

LEARNER-CENTRED ASSESSMENT¹

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Learner-centred assessment is a process of establishing where individual learners are in their development—the kinds of knowledge, skills and understandings they have developed and are able to apply to meaningful problems—for the purposes of monitoring individuals' progress through an area of learning and for making decisions about the best ways to facilitate further learning.

A key feature of a learner-centred approach to assessment is that it is linked tightly to the teaching and learning process. Its purpose is not so much to make a judgement about how a class or school is performing, to evaluate an instructional program, or to provide information that can be used for selection, graduation or the award of scholarships, but to provide teachers, students and parents with information that can be used to guide individual learning. The underlying question in a learner-centred approach is: where is this student up to in his or her learning and what might be done to support further development?

Underlying learner-centred assessment is an assumption that every student is engaged in a process of ongoing development and has the potential for further growth. The important question is not so much how one student is performing in relation to another, but where each individual is on his or her development of development, and what can be done to facilitate further learning.

The notion of individual development is thus a fundamental concept in a system of learner-centred assessment. The objective in learner-centred assessment is to establish where an individual is on a developmental continuum. In our work at the Australian Council for Educational Research we refer to a developmental continuum as a 'progress map'. A progress map describes the nature of development—or progress or growth—in an area of learning and so provides a frame of reference for monitoring individual development. Learner-centred assessment we also refer to as 'developmental' assessment.

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Under this approach to assessment, a learner's progress is monitored in much the same way as a child's physical growth is monitored: from time to time an estimate is made of a student's location on a developmental continuum, and changes in location provide measures of growth over time.

Progress Maps

A progress map is a picture of the path students typically follow as they learn. This vertical map provides a description of skills, understandings and knowledge in the sequence in which they typically develop: a picture of what it means to 'improve' in an area of learning.

The first step in implementing developmental assessment is to construct a progress map.

A progress map usually begins with teachers' understandings. Through their day-to-day experiences, teachers gain an understanding of how student development usually occurs in an area of learning. They come to recognise indicators of progress. An initial sketch of a progress map is made by putting on paper the understandings that teachers already have.

This initial sketch is then tested. Do other teachers agree with this description of typical growth? What is the empirical evidence for this map as a picture of typical student progress? Is this picture consistent with theoretical understandings of how learning occurs? How useful is the resulting progress map in practice? In other words, does it provide teachers with a useful framework for thinking about and monitoring student development through an area of learning?

The order of learning outcomes on a progress map sometimes reflects a natural, perhaps inevitable, developmental order. All children probably develop an understanding that spoken language can be represented using marks on paper before they understand the meanings of particular written words, for example. Knowing how to add and subtract integers may be a prerequisite to learning how to add and subtract fractions or decimals. In other cases, the order in which skills, understandings and knowledge develop is influenced by common classroom conventions: a decision by teachers to teach some skills and knowledge ahead of others, for example.

The intention in learner-centred assessment is to obtain an estimate of a student's current location on a progress map as a guide to the kinds of

learning experiences likely to be most useful at that stage in the student's learning and as a basis for monitoring growth over time.

This feature of learner-centred assessment distinguishes it from other forms of assessment which do not monitor progress against described continua. If the purpose of an assessment activity is to establish whether or not a student has satisfactorily completed a set of assigned tasks; if the purpose is only to rank students so that some can be admitted to an educational course or offered a scholarship; or if the result of an assessment is an uninterpreted score or grade, then that does not constitute developmental assessment.

Assessment Methods

The second step in implementing learner-centred assessment is to collect evidence that can be used to estimate students' locations on a progress map.

In learner-centred assessment, records of observations provide the evidence used to estimate learners' levels of attainment (i.e., locations) on a progress map. In general, the larger the number of relevant observations, the richer the available evidence, and the more dependable the conclusion about a student's current level of attainment.

A requirement of observations is that they be relevant. They must provide evidence about the area of learning to be assessed. More exactly, they must provide evidence about the learning outcomes identified on a progress map. Unless observations are relevant, conclusions based on those observations lack validity.

Some learning outcomes require observations of a particular kind. Skills in designing and undertaking an investigation, collecting, analysing, and evaluating information, and writing a report may be best assessed in the context of an assigned project. The ability to write for a range of audiences and purposes may be best assessed by observing a collection (portfolio) of a student's writing assembled over a period of time. Skills in manipulating apparatus, operating machinery, playing musical instruments, co-operating with others in a team activity, and speaking a second language may be best assessed by observing performances. Skills in making items of food, ceramics, textiles, wood and metal may be best assessed by observing the products of student work. And a student's mastery of a body of knowledge, ability to reason logically about a range of problems, and ability to apply procedures such

as mathematical algorithms may be most efficiently assessed through paper and pencil exercises.

