Focussing on assessment

BERWYN CLAYTON

Strategies for off-job teachers and trainers

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Adelaide 1995

A.C.N. 007 967 311

ISBN 0 86397 279 9
TD/TNC 42.24

Published by
NCVER Ltd
252 Kensington Road
Leabrook, South Australia 5068

Printed by Copymaster, Adelaide
Reprinted 1996, 1997, 2000, 2001, 2004

Acknowledgements

The author would like to acknowledge the considerable assistance and support provided by the National Centre for Vocational Education Research and the members of the Project Reference Group: Hugh Guthrie, Ivan Johnstone, Martha Kinsman and Trixie van Leeuwen.

Warm thanks are also extended to my colleagues in the Canberra Institute of Technology, who so generously took time out from their busy lives to read the manuscript and provide thoughtful, provocative and constructive comment.

I am indebted to those teachers and trainers who provided the assessment materials and exemplars in this book

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Introduction

As teachers and trainers involved in the delivery of vocational education and training programs, we are constantly assessing the outcomes of our educational endeavours. We assess our own teaching performance; we assess the performance of our peers, and through informal and formal mechanisms, we draw conclusions about the knowledge, skills and attitudes of every learner we interact with each day.

In our informal assessments we may base the judgements we make on previous experience, on personal values and views of the world, or simply on the basis of what seems to make sense to us. However, when assessment becomes a formal process, issues of validity, reliability and fairness come into play. We are concerned about being objective and about assuring learners and the broader community that we understand what is required in assessment and that we are prepared to take responsibility for the assessment decisions we make.

Why then has there been such a focus on assessment in vocational education and training in recent years? To a large degree, it has become a matter for public debate because government initiatives for workplace and training reform have raised the profile of training and placed it into a more public forum. The expansion of training in the workplace has brought new players who are vitally interested in training and assessment into the debate. Their need to know has encouraged a considerable amount of discussion and the development of information on how to train in the workplace and how best to assess training outcomes against industry standards.

As teachers and trainers in vocational education and training, we are now not alone in the assessment game and the approach we take and the assessment decisions we make are now, much more, open to scrutiny. A competency-based approach to training and assessment requires us to clarify the purposes of learning and to assess against clearly defined criteria so that we are able to recount precisely what learners can do on completing their courses. Assessment, after all, is a quality assurance process. And while the methods and procedures we use to carry out assessment need not markedly change to suit this new situation, both our processes and the judgements we make must now be open, understandable and defensible to all.

This book has been written to assist teachers and trainers who are delivering training either in formal institutional settings or in training rooms away from the day-to-day productive work environment. It is also designed to support and inform the curriculum process, as assessment is a key stepping-off point in the development of courses and training programs.

In ideal circumstances vocational education and training involves a close integration of learning on and off the job. But, often the ideal is difficult to achieve. Assessment issues for those delivering away from an actual work setting can be quite different and complex. Some of the complexity stems from the following factors:

- Many of our learners are not employed in the field for which they are seeking qualifications and many more are not even employed.
- Much learning off-the-job takes place with large groups of students in classrooms and workshops and only limited access to work placements is possible.
- In TAFE, particular emphasis is placed on providing learners with a broad range of skills and knowledge, which may extend beyond the skill parameters required for specific occupations.
- Teachers and trainers are often required to teach in discipline areas where no industry standards exist and, where they do exist, teachers are not in an appropriate position to determine learner competence. That is the task of industry.
- Timetabling, resourcing, staffing and organisational planning, influence the way assessment is approached. Teachers and trainers must still fulfil the statutory requirements of organisational policy with regard to course delivery, curriculum development, accreditation and certification.

There are no simple solutions.

The idea of this book is that you focus on the important components of assessment and consider the possibilities. The book is presented in four parts.

The first looks at the key elements of assessment: the reasons for assessing, the principles underpinning the process and the purposes for which assessment results are used.

