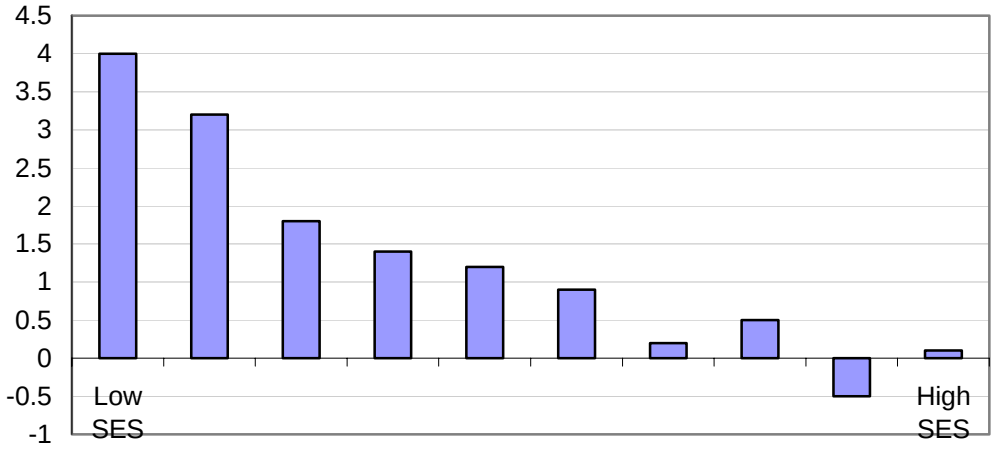
Source: Estimates prepared by Dr Stephen Lamb, based on data provided by Victorian Curriculum and Accreditation Authority.

Chart 14. Mean VCE Score, Males, by SES Decile, Adjusted for GAT, 2003, Catholic/Total (per cent)



Source: See Table 23.

Chart 15. Mean VCE Score, Females, by SES Decile, Adjusted for GAT, 2003, Catholic/Total (per cent)



Source: See Table 23.

Table 24. Multi-level Regression Estimates of Mean Year 12 VCE Study Scores, Victoria, 2003

	Null model	Level 1 model	Level 2 model
Intercept	29.038**	29.116**	29.070**
Student-level variables			
Female		1.535**	1.533**
SES		0.008**	0.006**
School -level variables			
Mean SES			0.015**
Percentage female			0.009
Size			0.006**
Catholic			1.983**
Independent			3.355**
Variance analysis			
Student-level	25.8	25.1	25.1
School-level	11.3	8.5	3.8
Variance at each level (%)			
Between students	**69.5**		
Between schools	**30.5**		
Variance explained			
Between students		**2.7**	**2.7**
Between schools		**24.8**	**66.4**
Variance explained total		9.4	22.1

Note: **p < 0.01.
Source: Estimates prepared by Dr Stephen Lamb, based on data provided by the Victorian Curriculum and Accreditation Authority. SES is based on address-matched census collection district scores from the occupation and education index of the Socioeconomic Indexes For Areas (SEIFA) provided by the Australian Bureau of Statistics. The school-level measure for SES is the mean student values.

The second stage is to estimate the full equation (4), using the complete data base on VCE students and schools. In the light of the discussion in section 1 above about the interpretation of the GAT variables in equations of this type, equation (4) has been estimated both excluding and including these variables. The results are reported in Tables 24 and 25 respectively.

These estimates show a strong effect of Catholic schools on student VCE outcomes, which is significant at the 1% level. As one might expect, the observed effect is stronger when the GAT variables are excluded, although the explanatory power of equation (4) is much reduced. But the effect remains strong, for both Catholic and independent schools, when the GAT variables are included. Further consideration needs to be given to detailed analyses of this type and their interpretation, including the examination of more accurate measures of socio-economic status. But these analyses provide evidence of a distinct contribution of Catholic schools to VCE outcomes, after correcting for all relevant factors.

Table 25. Multi-level Regression Estimates of Year 12 VCE Study Scores, Victoria, 2003 (with GAT)

	Null model	Level 1 model	Level 2 model
Intercept	29.038**	29.314**	29.421**
Student-level variables			
Female		1.555**	1.560**
SES		0.004**	0.003**
GAT		0.214**	0.212**
School -level variables			
Mean GAT			0.126**
Mean SES			0.004**
Percentage female			-0.002
Size			0.003**
Catholic			0.842**
Independent			1.254**
Variance Analysis			
Student-level	25.8	16.5	16.5
School-level	11.3	3.1	1.1
Variance at each level (%)			
Between students	**69.5**		
Between schools	**30.5**		
Variance explained			
Between students		**36.0**	**36.0**
Between schools		**72.6**	**90.3**
Variance explained total		47.2	52.6

Note: **p < 0.01.