Learner-centred approaches to assessment use all these and other methods of observation. Each method can be used informally as part of a teacher's day-to-day practice or, where high levels of reliability and comparability are important, as a basis for developing more structured assessment tasks and activities.

In collecting evidence it is especially important that observations are not limited to students' performances on passive, reproductive tasks. Students also must be observed creating their own solutions to problems. And the contexts in which they are observed should, wherever possible, be meaningful to students and interesting in their own right.

Not all methods of assessment are equally accessible and fair to all students. Teachers need to be aware of the implications of using particular methods of assessment for some individuals. Students may be disadvantaged on an oral presentation because of their cultural background, for example. Students from non-English backgrounds may be better able to demonstrate their skills and knowledge on short-answer paper and pencil questions than on extended writing or speaking tasks. And, relative to boys, girls are likely to perform better on essays and project work than on multiple-choice tests in the same learning area.

Judging and Recording

The collection of evidence includes the systematic recording of observations and judgements. Records of observations and judgements can take many forms.

A number of schemes have been developed by teachers to record their day-to-day observations of student classroom behaviour. These 'anecdotal' records, which some teachers later transfer to individual student record sheets, provide valuable information which can go unnoticed or be forgotten if not systematically recorded as it occurs.

Teachers make other observations through assigned classroom work. Writing tasks, projects, presentations to the class, portfolio entries, classroom exercises, and tests all provide opportunities to collect information about a student's current level of attainment in an area of learning.

Some of the records teachers keep simply indicate whether or not assigned tasks have been completed correctly (e.g., did the child give a

sensible estimate of the number of buttons on the table?). In other cases, more detailed records are kept of the steps a student takes to solve a problem or of students' partially correct but incomplete understandings. In still other cases teachers record ratings of student work, making separate judgements of different aspects of a piece of work ('analytic' ratings) or single overall ('holistic') ratings. Comments, evaluations, and suggestions for improvement are commonly recorded directly on to work as feedback to students.

When making judgements of student work, teachers need to be aware of common observational 'errors'. Examples of such errors include the tendency of observers to see what they expect to see on the basis of their preconceptions of a student's ability, and the tendency of observers to under-rate the performances of students of a particular sex or cultural background on some kinds of tasks and in some contexts.

Estimating Attainment

The third step in a learner-centred approach to assessment is to use the available evidence (records of observations) to draw a conclusion (or inference) about an individual's current location on a progress map.

Because a progress map is a description of the typical path of student progress through a learning area, the record of observations made for any particular student will only more or less resemble this path of typical progress. Developmental assessment requires an 'on-balance' estimate of a student's location on a progress map.

Two questions can be asked about this estimate:

- How valid is it?
- How reliable is it?

The validity of an estimate depends on the relevance of the observations on which it is based. Do the observations provide evidence about the full range of outcomes that make up the learning area? Is the available evidence an adequate reflection of the student's abilities, or is it too dependent on other influencing factors such as competence and confidence in the use of English? Are the observations 'fair' indicators of achievement in the sense that they are not affected by irrelevant student characteristics such as cultural background or gender?

The reliability of an estimate depends on the amount of information on which it is based. In general, the greater the amount of information,

the more reliable the estimate. But reliability also depends on the consideration given to the contexts in which observations are made. Students who are able to apply skills and knowledge to more complex, more demanding, and less familiar tasks display higher levels of ability than students who are able to apply the same skills and knowledge only to less complex, less demanding, and more familiar tasks.

In day-to-day work students are not always observed in the same contexts or undertaking the same tasks. This is especially true of students in different classrooms and different schools. When accurate (that is, reliable) estimates of students' locations on a progress map are sought, procedures are required that take account of the specifics of the tasks that individuals attempt and the contexts in which they are observed.

Reporting

In developmental assessment, student achievement is monitored and reported in terms of progress maps (or developmental continua). The monitoring of achievement against an explicit map or continuum permits a variety of graphical displays and descriptive interpretations of student progress.

A progress map provides a framework for monitoring student growth in an area of learning. Because this growth is monitored against a described continuum, individuals' estimated locations on a progress map can be interpreted and reported descriptively in terms of the skills, knowledge and understandings typically demonstrated by students at those locations.

These descriptions of student achievement can then be used as a focus for teacher-student and teacher-parent discussions of progress and to identify with students and parents the kinds of learning activities likely to be most useful at particular stages in a student's learning. In some classrooms, teachers make displays of progress maps and place them on classroom walls for students to see and discuss. In some schools and education systems, parents are given materials explaining key progress maps and receive reports of student progress in relation to those maps.