The second part emphasises planning, management and evaluation as essential elements of assessment and offers some suggestions which teachers and trainers may consider in the development of their own assessment strategies. Where practical and appropriate, short case studies, examples and action plans and pro formas have been included. These have been generously donated by practitioners as interesting and potentially useful exemplars.

The third part of the book looks at a range of assessment methods which can be used for assessing skills and knowledge. A brief description of each method is given, together with an outline of their particular strengths and weaknesses and the purpose for which the instruments are best suited. Some guidance in the form of construction hints is also included.

For any reader who wishes to follow up these brief outlines in a more extensive way, annotated reading lists are included at the end of each cluster of assessment methods.

The final section addresses those issues associated with assessment which remain matters of considerable discussion and debate. The issues are presented as a series of questions which are commonly asked by teachers and trainers. They are:

- What is the role of professional judgement in competency-based assessment?
- What constitutes a 'pass' in an assessment event or module?
- How can reassessment be managed efficiently and effectively?
- How can excellence be acknowledged in competency-based assessment?
- Can learning outcomes from several modules be assessed together?
- How can learners be given sufficient time and diversity of experience to develop their skills prior to assessment?

Too often assessment has been an afterthought in the curriculum development process and even in the delivery of training. While effort has been put into delineating aims, course structure, course content and resources, guidance on assessment has frequently been restricted to just a few lines in each module in a curriculum document. Consequently, assessment has sometimes been a puzzle for teachers, an unknown quantity for learners and a veiled mystery to those outside vocational education and training institutions.

Competency-based training is outcomes focussed. Therefore, assessment is a critical issue. A variety of means can be used to achieve the ends, but the desired outcomes need to be clearly understood by all involved. This can only be achieved if you focus on all aspects of assessment, debate the issues and share your views. Hopefully this book will be a catalyst for this vital discussion.

Part 1: Focussing on the key elements of assessment

In this section you will find:

1.1	**So what is assessment?**	**Includes definitions of criteria, evidence and judgement, and discusses types of evidence, quality of evidence and the issue of how much evidence is enough to support a sound judgement about learner achievement.**
1.2	**Purposes of assessment**	**Looks at the uses made of outcomes of assessment by teachers and trainers, learners and others; defines summative and formative assessment and considers the balance between these two approaches to assessment.**
1.3	**Principles of assessment**	**Defines validity, reliability, fairness and flexibility, outlines their important roles in various assessment contexts and suggests ways of ensuring these principles are addressed in developing strategies for assessment.**

1.1 So what is assessment?

The first point of focus in developing a strategy for assessment must be to clarify what is meant by the term. In the ***Framework for the Implementation of a Competency Based Vocational Education and Training System (1993)***, assessment is defined as:

> *"...the process of collecting evidence and making judgements on the nature and extent of progress towards the performance requirements set out in a standard, or a learning outcome, and, at the appropriate point, making the judgement as to whether competency [or the learning outcome] has been achieved "(p.39).*

Assessment, therefore, is a staged process which involves:

- the description/clarification of the desired learning outcomes assessment criteria,
- the collection of evidence, and
- the making of a judgement about what a learner can do based on a comparison of the evidence and the criteria.

In this ***criterion-referenced approach*** we are concerned to determine information about the performance of learners in relation to specific criteria. The bases for such criteria may be industry endorsed competency standards or other standards established during the curriculum development process. The assessment criteria, and the range of contexts and conditions under which performance is to be achieved are clearly delineated. Assessment instruments directly assess the stated learning outcomes and are designed to provide valid and reliable evidence about what the learners can or cannot do.

This is in marked contrast with a ***norm-referenced approach*** where assessments are utilised to compare the quality of performance of individual learners so that each individual learner's standing within a cohort of learners can be established.

Focus: What criteria?

The first aspect of assessment you need to focus on when planning and developing a strategy for assessment is the clarification/definition of the learning outcomes and their associated assessment criteria.

