

Social Justice

and the Curriculum: An Investigation into the Participation in the Curriculum of Different Groups of Students

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Abstract

The Victorian Ministry of Education's Social Justice Framework for schools is concerned with the effects of five aspects of schooling on seven groups of students (females, Koories, the poor, rural, low status background, immigrant and those with disabilities). One of the five aspects of schooling is the participation of students in the curriculum. This paper uses the 1990 Victorian SCOPE data to describe and compare the participation in different curriculum areas and in different subjects of four of the student groups included in the Social Justice Framework: females, Koories, students from low social status backgrounds and immigrant students.

Introduction

In 1988, the Victorian Minister for Education asked the State Board of Education to commence work on the development of a social justice framework for schools.

An important source of direction for this initiative was the Social Justice Schools Project which involved the cooperation of the State Board of Education, School Programs Division and two regional offices. Two clusters of schools in each of these regions and one additional cluster of Catholic schools participated in the project: in all 28 government schools and 24 Catholic schools were involved. The project was designed to enable the concept of social justice in education to be defined by school communities. That is, the principles embodied in the Victorian Government's Social Justice Strategy and other State or national initiatives in education, such as the Disadvantaged Schools Program and Country Areas Program, were shaped by the schools to produce a feasible framework.

As a result of this work, the State Board of Education forwarded advice to the Minister towards the end of 1990 and the book, *The Social Justice Framework*, was launched by the Minister at the beginning of the following year.

The social justice framework

In brief, the Victorian social justice framework is concerned with the effects on seven groups of students of five aspects of schooling as these operate at three levels of educational planning. This is depicted in Table 1.

Table 1 The Victorian social justice framework for schools

Groups of students

Aspects of schooling

Levels of planning

Female

Aboriginal

Poor

Low status background

Rural

Immigrant

With disabilities

Provision

Access

Success

Retention

Participation

School

District

System

The student groups

The groups of students which form the focus of the framework (girls, Koories, students from low social status backgrounds, students living in poverty, immigrant Australians, students with disabilities and students from rural areas) are the ones that are commonly referred to in the literature on equity in education and the ones which have frequently been the source of State or Federal special purpose funding and programs. The distinction between students living in poverty and students from low status backgrounds is deliberate (these are often treated together with a measure of socioeconomic status) and represents an acknowledgement that not only are these two groups different, although overlapping, but also that policies designed for students from particular social backgrounds may not be appropriate for students living in poverty. For example, encouraging retention at school may require policies aimed at the attitudes to education of some social groups while for students living in poverty the most appropriate policies may relate directly to income support. The selection of groups as the focus of attention in the framework was not intending to suggest that all students in a group have the same educational experiences. Similarly, the selection of these groups does not indicate that in all aspects of education they are disadvantaged but that it is likely that in some aspects of education they will require special attention.

For example, it is well researched that students from non-English-speaking backgrounds are more likely than other students to remain at school until Year 12 and to proceed to tertiary education (Sturman 1985). However, students from non-English-backgrounds are also more likely to require assistance at school with language difficulties and this need is especially evidenced for certain groups of immigrant students (State Board of Education 1992). In the same way, research shows that in some aspects of education such as retention, participation in tertiary education and success in some key areas of the curriculum, females out-perform their male

counterparts (State Board of Education 1992). On the other hand, research suggests that female students suffer disadvantage in other educational experiences: they can be subjected to harassment at school, they can receive less teacher attention in class than males and it is often argued that the subject choices that females make at school can limit their future choices to a greater extent than do the choices made by male students

(State Board of Education 1992).

Aspects of schooling

Five aspects of schooling are mentioned in the social justice framework: provision, access, success, retention and participation.

The notions of provision and access are interrelated as they both address aspects of the curriculum and the opportunities that students have to study different subjects or curriculum areas. Provision addresses this at the school level: if schools do not provide a broad curriculum and if there is no continuity of study from year to year, then students are deprived of the opportunity to study areas of the curriculum. Access addresses this issue from the perspective of student participation in the curriculum. If groups of students are opting to study particular curriculum areas and not others, or if timetabling arrangements preclude the study of some program areas, they may be disadvantaged in their future choices.

