

# Aptitude testing



# for university selection



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*explains how aptitude testing  
can provide universities with  
more sophisticated tools for  
selecting students for admission  
to higher education degrees.*

Historically, entrance to university in Australia over the last 50 years has been determined by: achievement in curriculum-based examinations, the subsequent award of a state certificate and the calculation of a tertiary entrance score. Initially the results of public exams held at the completion of the final year of high school provided the only information used to determine end of school achievement; since the 1980s work completed during the senior years of school was included and variously weighted. Subsequently in some states and territories, the public exams disappeared and a system of aptitude testing was introduced as a means of informing the value of the school-assessed tasks. Aptitude testing also became, for entrance to certain courses, a discrete measure that alongside academic achievement and possible other attributes, helped decision-makers process applications.

Consideration of the use of aptitude testing for admission to university courses is now being contemplated on a much wider scale. This follows the Australian government's announcement in the 2007 budget of the intention to pilot a Year 12 aptitude test to assist university entrance. In October the Department of Education Science and Training awarded the contract to conduct the first phase of this pilot program to ACER.

The development of aptitude tests for university admission is not new to ACER. The Special Tertiary Admissions Test, the

Australian Law Schools Entrance Test, the Undergraduate Medical and Health Sciences Test (UMAT), the Graduate Australian Medical School Admission Test (GAMSAT), the International Student Admission Test, and the Australian Technology Network Engineering Selection Test (ATNEST) are all in use today in Australia. ACER is also active in the United Kingdom and Ireland where it delivers tests for admission to medical and health professional courses and is involved in a pilot study with Cambridge Assessment to develop an aptitude test for undergraduate admission.

The constructs of each of the above tests were determined for the selection of specific student cohorts. The Special Tertiary Admissions Test aims to identify mature age candidates who may not have completed high school or did not do so recently and who have the capacity for university study. The Australian Law Schools Entrance Test refines this process further for mature age candidates who wish to study Law. The test focus is on skills deemed to be important for the study of Law, such as the ability to infer, and extrapolate from ideas; sift, analyse and critique information; comprehend and interpret ideas, arguments and information; and evaluate and judge issues and arguments.

UMAT, used to identify prospective doctors, dentists and others in the Health Science fields, allows universities to not only consider academic results of aspiring students, but

to also assess attributes considered important for student success in the health sector; attributes such as clinical judgement and the ability to engage in effective relationships with others. GAMSAT aims to achieve a similar outcome but from candidates who have already completed a first degree. To this end it includes a section assessing assumed scientific knowledge.

The audience for the International Student Admissions Test is culturally diverse students. This test has a two-fold purpose: it informs universities about the international candidate's potential for higher education study; and gives meaning and allows for verification of candidates' international academic transcripts.

The Australian Technology Network Engineering Selection Test was first administered in 2007. The Australian Technology Network group of universities has recognised that some candidates with the interest in and capacity to study Engineering have been excluded from Engineering courses because they have not pursued certain academic pathways. The Engineering Selection Test, with its emphasis on problem solving and scientific critical thinking allows for the identification of such candidates and their subsequent admission to bridging programs that will enable them to then study Engineering. The test, in recognition of the importance of project management skills as an attribute of the 21st-century engineer; also measures interpersonal reasoning.

Characteristically all the above tests have addressed certain criteria to guide their development. These criteria include who is being selected and what skills are being tested. Unlike traditional IQ tests, which include questions on vocabulary, patterns and abstract content, all the above aptitude tests measure candidates' abilities

to understand information provided and to apply that information to realistic problems. The focus, with different emphases, is on academic reasoning; the kinds of thinking that underpin higher education studies and are essential across a range of academic disciplines.

It is also significant that the universities who use these aptitude tests have the discretion to use them as they choose. A given test component, for example, may receive a double weighting by one institution while another may use it for purposes of screening only, to 'select out' rather than 'select in'.

The defining characteristics of all the above tests is that, with the exception of a few faculties in a few universities who admit students with a Special Tertiary Admissions Test score alone, the aptitude test score is considered for admission purposes alongside academic credentials. This is also the overriding intention of the implementation of aptitude testing on a wider scale for university admission, as proposed with the 2007 pilot.

The test that will be administered for the 2007-2008 pilot is *uniTEST*. It was developed by ACER and Cambridge Assessment to assist Australian and UK universities identify students with the verbal, quantitative and critical reasoning skills required for university study. The test is designed to make university more accessible to students whose backgrounds and circumstances may have placed them at a disadvantage in regular selection processes.

Further to this, *uniTEST* can assist universities to be more discriminate with the selection of candidates clustered around the course 'cut-off' mark, with the use of a process that is both transparent and accountable.

Finally, a common Year 12 aptitude test may provide more direct comparisons of interstate applicants and assist in the statistical process used to compare tertiary entrance ranks across Australia.

A key component of the *uniTEST* pilot will be the research following the trial. The evaluation of *uniTEST* will measure whether there is a correlation between the aptitude test scores and academic progress. A range of criterion measures will be used to inform judgement and evaluate the predictive validity of *uniTEST*.

There is every indication that across the sector there is disquiet over the use of tertiary entrance ranks as the sole determinant for university entrance. While there are already some measures in place to address issues of equity and access with the broadening of selection processes, the strongest endorsement to widen participation and refine the university admission process is for the introduction of national aptitude testing to complement student academic scores.

The 2007 pilot and the use of *uniTEST* represents a welcome addition to the student selection landscape.

### Further information

Further information about *uniTEST* and participation in the *uniTEST* pilot is available online from <http://unitest.acer.edu.au> ■





## Student Aptitude Test for Tertiary Admission (SATTA)

**ACER has been contracted to conduct stage one of the Federal Government's pilot Student Aptitude Test for Tertiary Admission (SATTA). ACER will use uniTEST during the trial.**

The Department of Education, Science and Training (DEST) will subsidise universities' participation in the trial by providing funding for universities to test up to 20 000 students, as well as providing up to \$10 000 to each participating Australian university to promote the scheme.

The pilot of *uniTEST* will provide universities with additional information on prospective students and provide alternative pathways to university for some students who may otherwise have not gained a university place.

*uniTEST* assesses candidates' generic reasoning and thinking skills, which are considered necessary for successful university study. The candidates' results may then be considered alongside their academic achievement scores to help determine their suitability for university study.

To date the Australian National University and Monash University have used the test, with Macquarie University holding a test session on 8 December to support their 2008 student intake. Enquiries have been received from a number of other institutions which are looking to apply the program.

For information about participating in a pilot program or attending *uniTEST* information sessions please contact Ms Tanya Williams, Project Director, ACER on (03) 9277 5736 or [williams@acer.edu.au](mailto:williams@acer.edu.au)

For further information about stage two of this pilot program, please contact Ms Jo Groube, Director, School and Student Reporting Section, DEST, on (02) 6240 7811 or [joanne.groube@dest.gov.au](mailto:joanne.groube@dest.gov.au)

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