In off-job training environments, the criteria against which learner performance are judged can be developed from a range of sources.

Some curricula may be based upon nationally endorsed industry standards, others will have been developed after consultation with local enterprises, unions and other interested parties, who have been involved in the curriculum development process. Some of you will be delivering modules which have been nationally developed and endorsed, whilst others will be teaching programs in which you have been directly involved in writing. In a number of cases, only limited guidance on assessment will be available in the course documentation, whilst other curricula and their supporting documentation may contain detailed assessment schemes and exemplars. The range of assessment possibilities can be quite confusing.

Although it is likely that curricula have been based on industry standards or on what industry representatives consider are appropriate standards, the achievement of learning outcomes in many institutional courses cannot ensure that learners are competent on completion of their courses of study. Only with further sustained practice in the workplace can their competence be determined. Therefore, you are charged with the task of preparing learners to become competent at a later time and the assessment criteria against which judgements are made will usually be different from those outlined in competency standards or applied in a real work situation.

In planning your assessment strategy, it is vital that all those who are teaching a course, or delivering modules in a program, focus on the learning outcomes and assessment criteria together. It will then be possible for all involved to identify where all the assessment opportunities are, and to develop a mutual understanding of the meaning of outcomes and criteria and a united approach to assessment of modules which they are jointly delivering. It is important to take time during the planning of delivery and assessment to discuss and negotiate agreement on how the learning outcomes and criteria are to be interpreted, applied and assessed.

Focus: What is evidence?

Evidence is the information about learner skills, knowledge and attitudes which is gathered through assessment. Examples of different aspects of competency on which evidence can be collected are included in the following table:

Product	Process
• Workpiece is to specification • Finish is to specification • Sale is made • Customer is satisfied • Unit is functional • Product matches specifications • Repaired plant works correctly • Budget is achieved • Targets are achieved • Document is correct and to customer requirements • Fault is found and rectified • Equipment is correctly set up • Rate of production is maintained • Patient recovers • Goods are delivered on time and in good condition • Presentation achieves required purpose • Work is completed on time	• Correct procedures are followed • Safe work methods are used • Required service is provided • Demonstrates commitment to safety • Shows initiative • Correct sequence is followed • Works as a member of a team • Demonstrates perseverance • Demonstrates cleanliness • Correct waste control measures are applied • Good communications are maintained • Shows diligence • Records are correctly maintained • Shows sensitivity to others • Correct cost control measures are carried out • Goods are correctly transferred
Underpinning Knowledge and Understanding **(Knowledge and understanding are demonstrated of:)**	
• Work procedures • Typical fault modes and remedies • Workplace hazards • Record keeping procedures • Training techniques • Safety first • Statutory requirements	• OH & S requirements • Quality management techniques • Safety precautions • Waste disposal procedures • Assessment techniques • Emergency procedures • Equal opportunity principles

Rumsey (1994), *Assessment Practical Guide*, p.8.

Focus: Types of evidence

There are various types of evidence which can be gathered to inform decisions about learner competence or achievement of learning outcomes. The differences between them largely relate to their proximity to naturally occurring workplace activities.

There is a close tie between the type of evidence and the context within which it is gathered. Thus, the types of evidence are:

- ***Direct evidence*** which is information gathered through observation of performance and application of knowledge in ***real work tasks in an actual workplace setting.***
- ***Indirect evidence*** which is information gathered through observation of performance of work-related but ***simulated tasks*** in environments away from the actual production of work, such as training rooms and classrooms/workshops in educational institutions.
- ***Supplementary evidence*** which is the information gathered in situations where it is impossible, inappropriate or simply too costly to set up simulated work experiences. This type of evidence is generally collected through pen and paper

testing and may concentrate upon a learner's ***underpinning knowledge.***

In workplace training, competence can be determined after gathering mostly direct evidence. However, the final judgement may be supported or validated by some indirect and supplementary evidence as well.