Participation in the curriculum, then, is a mixture of student choice, where this is available, curriculum provision and timetabling arrangements. The social justice framework refers to this area as access, but this is meant to cover not just the constraints that the school may apply to students but the choices that students themselves make.

Success in the curriculum is the central feature of the social justice framework:

While provision of and access to a comprehensive curriculum are essential objectives for planning and evaluation, they will be of little ultimate value if student achievement is not improving. All students should successfully undertake, and enjoy participating in, a comprehensive program of studies and make steady progress towards agreed goals. (Social Justice Framework 1990: 47)

The fourth aspect of schooling referred to in the framework is retention. While the more common interpretation of this concept, that is, retention to Year 12, is encompassed within the concept, it has wider meaning to include the patterns of attendance at primary and secondary schools, and the transition of students from primary schools and from secondary colleges into further education or work.

While the framework acknowledges that there will be students who decide to leave school early and who may have well planned options, there is encouragement of students to remain at school and to have clear educational pathways planned. This is in line with most current thinking in this area and is compatible with the targets and philosophies that have emerged from the 1991 Report of the Australian Education Council Review Committee into young people's participation in postcompulsory education and training (the Finn Report).

The final aspect of schooling referred to in the social justice framework

is participation. Not to be confused with student participation in the curriculum, this concept is concerned with the encouragement of parents, students and teachers to participate in the life of the school and in particular to be fully involved in decision making about curricular issues.

Levels of planning

Three levels of planning are described in the social justice framework: school-level, district-level and system level. In effect it might also be argued that a fourth level—the classroom—could have been included.

What was being argued is that planning at each of these levels should be based on social justice principles. To do this, it was argued that at each level information on the educational experiences of different groups of students should be collected and this information should form the basis of planning and action.

Monitoring the social justice framework

At the system level, the Department of School Education set in place an ongoing program to monitor the implementation of the social justice framework. This involved the collection of base-line data on each of the five aspects of schooling as they applied to each of the groups of students for which information was then available.

This paper presents some of the results of this process. It is concerned with the participation of different groups of students in the curriculum and as such focuses on the second aspect of schooling in the social justice framework, that is, access.

The recent national study of subject choice (Ainley, Jones and Navaratnam

1990) is also concerned with this issue. The national study used a somewhat different definition of curriculum areas. In addition, in Victoria it was based on a smaller sample of students from the 1989 SCOPE survey which had no information on Koorie participation in the curriculum. The national study, of course, focused on presenting a national picture rather than a State picture.

Sources of information

Data bases

The information presented in this paper is based on two sources of data: the Victorian SCOPE (Students' Choice of Occupations and Paths in Education) reports for 1986, 1989 and 1990 and the Victorian Curriculum and Assessment Board (VCAB) statistics from 1985 to 1992.

The major source of information is the 1990 SCOPE survey of Victorian school students. From this survey, data concerning different groups of students from government schools has been extracted. This is supplemented with information from previous SCOPE reports and from VCAB which allows a comparison over time.

The SCOPE reports provide information on student participation in different curriculum areas at Years 10, 11 and 12. The surveys are sent to all schools in the State and all students are requested to complete them. In 1986, over three-quarters of all Year 10, Year 11 and Year 12 students responded to the survey. Similarly, in 1990 responses from 75 per cent of students from 95 per cent of all Victorian secondary colleges were obtained.

Curriculum data

Each student indicates whether they are currently studying a range of subjects which are listed in the report. The subjects identified by the SCOPE personnel were derived prior to the introduction of the new VCE in Victoria although without too much difficulty it is possible to aggregate the individual subjects into the fields of study which are used in the VCE. This has been done in this report.

A finer level of detail is also available. Within the broader curriculum areas, the percentages of students taking one or more subjects is used to describe participation in greater detail.

