

Tertiary Entrance Performance: The Role of Student Background and School Factors

(LSAY Research Report Number 22)

**Gary Marks
Julie McMillan
Kylie Hillman**

November 2001

EXECUTIVE SUMMARY

The report examines the tertiary entrance performance of students in Year 12 in 1998 using data from the Longitudinal Surveys of Australian Youth (LSAY) project to address a variety of issues relating to tertiary entrance performance. The first substantive part of the report examines the relationship between tertiary entrance performance, measured by their Equivalent National Tertiary Entrance Rank (or *ENTER* scores), and a variety of demographic, socioeconomic, educational and psychological factors. These include literacy and numeracy achievement, gender, socioeconomic background, school sector, region, ethnicity and indigenous status. This part of the report also addresses the effects of psychological factors, such as self-concept of ability and educational aspirations. The second substantive part of the report focuses on individual schools, examining the impact of schools on student performance, differences between schools in the impact of prior achievement and socioeconomic background on performance and the influence of the school environment or context. 'School effectiveness' is also addressed in this report by determining which school characteristics lift tertiary entrance performance, taking into account differences in the academic and socioeconomic mix of students across schools and school sector.

The major findings from the investigation of the demographic, socioeconomic, educational and psychological influences on tertiary entrance performance are as follows.

Year 9 Achievement in Literacy and Numeracy

- **The strongest influence on tertiary entrance performance is literacy and numeracy achievement in Year 9.**
- **There are differences in the impact of Year 9 achievement on tertiary entrance performance across States.**
- **Performance in numeracy has a consistently stronger relationship with tertiary entrance performance than literacy.**

Socioeconomic Background

- **The three major dimensions of socioeconomic background - parental occupational status, parental education and wealth - are all correlated with tertiary entrance performance. Of these dimensions, parental occupational status has the strongest impact.**
- **Students from professional and, to a lesser extent, managerial occupational backgrounds exhibit higher *ENTER* scores.**
- **The correlation between socioeconomic background and tertiary entrance performance is moderate (around 0.3), but considerably weaker than that for Year 9 achievement and tertiary entrance performance (around 0.5).**
- **The impact of socioeconomic background on tertiary entrance performance is substantially reduced, but not removed altogether, after controlling for Year 9 achievement in literacy and numeracy. This indicates that socioeconomic background has effects over and above prior academic performance.**

Gender

- The distribution of *ENTER* scores differs between males and females, with males showing a wider distribution.
- On average females achieve slightly higher tertiary entrance scores than males. However, gender differences vary between jurisdictions. For example, in New South Wales females scored substantially higher than males, whereas in other States the differences were smaller and, in some instances, males slightly outperformed females.
- Girls experience greater achievement growth (that is, improvement in academic performance between Year 9 and Year 12) than boys.

School Sector

- School sector has a substantial impact on tertiary entrance performance. On average, students attending independent schools have higher *ENTER* scores than students attending Catholic schools, who in turn have higher mean *ENTER* scores than students attending government schools.
- Differences in *ENTER* scores between students attending independent and government schools are reduced by nearly 50 per cent after controlling for Year 9 achievement and the socioeconomic backgrounds of students.
- Differences in *ENTER* scores between students attending Catholic and government schools are reduced by about 20 per cent after controlling for prior achievement and the socioeconomic backgrounds of students.
- There are differences between school sectors in achievement growth.
- The relationship between students' socioeconomic background and tertiary entrance performance does not differ substantially between school sectors.

Region

- Non-metropolitan students' tertiary entrance performance is marginally lower than that of metropolitan students.
- The correlation between population density of the students' residential area and tertiary entrance performance is weak.
- Regional differences in tertiary entrance performance tend to be slightly higher in Victoria and South Australia than in Queensland and New South Wales.

Ethnicity

- The distribution of *ENTER* scores for students with fathers born in non-English speaking countries is wider than that for students with fathers born in Australia.
- The average *ENTER* score varies across ethnic groups. Some groups perform substantially higher than students with Australian-born fathers and some significantly lower.
- Some ethnic groups are performing at higher levels than would be expected given their prior achievement levels and socioeconomic backgrounds. For example, the high performance of Asian students is not explained by differences in their socioeconomic background or prior achievement.

Indigenous Status

- The small group of Aboriginal and Torres Strait Islander students in this sample who obtained an *ENTER* score had significantly lower scores than non-Indigenous students.

Psychological Factors

- Psychological factors examined in this report - self-concept of ability, parents' aspirations for the student's education and students' aspirations - have an impact on tertiary entrance performance in addition to the impact of the socio-demographic and educational factors summarised above.
- Self-concept of ability has a larger impact on tertiary entrance performance than students' aspirations, which in turn has a larger impact than parents' aspirations.
- These psychological factors do not explain differences in tertiary entrance performance between social groups.

Individual Schools

The major findings from the investigation of the role of individual schools are as follows.

- Between-school differences account for approximately 22 per cent of the variation in students' tertiary entrance scores. About half of this between school variation can be accounted for by differences between schools in individual student characteristics.
- About half of this variation can be accounted for by differences in the academic and socioeconomic mix of students and school sector.

Contextual Effects

- The schools' achievement environment effects tertiary entrance performance in addition to the effects of individual-level influences including students' prior achievement.
- The schools' socioeconomic environment does *not* affect tertiary entrance scores in addition to the effects of individual-level influences including students' socioeconomic background.

School Effectiveness

- School-level factors which contributed to lifting tertiary entrance performance, after accounting for the academic and socioeconomic mix of students across schools and school sector, were a higher level of confidence among students in their own ability, a school environment more conducive to learning, and higher parental aspirations for the students' education.