

Snapshot Assessments

This document provides further information about the Snapshot assessment, particularly regarding how the Assessment Tool makes a 'Threshold Decision'.

Snapshot assessments, recognise that in *some* circumstances a shorter assessment will provide enough information for an educator's purposes, while minimising the amount of time needed for administration. It is recommended that you discuss with others in your organisation when Snapshot assessments will be used.

The Snapshot assessments use the same items as the diagnostic assessments currently available and provide reports linked to the Learning Progressions for Reading and Numeracy. In order to use the adaptive functionality, the Snapshot assessment is only available online.

How precise are the new assessments?

Longer assessments generally generate more precise scale scores than shorter ones. For this reason results from a Snapshot assessment will tend to be less precise than scores from standard adaptive assessments. However, the minimum length of a Snapshot assessment has been set to ten questions to provide a level of precision that allows results from Snapshot assessments to be usefully compared with results from longer assessments. Like all assessments administered by the Assessment Tool, results for Snapshot assessments are always reported with a margin of error. The margin of error should always be considered when comparing results from two assessments.

Do results from Snapshot assessments appear in reports and data extracts?

Results from Snapshot assessments are treated as normal Assessment Tool results. They will appear in all reports and data extracts. Reports for the educator will always indicate when results came from a Snapshot assessment. There is no reference to Snapshot in the learner's reports.

Threshold and no-threshold

There are two types of Snapshot assessments. The first of these is designed to identify whether a learner is clearly achieving above (or below) a particular Learning Progression Step. For example, if an educator creates a Snapshot assessment aimed at Step 3 the Assessment Tool will report whether a learner's result is clearly above or below the minimum scale score required to be classified at Step 3. This minimum scale score is called the Step Threshold. If the learner's score is too close to the threshold to confidently make a decision the Threshold Decision is reported as "undecided".

The second type of Snapshot assessment is simply designed to be a short adaptive assessment (around 16 questions) that provides a broad estimate of a learner's reading or numeracy skills. This type of assessment does not report a Threshold Decision. A Snapshot assessment will always report a best fit Step and a scale score (with a margin of error) whether or not a threshold has been set.

When might an educator use a Snapshot assessment with a Step Threshold?

A Snapshot assessment that involves a Step Threshold could be used to determine which learners in a group are clearly achieving above a minimum Step. For example, if an educator had limited time and wanted to confirm which learners were clearly working above Step 5 they could create a Snapshot assessment and choose the Step 5 threshold. Learners who sat the assessment would each do a minimum number of questions to confirm whether or not they were above Step 5. The tool would report the Threshold Decision (Above, Below or Undecided) along with the best fit Step and Scale Score (with a margin of error). The learner's report does not include information about the Step Threshold nor the Scale Score.