Program choices

Finally, the subjects taken by individual students have been clustered together into recognised curriculum areas which reflect patterns of program choices of students and the resulting groupings have been subject to analysis according to participation by student background. To achieve these combinations of subjects, or program choices, cluster analysis was used. Cluster analysis is an exploratory procedure which examines the way in which subjects group together and then allocates students to the clusters formed. It is not, therefore, an exact indication of student numbers in any particular curriculum area nor of the subject combinations which exist.

Prior to the introduction of the VCE, a number of alternative ways of completing Year 12 were available. In 1990, which was a year of transition, these were – VCE Higher School Certificate (Groups 1, 2 and Approved Study Structures), VCE Tertiary Orientation Program and VCE T12. While the VCE Higher School Certificate was by far the largest of these certificates in terms of enrolments, the subject clustering patterns reflect these divisions to some extent.

Four main clusters are evident: humanities/social education; mathematics-science; technology/arts; and business studies. Two main factors appear responsible for cluster formation:

- the formal division between the diverse certificates (for example, subjects in the technology/arts cluster are diverse and tend to be vocational and taken together because they are non-Group 1 subjects)
- common subject combinations (the remaining three combinations, mainly Group 1 subjects, form into three recognisable subject-type areas)

Further information on the clustering process, the subjects that fall within each cluster and the percentage of students taking those subjects, is provided in the full report of this study which will be published shortly by the Victorian Department of School Education.

Student background

Student background information in the SCOPE survey has changed a little over time. In 1986 information was available by gender and language spoken in the home. In 1990, in addition to this information data on students from different social status backgrounds and data from Koorie students were available. VCAB data allow a gender breakdown.

As such the data allow for information on participation in the curriculum

of three student groups identified in the social justice framework: girls, Koories and students from low social status backgrounds. In addition, information on language spoken in the home allows for some insights into the participation in the curriculum of students from non-English-speaking backgrounds although it should be warned that some students speaking English in the home will almost definitely come from non-English-speaking backgrounds and some speaking another language may possibly come from an English-speaking background.

Focus of the paper

The focus of this paper is on the Year 12 curriculum and the participation in that curriculum of the following student groups:

- males compared with females
- Australians whose main language spoken in the home is not English compared with those whose main language is English
- Koories compared with non-Koories
- students from lower social status backgrounds compared with students from higher social status backgrounds

The definition of immigrant Australian in the 1990 SCOPE survey is based on a question concerning the language spoken at home (students are asked to specify a language from a list of 25). The definition of social status is based on a question which asks students to indicate in which job areas their parents/guardians work. A list of 54 possibilities is presented. For the purpose of this report this has been condensed into a very broad dichotomy of lower and higher status occupations. Information on gender and Koorie status is based on student self reporting.

The full report of this study, to be published shortly, provides additional information on Year 12 curriculum participation as well as information on Year 11 curriculum participation.

Gender and participation in the curriculum

VCE fields of study

Figure 1 shows the relative ratio of female to male enrolments in the VCE fields of study. There are very small or no differences in the percentage of male and female students enrolled in the broad science, social education and earth studies curriculum areas. Proportionally more female students are enrolled in one or more subjects in the LOTE, human development and history areas than male students, and proportionally fewer are enrolled in mathematics, information technology and technical studies.

Individual subjects

As shown in the table in Appendix 1, biology, human development in society and Australian history are the subjects with the highest female enrolments while physics, chemistry and mathematics B are the subjects with the highest male enrolments.

Figure 1 Relative ratio of female to male enrolments in VCE fields of study, Year 12, secondary colleges, Victoria 1990

In the LOTE area, there are proportionally larger numbers of girls in all subjects; in the English area there are proportionally larger numbers of girls in English literature, but proportionally fewer in ESL.

In the science area, there are larger proportions of females in psychology and biology but the reverse is the case in science, physics and chemistry. However, the difference between male and female ratios in the science area has changed considerably over time. For example, the ratio of boys to girls doing chemistry in Year 12 was 2.71:1 in 1973, compared to the 1990 ratio of 1.18:1. In other words, in 1973, almost three times as many boys as girls were studying chemistry, whereas, by 1990, the numbers had become nearly even.