Once a progress map is constructed, it provides a framework for thinking about levels of educational achievement and a basis for setting goals for improvement. What level of attainment in Reading is it reasonable to expect most Year 3 students to reach by the end of the school year? What level of attainment in Measurement is it reasonable to expect most Year 6 students to reach by the end of the year? Questions

of this kind lead to the development of standards: expectations of student achievement by particular stages in the schooling process.

As well as providing a framework for monitoring and reporting the progress of individual students, a progress map also provides a frame of reference for monitoring and reporting the progress of groups of students. These groups may be individual classes, all students in a school, all students in an education system, or particular subgroups of a student population such as girls, boys, or students from other language backgrounds.

Designing Learner-Centred Assessment Programs

The principles of learner-centred assessment can be applied to teachers' classroom assessments, but they also can be applied to large-scale assessment programs. The application of learner-centred principles in large-scale programs often is important because these programs play an important role in communicating values and expectations. Whatever might be espoused in policy documents, syllabus statements and classroom teaching, procedures for assessing school learning send powerful messages about what societies value and consider worthy of recognition and reward.

Because assessment procedures can be a potent influence on what teachers teach and students learn, the design of assessment programs and their impact on teaching and learning must be kept under constant review. A well-designed assessment system can be an effective means of focusing students' attention on valued learning outcomes, encouraging higher-order thinking and reflection, reinforcing curriculum intentions, and setting learners' sights on still higher levels of attainment. Well-designed systems, as well as operationalising and communicating the kinds of thinking and learning we wish to encourage in students, can provide a basis for valuable conversations among teachers about learning and its assessment, and between teachers, students and parents about individuals' current levels of progress, their strengths and weaknesses, and the kinds of learning experiences likely to be effective in supporting further learning. A poorly-designed system, on the other hand, may provide little support to learning and, at worst, may distort and undermine curriculum intentions, encourage superficial learning, and lower students' sights on satisfying minimal requirements.

The design of an assessment system also can influence teacher behaviour, particularly when assessment results are used to draw conclusions about the performances of individual teachers or schools, or

to allocate resources. An example of this influence was the impact of ‘minimum competency’ testing on teacher behaviour in the United States. Minimum competency tests were introduced in the 1970s and 1980s to establish whether students were achieving the minimum levels of knowledge and skill expected of students in particular grades (eg, end of high school). As many commentators have observed, a common response by American teachers to minimum competency tests was to focus their teaching efforts on the foundational skills assessed by these tests and to concentrate their attention on students who had not yet achieved these skills—sometimes at the expense of extending the knowledge and skills of higher achieving students. According to some writers, these tests not only constrained classroom teaching, but also had dubious benefits for the students they were designed to serve:

Over recent decades, we have learnt a great deal about the ways in which large-scale assessment programs convey values and impact on practice, and have become more aware of the unforeseen and unintended consequences of particular approaches to assessment. For example, we have discovered the tendency of criterion-referenced (and more recently competency-based) assessment systems to fragment curricula into unhelpful checklists of narrow skills and behaviours. We have seen the tendency of minimum competency tests to restrict the attention of teachers and learners to the achievement of fundamental knowledge and skills. And we better understand the difficulties of using complex performance assessments in high stakes settings, particularly as they relate to teacher workload, the authentication of student work, and the achievement of adequate levels of reliability and comparability.

The adoption of a learner-centred approach to the design of large-scale assessment programs involves the explicit construction of one or more progress maps for the purposes of assessing and reporting individuals’ levels of attainment and progress. Learner-centred assessment requires more than the identification of minimum acceptable levels of performance and the reporting of whether or not individuals have met these minimum standards: it requires a recognition that all students are on a path of learning and sees assessment as a process of establishing where individuals are in their ongoing development.

