SUPPORTING MATERIAL TO HELP INTERPRET SCHOOL / COLLEGE ATTAINMENT DATA

1. Meaning and interpretation of standardised measures of difference

Some of the numerical data set out in the left hand column of the school/college's table of data are accompanied by standardised measures of difference, in the last two right hand columns. These measures give some idea about the size and the comparability of the differences between the observed value of the specific school/college data element

a. and the value of this data element for the state-wide student cohort;

b. and the value of this data element for school/college's sector.

Sometimes these differences may indicate something of importance. On other occasions such differences may not be large enough to justify any conclusions.

a. For example, if on one data element the state-wide proportion is 76% and the school/college proportion is 76.5%, it is <u>not</u> reasonable to infer that this by itself shows a higher performance by the school/college. Some slight variation around the state-wide value should be expected purely by chance.

b. Suppose instead that, on this same data element, the school/college value is 89% of a total school/college cohort of 60 students. In this case it is reasonable to infer that the difference [*school* compared with *state*] is much bigger than would be expected by chance. But such a significant result does not of itself explain why this difference exists. It might be explained in two ways (or a combination of both):

- the school/college has done better or

- there is some way in which the group of students attending that school/college is systematically different.

c. Each of the standardised measures in the two right hand columns is on the same scale. A value between about -2.0 and 2.0 shows a difference that, in any one year, may simply reflect chance variations. A value outside these limits shows a difference that may be taken seriously.

d. The size of the school/college cohort is taken into account in the calculation of the measure. This is because chance variations have a much greater impact on small samples than on larger samples.

In addition, information regarding the significance of any variation in values between the current year and the previous year is included where appropriate. A value between about -2.0 and 2.0 shows a difference that may simply reflect chance variations. A value outside these limits shows a difference that may be taken seriously.

2. Three year trends

A solid arrow (up or down) appears next to selected values where there is a significant three-year trend. That is, the presence of an arrow says that the three values for this item over the last three years are steadily increasing (or decreasing) by an amount that is greater than would be expected from chance variations alone most (95%) of the time. The importance of this is that the arrow signifies a trend that may mean something important. Its absence, even if the values are going up each year, means that this pattern should probably not be taken seriously – it may be due to chance variations alone.

For the 2009 statewide and government sector data it should be noted that TQA records now include data from TAFE Tasmania for 2008 but not for previous years. This means that the three year trends for the statewide and government sector data reflect at least in part the inclusion of this extra information.

3. Australian Tertiary Admission Rank (known before 2009 as the TER)

Definition of a Australian Tertiary Admission Rank (ATAR)

An ATAR is an estimate of a student's percentile ranking in the *total* age-cohort, not just a ranking of eligible students. It is calculated as a percentile ranking of students using their Tertiary Entrance Scores. A Tasmanian student with an ATAR of 90.00, means that the student was ranked in the top 10.00% of the age cohort, based on Tasmanian Tertiary Entrance Scores, and would be regarded as being equal to a student with an ATAR of 90.00 from any other state. The national comparability of the ATAR is based on the assumption that the total age-cohort in Tasmania is equivalent in ability to the total age-cohorts in other states. As part of its partnership with the University of Tasmania, the TQA calculates tertiary entrance scores and converts these to nationally comparable tertiary admission ranks (ATAR) using agreed rules and procedures.

An ATAR is calculated for students who have completed two years (or the equivalent) of senior secondary study and have satisfactorily completed the equivalent of a minimum of four eligible senior secondary courses, with at least three being done in Year 12 (or Year 13). Results in approved UTAS units can also count towards the ATAR.

A maximum of the equivalent of five eligible courses can count towards the ATAR, provided they were undertaken in Year 12 (or Year 13) and one other year. A student who has completed the same eligible course twice can only count one of the two results towards an ATAR. An eligible course is one which meets agreed requirements for quality assurance of results and has a suitable level of complexity / demand (level 3 in the scheme developed by the Victorian Credit Matrix).

Notes on interpreting a median ATAR

(i) What is a median tertiary entrance rank (a median ATAR)?

The school/college's average ATAR is the middle measure of the ATARs of the all the eligible students finishing year 12 in 2009. We have provided two types of measures of central tendency.

   a. We measured the *mean*, which is the sum of eligible students' ATARs divided by the total number of eligible students.

   b. As it is required for Commonwealth reporting, we also measured the *median*. This is middle measure of your students' ATARs when they are arranged from lowest to highest.

(ii) What does your school/college's average tertiary entrance rank – the mean and the median – tell us about the performance of your school?

A school's average tertiary entrance rank is affected by three factors:

   a. how well the eligible students at the school achieve

   b. the social mix of the students who are eligible

   c. the fact that only a small fraction of the total set of students state-wide attends the school.

The last fact means that a school's average tertiary entrance rank will vary from the state-wide average and from year to year even when:

   a. the school does just as well as any other school in terms of its impact on the achievement of its students

   b. the school does not select its students systematically

   c. higher (or lower) achieving students are not more likely to enrol at this school than at others.

Chance variations

Schools/colleges can expect their median ATAR to be different from the state-wide median. The following three examples show likely chance variations:

   a. By chance alone, the median ATAR for a school with 140 eligible students will vary above and below the state-wide median of, say 78.5, easily reaching values as high as 81.0 or as low as 76.0.

   b. By chance alone, for a school with 70 eligible students the variation around the state-wide median of, say 78.5 will easily reach values as high as 81.5 or as low as 75.5.

   c. For a smaller school, the chance variation is much bigger. By chance alone, the median ATAR for a school with 30 eligible students will vary around the state-wide median of, say 78.5, easily reaching values as high as 83.5 or as low as 73.5.

What does this mean?

a. Assuming that the students attending the school/college are, overall, typical of the range of students across Tasmania who are eligible for an ATAR, the parents of students at your school/college should not think that the institution has necessarily performed well (or badly) even if the median ATAR result rises or falls in the range covered by chance variations.

b. The students attending a school/college are likely to be typical, overall, of the range of students in Tasmania who are eligible for an ATAR if the school/college does not select or attract students who are more (or less) likely to do well in their senior secondary studies.

c. If the school/college has information showing that the students who attend and are eligible for an ATAR are, overall, not typical of the state-wide student population, then the comparison of the median ATAR for the school/college with the state-wide average does not, by itself, say anything useful. For example, if the school can show that, overall, it attracts students who could be expected to achieve much less well than the average, a school/college result near the state-wide median may represent an important success.

4. Year 12 Points Score

A 'year 12 points score' is calculated from a student's results in TQA accredited courses, TQA recognised courses, VET competencies and certificates. Each possible result – award or competency or other type of result in TQA recognised courses, such as AMEB – has been assigned a points value, derived from analyses of the state-wide data. Each subject/competency/certificate has also been assigned a number of credit points (reflecting its size based on information about the intended or design time). A TCE C syllabus, for example, has a credit point rating of 15 (corresponding to 150 hours). A student's point score is then the average of the best five equivalent scores across a set of results, with a total size of 75 credit points.