In the area of mathematics, 77 per cent of all male students take one or more mathematics subjects in Year 12, compared to only 59 per cent of female students. This is largely explained by the differences in the more prestigious areas of mathematics, where there are proportionally fewer girls. In business mathematics, the proportion of male and female students are about equal.

In the area of information technology, girls have a higher participation rate than males in typing/wordprocessing, a roughly equal rate with boys in information technology, and a lower rate than males in computer science and computer studies.

In the area of social education, female and male students have roughly similar rates of enrolment. Girls, however, outnumber boys in the history subjects. In subjects in the personal development area, there are proportionally more girls in human development and society and proportionally fewer in outdoor education and physical education.

Twenty-eight per cent of girls choose one or more subjects from the arts area, compared with 25 per cent of boys. Boys are more likely than girls to be enrolled in graphic communication and less likely to be enrolled in drama, art and media education. In technology studies, proportionally fewer boys than girls are enrolled in catering and textiles, but in all the other areas they outnumber girls.

Finally, in the area of earth studies proportionally fewer girls than boys are enrolled in geography, geology and agricultural and horticultural studies, but proportionally more are enrolled in environmental studies.

Student programs

As shown in Figure 2, gender differences are apparent in all four Year 12 program groupings which emerged from the cluster analysis. There are proportionally fewer girls in the Mathematics/Science, Business Studies and Technology/Arts groupings, and proportionally more girls in the Humanities/Social Education grouping.

The biggest differences are in Mathematics/Science, where, proportionally, there are twice as many boys as girls enrolled and in the Humanities/Social Education cluster where 41 per cent of all girls are to be found, compared to 15 per cent of all boys. The Business Studies and the Technology/Arts combinations represent the most "even" distributions of boys and girls, although both are still somewhat weighted towards male students.

MALES

FEMALES

Figure 2 Program groupings by gender, Year 12, Victoria 1990

Clearly, gender differences in individual subjects are augmented when particular subjects are combined.

Patterns of enrolment over time

Female enrolments in VCE fields of study for 1986 and 1990 are shown in Figure 3. During this period, female students have increased their participation in mathematics, information technology and arts but reduced their participation in history, human development, social education and LOTE.

Since 1986, the ratio of female students to male students in most subject areas has to some extent equalised, and particularly in mathematics and the physical sciences. However, girls still have lower participation rates than boys in most technology studies subjects, physics and mathematics. The 1990 SCOPE survey shows that there are still significant differences in the subject choices of boys and girls. For example, the two non-compulsory subjects with the highest enrolments of girls were biology and human development and society, while for boys the highest enrolments were in mathematics A and physics.

Figure 3 Percentage of female students taking one or more Year 12 subjects in VCE field of study, Victorian secondary colleges, 1986 and 1990
Koories and participation in the curriculum

The number of Koorie students in the SCOPE survey is very small (190 at Year 11 and 96 at Year 12) and therefore the information in this section should be interpreted with caution. The retention rate of Koories is far lower than for the total student population and this may explain the inconsistent pattern of subject choice of Koories at Years 11 and 12. In addition, special curricular arrangements may be made in those schools with a large Koorie enrolment and these patterns may not be reflected in the SCOPE subject lists.

VCE fields of Study

As shown in Figure 4, a higher proportion of Koories takes one or more subjects in the arts, technology studies, information technology, mathematics and earth studies than non-Koories. History, social education, business studies and LOTE show the opposite trend, with proportionally fewer Koories than non-Koories taking one or more subjects in these areas.

Figure 4 Relative ratio of Koorie to non-Koorie enrolments in VCE fields of study, Year 12, secondary colleges, Victoria 1990

Individual subjects

Although accurate comparisons between Koorie and non-Koorie students remain a problem, some patterns are discernible in individual subject selections.

The details of these enrolments are displayed in Appendix 1.