Source: Estimates prepared by Dr Stephen Lamb, based on data provided by the Victorian Curriculum and Accreditation Authority. SES is based on address-matched census collection district scores from the occupation and education index of the Socioeconomic Indexes For Areas (SEIFA) provided by the Australian Bureau of Statistics. The GAT scores measure the results of students on general achievement tests. The school-level measures for SES and GAT are the mean student values. Correlation between GAT and mean VCE study score is 0.72. At this level, multicollinearity is an issue.

(14) Students from Catholic schools achieve higher than average rates of transition to university, after correction for socio-economic status and gender, than Victorian students as a whole.

The On Track Survey is a comprehensive study, covering about 35,000 individuals who have completed VCE in a given year, undertaken by the Centre for Post-Compulsory Education and Lifelong Learning at Melbourne University for the Victorian Government. It provides a range of information about the destinations of VCE graduates, including by school type, and enables the use of geocoding methods to assess the socio-economic status of students.

Table 26. Transition to University, by School Type, Socio-economic Status and Gender, 2002 (per cent of VCE completers)

	Girls			Boys		
	Catholic	All Schools	Difference	Catholic	All Schools	Difference
Highest	65	63	2	56	54	2
Upper Middle	50	44	6	38	37	1
Lower Middle	48	37	11	36	29	7
Lowest	45	34	11	34	26	8

Source: On Track Survey (Polesel and Teese 2004).

Table 26 provides information, drawn from the On Track Survey report for 2002, on transition rates to university for students by gender and school type, for four quartiles of socio-economic status. While transition to university is not by any means the only indicator of performance in secondary school education, it is an important indicator nevertheless. Table 26 shows that students from Catholic schools had higher transition rates to university education than the all schools average, and that this was very pronounced in the lower middle and lowest socio-economic quartile. For girls in these two quartiles the transition rate was 11 percentage points higher in Catholic than in all schools, while for boys the difference was 7-8 percentage points.

(15) These higher than average outcomes, after correction for family background and other relevant factors, probably reflect the social capital embodied in the Catholic tradition, in individual Catholic communities and in the schools themselves.

The three pieces of evidence indicate that Catholic schools do indeed achieve higher than average outcomes in several importance dimensions, after correcting for socio-economic status and other relevant factors, especially for students from less advantaged background. They thus suggest that the hypothesis developed in Section 1, that Catholic schools and the Catholic tradition carry educationally relevant social capital that individuals can access for educational activities and that this should be of special value for students with low access to social capital, is correct.

The Cost-Effectiveness of Catholic Schools

(16) Thus Victorian Catholic schools achieve significantly higher than average educational outcomes, after correction for family background, at substantially lower than average costs.

The findings to date indicate that students in Catholic schools, especially those from lower socio-economic backgrounds, achieve higher than average educational outcomes, and that this is achieved with access to substantially lower resources than for other schools. While providing evidence for the role of specific social capital, they also indicate that these schools are a highly cost-effective way of achieving the central public objectives of excellence with equity in education. They also suggest that Catholic schools can play a valuable role in any new strategy to better achieve those vital public objectives.

(17) Disregarding the benefits from better than average outcomes, that is considering only the contribution of the Catholic community and lower costs, Victorian Catholic schools generated a net saving to the Australian community in 1999-2000 of about $440 million per annum, or about $2450 per annum per student enrolled.

There are a number of ways in which the operation of Catholic schools might produce a net benefit to the overall community. Several relate to the cost and funding of these schools, relative to the alternative of a fully funded government school. These include the direct contribution by parents and the broader Catholic community to recurrent and capital costs of the schools and through the savings from achieving at least equal outcomes for reduced costs. Other benefits might arise through the achievement of higher than average educational outcomes or other social benefits for (assumed) average costs, while social costs might emerge to the extent to which Catholic schools, by selecting many able or committed students from more affluent families, make the job of government schools more difficult. Our view is that the evidence indicates that there are no significant selection effects into Catholic schools but that higher than average outcomes after correction for family background are obtained, so that there should be further net benefits from these factors. Nevertheless we ignore these factors here, and calculate only the net financial savings arising from Catholic schools in Victoria.

Conceptually there are three elements in our estimate of savings to governments as a whole in Australia:

- the direct private contribution of parents and the Catholic community to the operating costs of the schools;
- the contribution of parents and the Catholic community to the capital infrastructure of the schools; and
- the savings arising from achieving at least average outcomes from lower recurrent expenditure per pupil than is the case in government schools.