How the tool decides if someone is above or below a Step Threshold

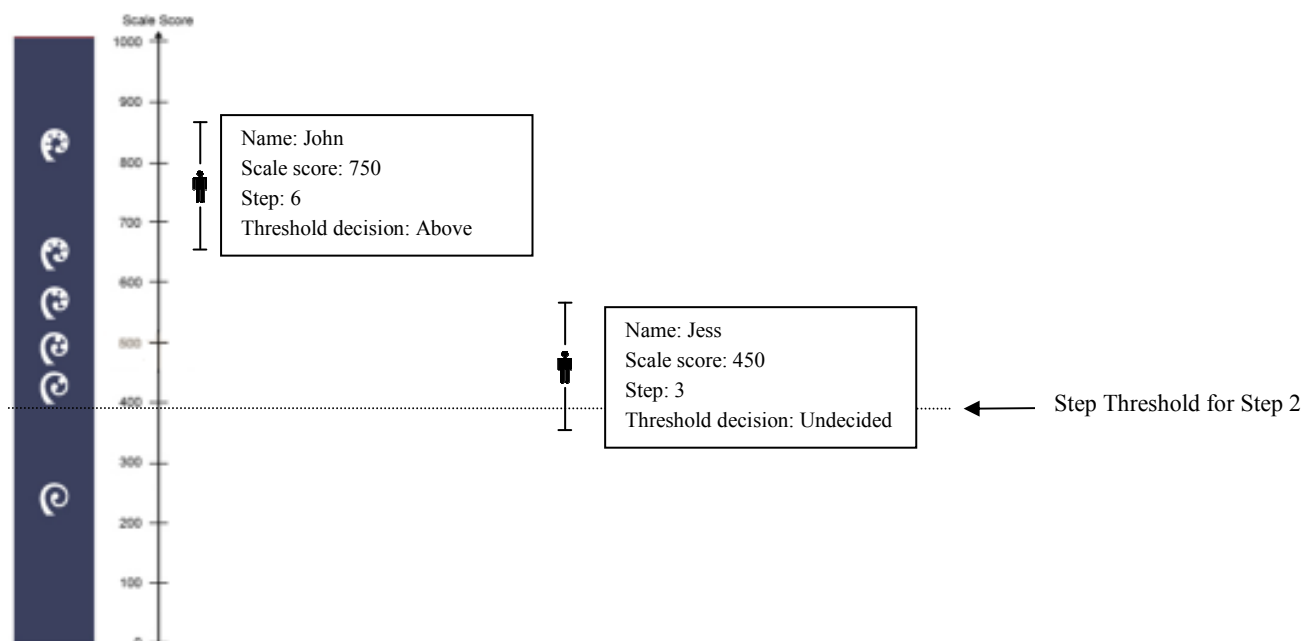
Each time a learner answers a question in an adaptive assessment the Assessment Tool is able to calculate a scale score and a margin of error for that score. Assessment always involves a level of imprecision and the margin of error provides a range of scores within which the learner's true score probably lies. The margin of error can be calculated for different probability levels. Whenever the tool reports a final result for instance, it always provides a 68% margin of error. This means that there is a 68% probability that the learner's true score lies in the range reported. During a Snapshot assessment the Tool calculates a new scale score and a 95% margin of error after each response from the learner. It then checks to see whether the minimum scale score required to be working at the Step (the Step Threshold) is within the range indicated by the 95% margin of error. If it isn't, the tool can terminate the assessment and report whether the student is below or above the Step. If it is, the tool can administer another item and then calculate an updated scale score and margin of error.

At the start of an assessment the 95% margin of error is very large. As more responses are provided the tool gains more information to work with and the margin of error gets smaller. If the learner is achieving well above or below the Step Threshold it doesn't take very many items before the Assessment Tool can determine that the learner is above or below. The minimum number of questions a learner must do before the Tool can terminate the assessment has been set to 10 to make sure each learner gets a range of questions before the assessment ends. Snapshot assessments are meant to be short, so if after 16 items the step Threshold is still within the margin of error, the Assessment Tool will terminate the assessment (as long as the last item in the current question set has been administered) and report a Threshold Decision of "undecided".

Figure 1 illustrates how a Threshold Decision works when the Step Threshold has been set to Step 2 in numeracy. In the figure person icons have been used to locate the results for two learners (John and Jess) on the numeracy scale along with 95% margin of errors around their scores. The threshold for Step 2 is shown by the dotted line crossing at 396 on the scale. The margin of error around John's score indicates that his numeracy skills are somewhere between about 640 and 860. The bottom of this interval is clearly above 396. The Threshold Decision for John is therefore "Above", signalling that it is highly probable John's numeracy skills are above the minimum level required to achieve at Step 2. On the other hand, the margin of error for Jess' score

crosses the line representing the Step 2 threshold. In this case we can't be 95% confident that Jess is achieving above Step 2, so the Threshold Decision is reported as "Undecided". Notice that the best fit Step from this assessment for Jess is still Step 3. This is the best estimate of a step value we can make for Jess based on this assessment. However, we need more information before we can be 95% confident the assessment has not overestimated her numeracy skills.

Figure 1 Making a Threshold Decision



Glossary

Margin of Error - The margin of error provides a range within which we can be reasonably sure the learner's true score actually lies. At the end of all assessments the Assessment Tool reports a scale score with a 68% margin of error, for instance 550 plus or minus 35. This means that there is a 68% probability that the learner's true score lies somewhere between 515 and 585. After each response during a Snapshot assessment with a Step threshold the tool calculates a 95% margin of error to decide whether a learner is clearly achieving above or below a Step level.

Scale Score - The result of an assessment in a particular learning area (for instance, reading) is reported on a scale of 1 – 1000. Scale scores take into account how difficult the questions were that made up the assessment and for this reason can be compared with other scale scores in the same learning area regardless of which questions were used in the assessments administered.

Step Threshold - A Step Threshold is the minimum scale score required to be reported as achieving at a particular step on the Learning Progressions for Reading or Numeracy.

Threshold Decision - A Threshold Decision reports whether the learner result on the assessment indicates they are clearly above or below the Step Threshold set by the educator. When the Assessment Tool cannot be confident that the learner is clearly achieving above or below the step it reports a Threshold Decision of "undecided".