At Year 12, Koories choose a wider range of subjects than non-Koories. Four subjects attract more than 20 per cent of Koories (biology, business mathematics, mathematics A and accounting), compared with five for the

population as a whole (biology, mathematics A, accounting, legal studies, and human development and society).

In the mathematics area, Koories have higher percentage enrolments than non-Koories in business mathematics and mathematics at work but lower percentage enrolments in space and number, reasoning and data and change and approximation. Similarly, in the science area Koories have higher participation rates in all subjects except physics and chemistry.

In the area of information technology, Koorie students, compared with non-Koorie students, have higher percentage enrolments in computer studies and typing/word processing, lower percentage enrolments in computer science and roughly equal enrolments in the subject information technology.

In the social education area, Koorie students have a slightly lower participation rate than non-Koorie students in politics and a higher participation rate in social studies. In addition, Koories have lower percentage enrolments than non-Koorie students in Australian and European history and higher percentage enrolments in other history subjects.

In business studies, compared with non-Koorie students Koories are less likely to be enrolled in legal studies and small business management but are more likely to be enrolled in all other subjects from this area.

In the area of personal development, Koories have a higher participation rate than non-Koorie students in health education, outdoor education and non-Group 1 physical education, and a lower participation rate than non-Koorie students in human development and society and Group 1 physical education.

Koories have the highest participation rate in the technical studies area of any group, with higher enrolment rates than non-Koorie students in all subjects except plastic studies. Similarly, in the arts area Koories have higher participation rates than non-Koorie students in all subjects except graphic communication.

The number of students taking LOTE subjects is very small and as a consequence comparisons are difficult. Overall, Koorie students are less likely to study LOTE than non-Koorie students; however, they have a higher participation rate in French.

Student programs

Differences between Koories and non-Koories are also evident in an examination of student program clusters, although the small number of Koories in the sample (N=86) compared to non-Koories (N=16 746) makes accurate comparisons difficult. Figure 5 shows the relative distributions of Koories and non-Koories across the four clusters of programs.

The biggest differences are in the Mathematics/Science and Humanities/Social Education groupings, where there are proportionally fewer Koories compared with non-Koories, and in the Technology/Arts area, where there are proportionally more Koories. Of all Koories, 36 percent may be found in Vocational Studies (that is, Technology/Arts), compared with only 24 percent of non-Koories. Nineteen percent of Koories are found in Mathematics/Science compared with 25 percent of non-Koories, and 22 percent

may be found in Humanities/Social Education compared with 29 percent of non-Koories. The two groups have relatively even numbers, proportionally, in the Business Studies grouping.

KOORIES

NON-KOORIES

Figure 5 Program groupings by Koorie status, Year 12, Victoria 1990

Given the small size of the Koorie sample in this analysis, it is difficult to make strong statements regarding the differences between Koorie students and non-Koorie students in their participation in the curriculum. It is also not possible to comment on long-term trends as there are no longitudinal data available for comparison. However, there is some evidence to suggest that Koorie students are more likely to be enrolled in subjects of a technical nature than are non-Koorie students. This is borne out by figures outlining enrolments in technology studies subjects and by the tendency of these students to be found in vocationally oriented study programs.

Social background and participation in the curriculum

Fourteen per cent of students at Years 11 and 12 in the SCOPE survey for 1990 reported that their parents had unskilled or semi-skilled occupations. (To determine parental occupation when both parents or guardians were working, the higher status occupation was chosen). This group is compared with those students who reported that their parents had higher status occupations. For the purpose of these analyses students whose parents were unemployed, pensioners or whose occupations were unknown were excluded from the analyses.

VCE fields of study

The difference in the percentage enrolments in the curriculum areas of Year 12 students from low status backgrounds compared with other students are displayed in Figure 6. Compared with other students, students from low status backgrounds have higher enrolments in the areas of LOTE, information technology and technology studies and lower enrolments in the areas of social education, earth studies and history. The two groups have similar enrolment rates in science, mathematics, business studies, human development and the arts.