The collection of direct evidence, however, is not always feasible for providers of training outside the workplace. As a result, indirect and supplementary evidence (or second-order measures) may provide the bulk of the evidence upon which judgements are made about learner achievement in institutional settings.

Further, institutional efforts to obtain direct evidence through work placements and field practice is complicated often by an inability to control the experience that learners might have. Generally there can be no guarantee that an appropriate range of tasks can be covered. Nor can there be any control over the extent of learner involvement or the quality of their experience. This can work against full coverage of what is designated in the learning outcomes and assessment criteria.

Confronted by this problem, you need to plan a variety of assessment events which will allow a balanced collection of direct, indirect and supplementary evidence. If you are able to observe learners carrying out real workplace tasks on-the-job, to check them completing set simulated tasks and to assess their underpinning knowledge through questioning and written activities you are likely to have a high degree of confidence in your final decisions about the achievement of learning outcomes.

Whatever decisions you might make about the types of evidence you intend to gather, it is vital that you concentrate upon gathering evidence that it is of ***the highest possible quality.***

Focus: Ensuring the quality of evidence

Quality can be assured if you concentrate on gathering evidence that you can confidently say is ***valid, authentic, current*** and ***sufficient.***

- ***Validity*** relates to whether the evidence directly and appropriately addresses the learning outcomes (based on industry standards) and their specific assessment criteria;
- ***Authenticity*** relates to the assurance that the evidence submitted by learners is actually an outcome of their own efforts;
- ***Currency*** refers to the recency of the evidence provided, and

- ***Sufficiency*** relates to whether there is enough evidence of learner attainment on which to confidently determine that the learning outcomes have been achieved.

It is this latter point which can be of concern to many teachers and trainers.

Focus: How much evidence is enough?

> *To judge that someone is competent on only one piece of evidence would be very risky indeed and certainly undesirable. However, dozens of observations or examples, while probably being more convincing would probably be unnecessary and a needless expense.*
>
> (Rumsey, 1994, p. 15)

In institutional settings it may not be possible to provide the full range of opportunities and contexts required to confirm, with the fullest degree of certainty, the level or extent of learner achievement. Simulated assessment environments cannot hope to cover the diversity of contexts that are available in work settings, and even in work experience or field placement environments, it is extremely difficult to orchestrate situations which allow assessment of a range of learner performance.

Other inhibiting factors are the lack of available work placements, time, and the feasibility and cost associated with providing a full range of contexts in off the job.

In off-job situations, concerns about these inhibiting factors can encourage teachers and trainers to gather an excessive amount of evidence just to make sure that their assessment decisions can be justified. Such over-assessment is counter-productive as it eats into valuable teaching and learning time. With experience, however, a reasonable balance can be achieved.

Basically, the evidence that is gathered can only ever be ***a sample*** drawn from the possible range which could be assessed. It is, therefore, important to ensure that the evidence is:

- sufficiently comprehensive to cover the elements which, as discipline experts, you have deemed to be critical to the achievement of the learning outcomes and the module purpose;
- of the highest quality possible to ensure validity and reasonable reliability;
- drawn from a variety of sources through a mix of assessment methods such as observation, paper and pen tests of underpinning knowledge, demonstration in set tasks and questioning: and
- collected in the most cost-effective way possible.

As Black suggests:

In the final analysis...sufficiency is not entirely a technical question but also a question of the balance between 'certainty' and cost.

Black, 1993, p. 8.

Focus: Making judgements

The judgement phase of assessment is the step in which a judgement is made about what the learner can do based on a comparison of the collected evidence with the stated criteria.

Any determination about the quantity and quality of evidence, together with the rules which are to govern the making of final decisions must be defined and clearly prescribed ***prior to the commencement*** of the teaching and learning process. The outcomes of these decisions must also be shared with learners.

