

International Student Admissions Test (ISAT) Research Study 2003 – 2005

Kelvin Lai, Susan Nankervis

Executive Summary

The Australian Council for Educational Research (ACER) has undertaken a validation study of the International Student Admissions Test (ISAT) by examining the relationship between ISAT results and a number of final year of school programs: the International Baccalaureate (IB), the Western Australian Tertiary Entrance Examination (TEE), the South Australian Matriculation (S.A.M) program, the Canadian International Matriculation Programme (CIMP), and an Australian university's Foundation Year Program (FYP).

The fact that the highly selective IB groups generally performed very well in ISAT is indicative that ISAT is able to identify high ability students.

The data was examined by correlations; the distribution of ISAT scores within individual curriculum subject results as shown in boxplots, crosstabulations and scatterplots; and prediction of curriculum program scores using a regression on ISAT scores. In general, the findings were as follows:

- correlations showed that there is a positive linear association between the ISAT scores with both the different subject scores and the total curriculum program scores.
- the distribution of the ISAT scores within different subject score groups, tended to display the same pattern of variation. In most subjects, students with a higher ISAT score also had higher subject scores.
- the scatterplots showed that students in the highest score groups in most of the program subjects have high scores in both Quantitative Reasoning **and** Critical Reasoning. This suggests that achieving a top score requires strength in both quantitative and critical reasoning.
- a cohort-specific combination of ISAT scores to predict overall curriculum program scores saw most observed program scores fall close to the predicted score. Most were not significantly different from the observed scores at the 0.05 level.
- Some curriculum programs tend to cluster a number of students within a short mark range; ISAT scores with a wider mark range are capable of giving finer distinction between students.

ISAT scores measure generic skills rather than subject content, so variations would be expected when comparing results to curriculum programs. However, the results suggest that the two types of measures exhibit a certain degree of commonality, indicating that the skills required to achieve high curriculum program results are related to the skills required to achieve higher ISAT scores. This was found in each of the curriculum programs in the study. The fact that similar patterns are found in different subjects also illustrates how performance in individual subjects is dependent on these generic skills.

The findings of this study would seem to indicate that ISAT provides a useful indicator of student ability for use in the university selection process.