Figure 6 Relative ratio of low and high status student enrolments in VCE fields of study, Year 12, secondary colleges, Victoria 1990

Individual subjects

The details of individual subject enrolments for students from different social backgrounds are displayed in Appendix 1.

Five subjects attract more than 20 per cent of students from low social status backgrounds (biology, chemistry, mathematics A, accounting, legal studies and human development and society), compared with five for other students (biology, mathematics A, accounting, legal studies, and human development and society). For students from low social status background, however, enrolments in Mathematics A, biology and chemistry represent less

of the total non-compulsory enrolments than they do for other students. More specifically, within the science area students whose parents or guardians have skilled or unskilled occupations have lower participation rates in biology, chemistry and physics than have other students. The pattern in mathematics reveals that students from low status backgrounds compared with other students have fairly equal participation rates in space and number, reasoning and data and change and approximation, a higher participation rate in business mathematics, and lower participation rates in Mathematics A and B.

In the area of information technology, students whose parents or guardians have skilled or unskilled occupations have higher participation rates in typing/word processing, information technology and computer studies and a slightly lower participation rate in computer science than students whose parents have higher status occupations.

Students from low social status backgrounds have higher participation rates in almost all technology studies subjects compared with other students, with the differences being particularly notable in woodwork and catering. The pattern in the arts area was more complex however with differences across a range of subjects.

In the area of social education, students from low status backgrounds have a lower participation rate in politics than other students (differences in other subjects in this curriculum area were small), in the history area they had slightly lower percentage participation in all subjects, in the earth studies area they had lower participation rates in geography and environmental science, and in the area of human development they had lower participation rates in human development in society and physical education (differences in other subjects in this curriculum area were small).

In the area of business studies, students from low social status backgrounds compared with other students had higher or equal participation rates in all subjects except economics.

In the LOTE area, in general students from low social status backgrounds were more likely to be enrolled than were other students but the type of LOTE varied across the two groups of students; students from high social status were more likely to choose French and German.

Student programs

Substantial differences exist in the subject combinations taken by students from different status backgrounds. Figure 7 shows the relative distributions of higher and lower status groups among the four combinations of subjects.

LOWER STATUS

HIGHER STATUS

Figure 7 Program groupings by social status background, Year 12, Victoria 1990

The largest difference is evident in the Technology/Arts grouping, which accounts for 30 per cent of the lower status group but only 21 per cent of the higher status group. Higher and lower status groups are also unevenly

distributed among the Mathematics/Science and Humanities/Social Education groupings, with the higher status group over-represented in both Mathematics/Science (21 per cent of the higher status students compared with 26 per cent of the lower status students) and in Humanities/Social Education (26 per cent of lower status students compared with 31 per cent of higher status students). Once again, the most "even" grouping is Business Studies, which accounts for 23 per cent of lower status students and 22 per cent of higher status students.

Differences in enrolment patterns between low and high status background students are not great but they are apparent in a number of areas. For example, students from a low status background are more likely than high status background students to be enrolled in technology studies subjects and less likely to be enrolled in mathematics A, mathematics B, physics, biology and chemistry. In the area of broad study programs, low status students are more likely to be enrolled in Technology/Arts or Business Studies combinations of subjects, while high status students are more likely to be enrolled in Mathematics/Science or Humanities/Social Education combinations.

Language background and participation in the curriculum

Students whose main language in the home is not English account for 15 per cent of Year 12 students in the 1990 SCOPE survey. While for the purpose of this paper and for reasons of parsimony these students have been grouped together, their diverse backgrounds suggest that they are not a homogeneous group. For example, the group includes students whose families are newly arrived in Australia, as well as students whose parents may have been in Australia for many years. It does not account for differences in language proficiency nor for cultural or socioeconomic differences between ethnic groups. While not described in this paper, for example, the patterns of subject choice are quite different for students whose main overseas language is European, Asian or Middle Eastern.

VCE fields of study

The percentage of students studying one or more subjects in the VCE fields of study are displayed in Figure 8.