To ensure that decisions are as reliable and objective as possible, all of you who are involved in delivering particular modules need to be involved in the preparation and development of the assessment scheme which you are going to use. Through such a mechanism, a mutually agreed understanding of the standards upon which all learner achievements will be judged can be consistently applied by all teachers.

This time for mutual reflection, discussion and agreement is a vital part of the planning of any assessment strategy.

Focus: Exercise

You might now like to relate the following questions to your own assessment practice. Select a module/course that you are currently teaching.

How does your assessment practice rate?

Focus checklist

1. Are the learning outcomes and the assessment/performance criteria clearly understood by all involved in teaching the course/module?
2. What constitutes appropriate evidence for the designated learning outcomes and criteria?
3. What types of evidence will you be able to gather to support decisions about learner achievement?
4. Where appropriate or possible, has on- and off-the-job assessment been integrated to give a whole picture of learner achievement?
5. What mechanisms can you employ to ensure the quality of the evidence you are going to collect?
6. Can you determine how much evidence will be enough to generate a sense of confidence in your final judgement of learner achievement?
7. Are there processes in place that will ensure judgements about learner attainment are consistently made?

Further reading

For further details on criteria, evidence and judgement you might read ***Assessment Practical Guide*** (1994) by David Rumsey. Case studies and examples of different aspects of competency/learning outcomes on which evidence can be gathered are included on pages 6 to 10.

1.2 Purposes of assessment

Having determined what the various aspects of assessment are, the next points to focus on are the purposes of assessment. For whom and why are we assessing and what does assessment provide for those involved in the process? These are questions which you must answer ***before*** you go on to develop your strategy for assessment.

Focus: For whom are we assessing?

The beneficiaries of any assessment process are the learners, ourselves as teachers and trainers, and others outside the teaching and learning process who are interested in the information that assessment of achievement provides.

For learners, assessment can provide:

- an opportunity for informal learning not previously assessed to be formally recognised. This is known as the Recognition of Prior Learning (RPL);
- an indication of their progress in a course or training program;
- clarification of those areas upon which they might need to work to successfully achieve the learning outcomes;
- valuable feedback which may encourage and motivate learners;
- an opportunity to develop their critical skills so that they can accurately assess their own knowledge, skills and other attributes.
- a meeting of requirements for licensing;
- rewards for their effort, and
- evidence of their achievement of learning outcomes.

For teachers and trainers, assessment can provide:

- indications of learner weaknesses and opportunities for us to make adjustments to our teaching to address these;
- valuable feedback about the effectiveness of our teaching;
- evidence upon which to make informed decisions about the progress of learners and ultimately to make judgements about the achievement of learning outcomes, and
- feedback which can assist in planning for future teaching and inform curriculum review and development.

For employers and other interested 'outsiders', assessment can provide:

- information about a potential employee's achievement in training;

- an assurance of quality which is important to industry, teachers/trainers, learners, further education institutions, the community and funding authorities.

Focus: Formative and summative assessment

Assessment can be used either ***formatively*** or ***summatively***.

The purpose of ***formative assessment*** is to provide information which can be used to shape the teaching and learning process both on and off-the-job.. It offers the opportunity to adjust teaching to address the specific needs of learners and to give them valuable feedback about their strengths and their areas of weaknesses. Formative assessment is primarily concerned with giving both learners and teachers and trainers some idea of how learners are progressing in a particular module; with rectifying learning and teaching problems as they arise, and with encouraging and motivating learners. Formative assessment generally concentrates directly on specific short-term learning goals.

Formative assessment can involve the use of assessment instruments such as class tests of performance or knowledge, but it may also simply involve teachers and trainers observing performance and providing verbal feedback during practice of a particular facet of learning. Alternatively, formative assessment can be carried out by the learner or the learner's peers at various points during the delivery of a module.

Often formative assessment can be an informal process and there may be no need to record the results in any formalised way. A note in a roll book may be sufficient. Learners, however, may be demotivated if the outcomes of their formative efforts appear to be discounted and they need to be actively encouraged to view formative assessment as a vital and integral part of their learning. It is, therefore, important that learners be informed of the role played by any formative assessment events.