We estimate the net value of these three factors by comparing, for Victorian primary and secondary schools separately, the total cost of that would be incurred in educating Catholic school children in government schools (average government sector recurrent expenditure plus capital user charge per student) with the contribution that governments make to the costs of Catholic schools (recurrent grants from both levels of government to Catholic schools plus that proportion of the capital costs of these schools that have been in effect met by government, such as by capital grants, interest subsidies or tax deductions). The capital user charge is that applied by the Productivity Commission in its *Report on Government Services* (Productivity Commission 2004). In calculating the proportion of that charge met by governments in Catholic schools we make two conservative, simplifying assumptions: that the capital stock employed in Catholic schools has a value per student 80% of that for government schools, and that 50% of the cost of that capital stock has been contributed by governments.

On this basis we estimate that Victorian Catholic schools generated a net saving to the Australian community in 1999-2000 of about $440 million per annum, or about $2450 per annum per student enrolled. Updated estimates to 2003 are bedevilled by the data issues referred to elsewhere in this report, especially the move from cash to accrual accounting for the government sector, but are likely to be higher than these figures.

(18) For the Victorian Government, which would otherwise bear most of the costs of educating students now in Catholic schools, the net saving is substantially greater.

If all Catholic students were to be educated in government schools, average government school costs per student would be incurred and Commonwealth payments in respect of these students as private school students (net of Commonwealth payments in respect of government schools) would be foregone. In this scenario the net saving to the Victorian taxpayer from the existence of Catholic schools would be about $780 million per annum or about $4350 per annum per student enrolled. We do not treat this as a realistic scenario, however, as the Australian Government could not stand aside if Victorian Catholic schools were no longer in operation, and it does not take account either of possible long-term equalisation of these costs through Grants Commission processes.

What is clear, nevertheless, is that the savings to the Victorian taxpayer from the existence of Catholic schools is substantially greater than the estimate provided above for the saving to the Australian community as a whole, because of different responsibilities in funding different types of schools.

3. Towards a United Response

If Victoria is to be competitive in the global knowledge economy, and give all of its citizens the chance to participate in the resulting prosperity, major new programs to achieve excellence with equity in schooling will be necessary. In the light of our above findings about Victorian Catholic schools, these schools can and should play a significant role in such programs, providing that they can manage the pressures currently upon them and can further increase their support for disadvantaged families. Indeed, the evidence reviewed in this report suggests that Catholic schools can provide a highly cost-effective contribution to achieving broader public goals.

New Approaches to Achieving Public Goals

There is a powerful case, and growing agreement, that the time is ripe for a new, coordinated program to achieve public goals of excellence and equity for all Victorian, and indeed Australian, schools. These programs should bring together all schools that are willing to pursue these public goals, on the basis of the following principles:

- clear definition of, and commitment to, the public goals to be pursued;
- an acknowledgement of the extent of the social division that has developed within Victorian school education;
- an understanding of the role of social capital, and of the inter-relationship between social capital and social geography in influencing educational outcomes;
- a recognition of the need to go beyond approaches based on equality of resources if real progress is to be achieved; and
- new financing structures for private schools that commit to the achievement of the public goals.

It is a major task to define in detail such a coordinated program, and then to implement it in a coordinated and consultative fashion. But it is a task to which the Catholic Education Commission of Victoria should be, in our view, a major and willing contributor.

Towards Equal Outcomes in Schooling

There has been a long debate, touching on many disciplines, about whether the pursuit of equality should involve equality of opportunity or equality of outcomes. Each of these options in turn has many different interpretations. Should educational policy, for example, seek to ensure that all schools have at least a minimum acceptable level of educational resources, to equalise resources across schools or go beyond equality of opportunity to seek to equalise outcomes across social groups? The Karmel Report of 1973, perhaps the most important reforming document in Australian education over the last half-century, was ambivalent about its objectives in this area (Crittenden 1974), but emphasised the limitations on any attempt to achieve equality of outcomes:

> It is almost certainly the case that schools alone cannot effect the degree of environmental change necessary to enable all groups of children to reach an equal average level of attainment. (Para 3.21, p. 22)

Victorian and Australian schools have become more unequal in the thirty years since the Karmel Report was implemented, in ways that manifestly reduce the overall excellence of schooling. We now have a better understanding of the economic and social forces that are driving that increased inequality, and of the linkages between education, social capital and location. It this context it will be necessary to go beyond the provision of equal resources to schools serving lower socio-economic areas, recognising that achieving acceptable outcomes in such areas will be more costly and will require a range of specialised and highly skilled resources. Teese has outlined the elements of such an integrated program:

> Ending failure in our schools will require an integrated use of policy tools—graduated and progressive benchmarking to raise the standards of weaker learners; a resource allocation model that favours disadvantaged schools; a workforce strategy involving targeted professional development, performance appraisal, and freer circulation of teachers; a new audit and review process which facilitates system intervention and uses more refined benchmarking techniques; and curriculum evaluation focused on quality of outcomes, equity, and pedagogical (not only academic) rigour. (Teese 2004, p. 15)

Defining and implementing this agenda is, in our view, another urgent task.