Figure 8 Percentage of students in VCE fields of study by language spoken in the home, Year 12, Victoria 1990

As would be expected, students whose main language in the home is not English are far more likely to be studying a LOTE than are other students. They are also more likely than those students who speak English in the home to be studying mathematics, business studies and information technology, but less likely to be studying science, human development, the arts, technology studies, earth studies, Australian studies and history. These broad patterns hide substantial subject differences.

Individual subjects

The enrolment rates for individual subjects for students from English speaking and non-English speaking backgrounds are shown in Appendix 1. Over 20 per cent of non-English-speaking background students are enrolled

in each of seven different subjects (chemistry, physics, mathematics A, mathematics B, accounting, economics and legal studies), reflecting a traditional curriculum emphasis. On the other hand, over 20 per cent of English-speaking students are enrolled in each of only four subjects (biology, mathematics A, legal studies and human development and society). More specifically, in the science area non-English-speaking background students have higher participation rates in chemistry and physics than English-speaking background students and lower participation rates in biology, science and psychology. In the mathematics area, students from non-English-speaking backgrounds are more likely than their English-speaking counterparts to be enrolled in most mathematics subjects. In the information technology area, non-English-speaking background students have higher participation rates than English-speaking background students in information technology and computer studies and roughly the same in computer science and typing/word processing. In business studies, students from non-English speaking backgrounds have higher participation rates than other students in all subjects except shorthand. In the arts, students from non-English-speaking backgrounds have lower participation rates in all subjects compared to students from English speaking backgrounds. In technology studies, and the pattern is almost the same for subjects within the technology studies area. In the human development and history areas and in Australian studies, compared with other students, non-English speaking background students have a lower participation in all subjects, especially physical education and human development in society. In the area of social education, non-English-background students have lower participation rates in politics but somewhat higher in social studies than other students, while in Earth studies they have lower participation rates than English-speaking students in all subjects except geology. In the LOTE area, compared with other students, non-English-background students have higher or equal participation rates in all subjects except Japanese.

Student programs

Differences between non-English-speaking background and English-speaking background students in the types of programs they take are also apparent. Figure 9 shows the relative distributions of English-speaking background

and non-English-speaking background students in the different program groupings.

| | |
|--------------------------------|------------------------------------|
| ENGLISH-SPEAKING BACKGROUND | NON-ENGLISH-SPEAKING BACKGROUND |
|--------------------------------|------------------------------------|

Figure 9 Program groupings by language spoken in the home, Year 12, Victoria 1990

Non-English-speaking background students are over-represented in the Mathematics/Science grouping which accounts for 33 per cent of all non-English-speaking background students, compared with English-speaking background students with 23 per cent of their numbers in this grouping.

Non-English-speaking background students are also over-represented in Business Studies (27 per cent compared with 21 per cent of non-English-speaking background students).

By contrast, there are proportionally nearly twice as many English-speaking background students in the Humanities/Social Education grouping as there are non-English-speaking background students (32 per cent compared with 17 per cent). The Technology/Arts grouping shows relatively even distributions of English-speaking background and non-English-speaking background students as proportions of their respective groups.

Patterns of enrolment over time

As shown in Figure 10, during the period 1986 to 1990, the percentage of Year 12 students from non-English-speaking backgrounds taking mathematics, science, business studies and information technology subjects has increased while the percentage enrolled in LOTE, social education, human development, earth studies and history has declined.

This changing pattern of enrolments can, in part, be attributed to the changing mix of new arrivals enrolling in government schools. Since 1981, there has been a steady increase in the number of non-English-speaking students speaking Vietnamese, Chinese (all languages), Turkish and Macedonian (Yugoslavia), while the number of students speaking Greek and Italian at home has declined.