Summative assessment refers specifically to the process of gathering evidence and making the final decision about a learner's achievement of module/course learning outcomes or competency. It is primarily concerned with assessing learners' skills, knowledge and attitudes either towards the end of a period of learning which has included some formative assessment (feedback) and sustained practice or when learners consider they are ready to provide the evidence necessary to meet the assessment requirements.

Assessment of this type is generally carried out by teachers and/or trainers or workplace supervisors. It also can involve peers and the learners themselves in collaboration with any nominated assessor.

In a structured off-job setting, summative assessment tends to be a much more formal and structured process involving a systematic evaluation of a learner's performance against clearly specified criteria and the formal reporting of the results.

Focus: Getting the balance right between formative and summative assessment

With the introduction of competency-based curricula, there has been a tendency to exaggerate the summative aspects of the assessment process. This has occurred because most module descriptors have included a set of learning outcomes, a listing of assessment criteria, an assessment method against each outcome and a statement of the conditions under which each learning outcome are to be assessed. They have included minimal information on an appropriate assessment strategy.

Such an over-emphasis on the summative approach can lead to a situation where learners are over-assessed and assessment becomes the driving force in the teaching and learning process. With so many formal hurdles for learners to clear, the likelihood of teachers having to re-assess can be markedly increased. This, together with institutional requirements to mark, record and report every summative assessment event, can make the assessment process sometimes difficult to fit into the time allocated for a module. It can also make the assessment process quite costly and a strain on teachers and learners alike.

Concentrating on the summative, too, can mean that teachers and trainers miss the vital opportunities that formative assessment can provide to enhance the quality of the learning experience for themselves and their learners.

When developing a strategy for assessment, the amount of formative assessment and summative assessment to be used in a module needs to be carefully balanced. An integrated assessment approach will ensure the quantum of summative assessment not only satisfies sufficiency requirements, but allows the reinstatement of formative assessment as a valuable informational tool in the teaching and learning process.

A good rule of thumb is that the amount of time spent on summative assessment should be no more than ten percent of the nominal duration of the module. In the following example of a strategy for assessing a module on farm animal husbandry formative and summative approached are blended to assess a series of learning outcomes.

Learning Outcome							
Assessment Instruments	**1**	**2**	**3**	**4**	**5**	**6**	**Assessment Timing**
Brief Assignment		**F**					**1/3 through module**
Assignment			**F**	**F**			**1/2 way through module**
Theory Test	**S**	**S**	**S**	**S**	**S**		**2/3 through module**
Practical Test	**F& S**	**F& S**	**F& S**	**F& S**	**F& S**		**2/3 through module**
Written assignments (with answers provided)*	**F**	**F**	**F**	**F**	**F**		**At learner's own pace**
Theory Test	**S**	**S**	**S**	**S**	**S**		**When learner chooses**
Team Exercise*		**F& S**				**F& S**	**At end of module**
Practical Work (Observation)	**F**	**F**	**F**	**F**	**F**	**F**	**Throughout module**

F *Formative Assessment* provides feedback regarding the learner's current level of performance and rate of progress towards meeting the standard specified in learning outcomes and assessment criteria.

S *Summative Assessment* is used to determine whether the learner's performance meets the specified standard. In this case, the result is formally recorded.

* Suitable for Self Assessment

[Courtesy of the National Laboratory Science Technician Curriculum Project]

Finally, in balancing the two types of assessment, it is also appropriate to allow learners to use evidence drawn from formative assessment. But, clearly, this approach should not be ***expected***, otherwise the learning value associated with formative assessment will be lost.

Focus exercise

You might now like to relate the following questions to your own assessment practice. Select a module/course that you are currently teaching.