A New Settlement for Non-Government Schools

Funding arrangement for private schools differ widely around the world. In many countries Catholic schools, and other private community schools, are fully funded by governments on the same basis as government schools, while being allowed to retain their distinctive character as religious or private schools. Funding to private schools from the Commonwealth Government has grown rapidly over the past decade, under both Labor and Coalition Governments, while Victorian Government funding has grown much less rapidly. These developments have taken place without any agreed national framework about how government funding will contribute to the national goals of excellence and equity. An integrated new approach to achieving equity and excellence in Australian schools will require a new agreement about the funding of private schools, based on a shared understanding of the role of that funding in achieving the public purposes of excellence and equity.

Such a program will also imply a new agreement about the public funding of private schools, based on this shared commitment. This should involve a substantial increase in public funding for poorer Catholic schools (say to 85% of a realistic national average for government schools) but should fall short of full funding of Catholic schools as in some other countries. Resources are urgently needed to strengthen government schools, and Catholic schools will retain their uniqueness and strength only to the extent to which they remain fully supported by the efforts of the Catholic community.

The Future Direction of Catholic Schools

If the Victorian community were to embark on a sustained and united approach such as that outlined above, and sought the involvement of the Catholic community and

their schools in that process, this would pose a number of challenges for Catholic education in this State. Some of these are noted briefly below.

Priority to Those in Need

It has long been a tradition of the Church that priority in education should be given to the poor and to those in need, in both a material and a spiritual sense. This tradition is, for example, clearly expressed in paragraph 58 of the statement *The Catholic School* from the Sacred Congregation for Catholic Education:

> Since it is motivated by the Christian ideal, the Catholic school is particularly sensitive to the call from every part of the world for a more just society, and it tries to make its own contribution towards it. It does not stop at the courageous teaching of the demands of justice even in the face of local opposition, but tries to put these demands into practice in its own community in the daily life of the school. In some countries, because of local laws and economic conditions, the Catholic school runs the risk of giving counter-witness by admitting a majority of children from wealthier families. Schools may have done this because of their need to be financially self-supporting. This situation is of great concern to those responsible for Catholic education, because first and foremost the Church offers its educational service to " the poor or those who are deprived of family help and affection or those who are far from the faith "[8]. Since education is an important means of improving the social and economic condition of the individual and of peoples, if the Catholic school were to turn its attention exclusively or predominantly to those from the wealthier social classes, it could be contributing towards maintaining their privileged position, and could thereby continue to favour a society which is unjust. (Sacred Congregation for Catholic Education 1977)

To be true to this vision, Catholic education in Victoria needs to respond further to the changing economic and social realities of our community. This response, necessary in its own right, would also be consistent with and be facilitated by the broader public programs touched on above. Such a response might involve, for example, increased redistribution of financial resources, especially additional resources, to poorer schools; specific programs to cater for children from those families, such as single parent families and families with neither parent employed; and increased attention to the skilled resources required to produce good outcomes in lower SES schools.

Rethinking the Religious Character of Schools

In many areas Catholic schools are accepting an increasing proportion of non-Catholics, including many adherents of religions other than Christianity. Some schools seek to provide a religious educational environment that, while Catholic in substance and orientation, is especially open to a diversity of religious faiths and tradition. Such an evolution of the spirituality of Catholic schools might be particularly appropriate to the multicultural circumstances in which Victoria now finds itself, and another way in which schools can respond both to the vision of Catholic education and to the emerging needs of the Victorian community.

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[8] Second Vatican Council, *Declaration on Christian Education "Gravissimum Educationis "*, 9. Citation in the original.

Participation in the Public Response

Another important question for Catholic education in Victoria is whether, given the effective withdrawal of the religious orders from teaching and educational leadership and falling religious participation in parishes, it can mobilise the leadership and commitment to participate in the broader public programs. The history of Catholic education in Victoria certainly suggests a positive response to this question, but it does need to be addressed.

Conclusion

Catholic education has played an important role in the development of the Victorian community over the last one hundred and forty years. The evidence reviewed in this report suggests that it continues to provide high quality educational outcomes, especially for those from lower socio-economic settings, at lower than average costs. While in several respects Catholic schools in Victoria are under severe pressure, they are also well placed to contribute strongly to new public initiatives to achieve excellence with equity in Victorian schooling.

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