Figure 10 Percentage of Year 12 students from non-English-speaking backgrounds doing one or more subjects in VCE fields of study, secondary colleges, Victoria 1986-90

The diverse nature of students from a non-English-speaking background makes it difficult to compare their participation with that of English-speaking background students. However, some generalisations can be made. Non-English-speaking background students are less likely, for example, than English-speaking background students to be enrolled in English-language oriented subjects such as the humanities and social sciences and more likely to be enrolled in languages other than English. At the level of student programs, non-English-speaking background students are more likely to be enrolled in Mathematics/Science or Business Studies combinations of subjects and less likely to be enrolled in Humanities/Social Education or Technology/Arts combinations.

Conclusion

The social group to which students belong has a substantial influence on their curriculum participation. This is true of students differentiated by each of gender status, language status, Koorie status and social status. While there is evidence that gender differences in curriculum participation in secondary colleges are diminishing, differences still exist and these are greater for the other social justice groups.

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The authors would like to express their appreciation to the Victorian Department of School Education for releasing these data for this paper. A full report of this study will shortly be published by the Department of School Education.

These differences are displayed in the full report of this project.

Appendix

1

Year 11 enrolments by social justice groups, Victorian Government colleges, 1990

Gender Status

Language Status

Social Status

Curriculum areas
and subjects

All

Students

Female

Students

Male

Students

All

NESB

English

Speaking

High

Status

Low

Status

Koories ENGLISH English 95.696.295.182.698.496.894.197.9 English as a second
Language 2.92.53.114.80.32.13.91.0 English

literature 7.611.32.93.08.78.36.16.3 English - other

1.82.11.52.81.61.62.01.00 one or more subjects

99.599.699.599.599.699.699.40 LOTE French 1.52.10.72.01.41.90.94.2 German 0.8

1.20.40.90.91.01.10.0 Italian 0.71.00.41.80.50.61.21.0 Modern

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- other
2.22.22.011.50.31.34.00.00one or more subjects9.210.96.832.74.37.813.36.3

SCIENCEBiology28.336.118.319.130.430.224.229.2Chemistry19.315.823.624.818.2
20.116.418.8Physics16.67.328.421.615.717.314.113.5Science2.72.03.52.02.72.3
3.55.2Human
and Social
Biology1.92.51.21.61.91.72.35.2Psychology4.96.92.33.15.24.56.411.5Science -
other
0.80.71.00.80.80.90.82.10one or more subjects
52.653.052.34953.754.048.954.2MATHEMATICSChange and
approximation1.00.61.61.31.01.01.00.0Reasoning and
data2.62.23.02.22.62.62.81.0Space and
number3.32.83.93.73.13.13.33.1Mathematics
A35.829.843.543.034.737.730.027.1Mathematics
B14.27.822.221.412.714.412.412.5Mathematics
C1.10.81.51.21.01.01.08.3Business
Mathematics15.815.715.916.015.514.220.524.0Mathematics at
Work5.35.05.55.75.14.77.310.4Mathematics - other
2.82.53.32.22.92.63.43.10one or more subjects
66.658.876.573.865.065.868.375.0BUSINESS
STUDIESAccounting21.119.523.527.819.620.723.421.9Business
Education1.41.11.71.81.21.21.64.2Small Business
Management3.43.23.74.03.23.04.01.0Economics16.814.120.520.316.117.316.317.7
Legal
Studies28.631.125.529.028.529.129.019.8Shorthand0.20.30.00.00.20.20.22.1Sec
retarial
Studies/Office Practice2.74.20.72.72.62.42.94.2Business Studies - other
2.12.61.43.01.81.63.13.10one or more
subjects47.049.244.353.045.646.349.841.7

SCIENCEBiologyChemistryPhysicsScienceHuman and Social
BiologyPsychologyScience - other
One or more subjects
MATHEMATICSChange and approximationReasoning and dataSpace and
numberMathematics AMathematics BMathematics CBusiness
MathematicsMathematics at WorkMathematics - other
One or more subjects
BUSINESS STUDIESAccountingBusiness EducationSmall Business
ManagementEconomicsLegal StudiesShorthandSecretarial Studies/Office
PracticeBusiness Studies - other
One or more subjects

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BiologyPsychologyScience - other

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