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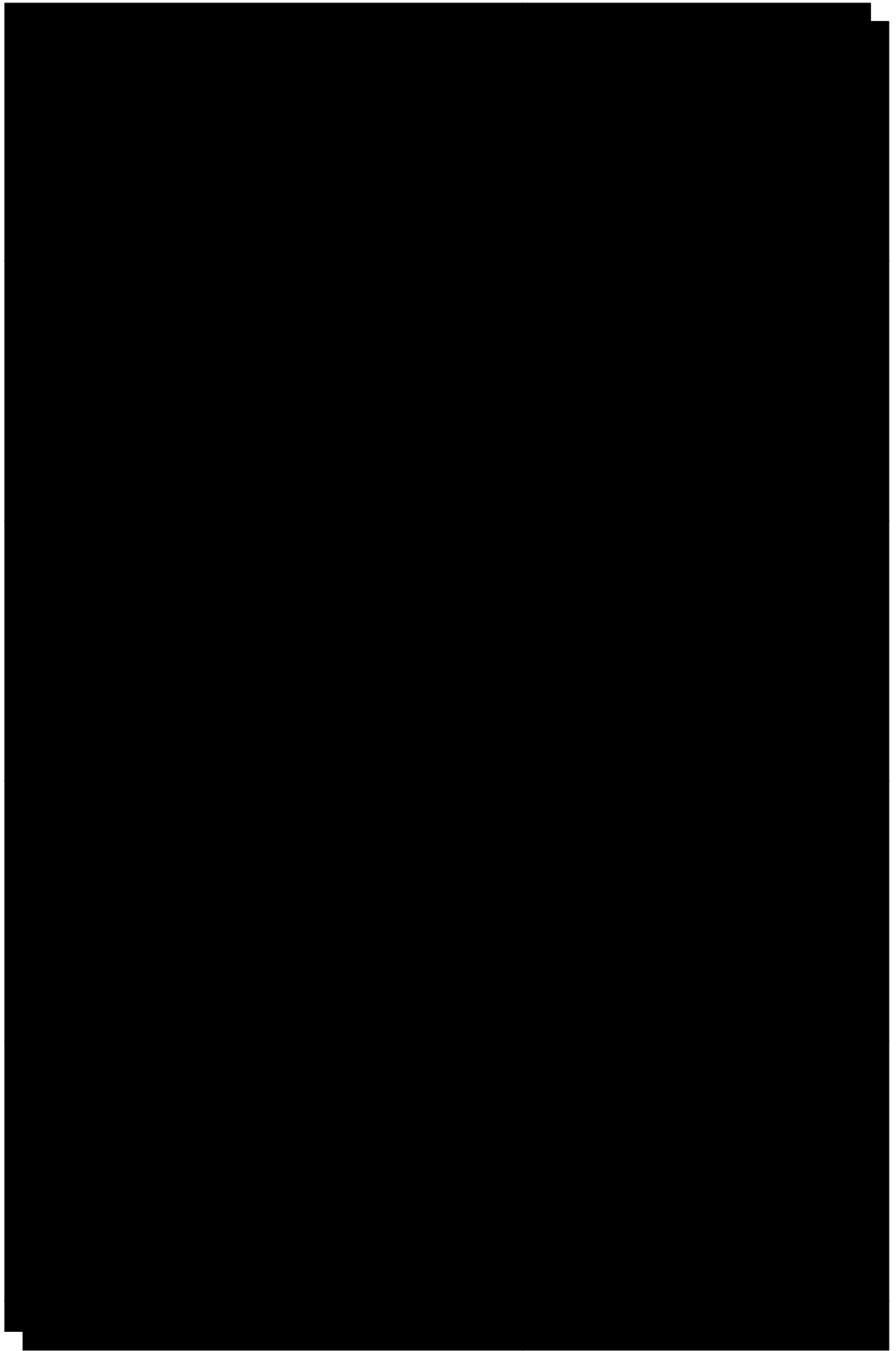


Figure 1. The lower portion of a Counting and Ordering progress map showing examples of knowledge, skills and understandings.

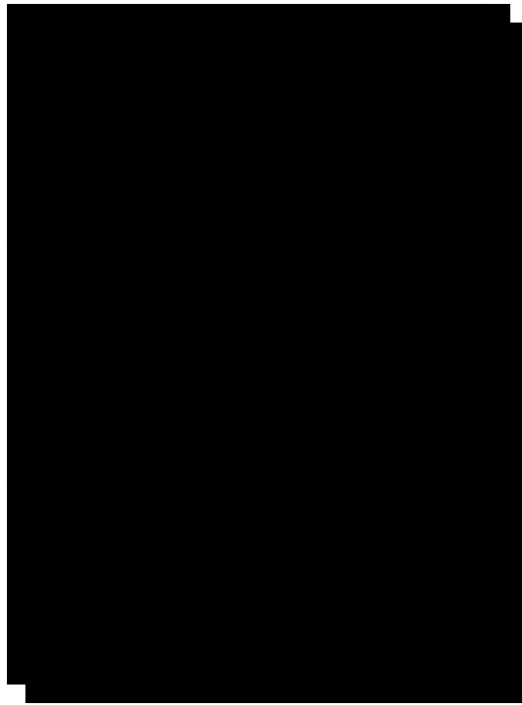


Figure 2. Display of one student's estimated levels of achievement on five language proficiency progress maps