Focus checklist

1 Are opportunities available to formatively assess and provide direct feedback to learners ?

2 Is the blend of formative and summative assessment appropriate?

3 Can you identify some areas where it may be better to employ a formative approach to assessment?

4 What impact is re-assessment having on the teaching and learning process?

Further reading

For further details on the purposes of assessment you might again read ***Assessment Practical Guide*** (1994) by David Rumsey. Pages 13 and 14 also include examples of formative and summative assessment on and off-the-job.

1.3 Principles of assessment

Having identified and clarified the key aspects and purposes of assessment, the next focus is on the ***validity, reliability, fairness*** and ***flexibility*** of assessment processes and procedures. These are the basic principles which underpin good assessment practice.

By consciously addressing these principles whilst planning, developing and implementing an assessment strategy, you will almost certainly:

- fulfil the technical requirements of assessment;
- provide equality of opportunity for all of your learners;
- meet the needs for accountability;
- generate training outcomes for learners and yourselves which have credibility and acceptance throughout industry and the broader community.

The ***National Framework for the Recognition of Training*** (NFROT) emphasises a commitment to these principles. Teachers and trainers have an important role to play in generating a national sense of confidence in the quality of what they do. At a more personal level, teachers and trainers will generate a degree of confidence in their own professional approach to the teaching and learning process.

In the following pages, the principles of assessment are defined and guidance is given on how you can ensure that assessments are as valid, reliable, flexible and fair as it is possible to make them. This is not always easy, as there can be constraints on assessment which influence the degree of validity, reliability, flexibility and fairness that can be achieved.

Such constraining factors need to be identified in the planning and implementation of assessment events, and alternative strategies developed which are a balance between cost, feasibility and confidence in the final judgement about learner achievement of learning outcomes, module purpose and course aims.

Focus: Validity of assessment

Validity cannot be directly measured, but must be inferred from the evidence that is collected to support the achievement of a learning outcome.

Assessments which are valid are those that directly and precisely assess what you specifically set out to assess. The assessment instruments selected should provide learners with

the opportunity to actually perform the tasks and/or demonstrate the understanding required by learning outcomes and their associated assessment criteria. Assessments which are valid are those that utilise assessment instruments which are 'fit-for-the-purpose'.

Judgements which are valid are those that are made on the basis of evidence gathered using valid assessment methods. Again sufficiency is an important issue in relation to validity. To make a valid decision, it is important to decide what evidence is appropriate; how much of it is required and over what period of time it should be collected.

> *The ability of a learner to apply knowledge and skills in new and different situations usually cannot be inferred when performance has only occurred once and in one context. Hence, valid judgements of competence will normally be based on performance in a variety of contexts or situations.*
>
> (Hager, Athanasou & Gonczi, 1994, p.14)

In a very simplistic example, where the designated outcome of training is that a person can run 100 metres in under 13 seconds, a valid assessment event will involve the learner running over the prescribed distance whilst being timed with a stopwatch. A valid (and reliable) judgement, however, will require the runner to achieve the required standard on a number of occasions over a period of time.

More importantly, ***assessment methods and assessment judgements are valid*** if they relate directly to the learning outcomes being assessed and that those learning outcomes reflect the performance requirements of relevant competency standards verified and validated through industry consultation. Without this validation process, the validity of the assessment process must be brought into question.

Validity is a matter of degree. Assessment instruments and the judgements that are made about learner achievement can range anywhere between being highly valid and having only a limited degree of validity.

When selecting an assessment approach, it is important to determine:

- whether the approach will appropriately assess the stated learning outcomes (and no other outcomes which are not specified);
- to what extent the outcomes validly reflect the underlying competency standards, and
- if it is a valid assessment instrument, to what degree is it valid.

The closer assessment mirrors exactly what is described in the learning outcomes and assessment criteria, the higher the degree of validity will be achieved. Consider the following module drawn from a course for entry level into the Transport and Distribution industry. Only one of the three learning outcomes has been included as an example.

MODULE TITLE	TRANSPORT CALCULATIONS
Module Purpose:	**To provide learners with the knowledge and skills to perform mathematical operations to solve a range of common transport-related numerical problems**
Learning Outcome 3	**Perform mathematical operations to solve a range of common industry-related numerical problems by mental, written and electronic calculations**
Assessment Criteria	**1. Accurately calculate area and volume of regular and irregular shapes.** **2. Accurately and efficiently calculate job costs on the basis of time (person hours) and volume.** **3. Calculate cubic capacities and tonnage for loading purposes.** **4. Calculate cost per tonne/kilometre and cost per litre/kilometre**
Assessment Conditions	**To successfully achieve this learning outcome the learner must, with the aid of a calculator, demonstrate an ability to perform the relevant arithmetic calculations with 90% accuracy on at least three occasions.**
Assessment Method	**Practical exercises**

[Courtesy of Transport Training ACT]

It would be quite appropriate to assess this learning outcome using a pen and paper-based short answer test conducted in a classroom and achieve a reasonably high level of validity. If, however, the assessment involved practical exercises undertaken in a simulated work environment with access to realistic transport documentation and appropriate freight items, the assessment method and the inferences that could be drawn about learner performance are likely to have a higher degree of validity. Taking it a step further, if the assessment was carried out in a workplace, using real work examples under natural work conditions, the assessment would be quite specifically judging the learners' performance against the module purpose, the learning outcome and assessment criteria. As a result, the degree of validity achieved would be even higher.

In off-job environments, it is often difficult to achieve a high degree of validity in the assessment of outcomes which are

specifically directed toward workplace performance and industry standards. For example, assessment of learner performance in a simulated work setting can rarely emulate that which is required or possible in a real workplace environment. For this reason, it is also less valid to make judgements about learner ***competence*** after assessment events in simulated settings. A learner's ***potential*** to be competent, however, can be validly inferred from the results of these events.

Where skills, knowledge and attitudes are all assessed together in an integrated way, a higher degree of validity can be achieved. Such integrated events allow learners not only the opportunity to directly demonstrate their ability to perform realistic practical tasks, but to provide you with evidence of the extent of the understanding which underpins this ability.

Further, an approach which assesses skills and knowledge in a holistic way makes sense to learners, who are concerned about seeing the relevance of what they are doing. Not only do assessment events need to have the highest degree of validity possible, but they also must be logical, highly appropriate and relevant to the learning situation and assessment purpose for which they are being used. This aspect of validity is known as ***face validity.*** Although in a technical sense this aspect of validity is often discounted, for learners, it is vitally important.

Good assessment practice requires you to focus on the validity of the instruments you use and the validity of the inferences you draw from the evidence that you collect. In planning a strategy for assessment, it is important that mechanisms are in place for checking the processes to ensure that they are as valid as they can possibly be under the circumstances. A check for validity is a way of ensuring quality outcomes for all involved in the teaching and learning process.

Focus exercise: Validity

As with previous focus checklists, you might like to relate the following questions to your own assessment practice. If you are able to give a positive response to each question in the list, the validity of the judgements you are making about what your learners can do, is more than likely to be reasonably high.

Focus checklist: Validity

1. Are the learning outcomes to be assessed and the assessment criteria to be met by learners explicit?
2. How well do the learning outcomes relate to the competency standards on which they may be based?
3. Does your assessment address only the criteria determined to be critical to the achievement of the learning outcomes?
4. Are the assessment methods appropriate for the type of evidence you require and the outcomes you are assessing?
5. Is there sufficient quality evidence being collected?
6. Are you using a variety of assessment techniques to gather your evidence?
7. Having regard for feasibility and cost, is assessment being undertaken in relevant settings using a variety of contexts?
8. Is the relevance of your assessments clearly evident to learners?
9. Is assessment pitched at an appropriate level?
10. Is your evidence being gathered in different ways over a period of time?
11. Does your approach assess skills and knowledge in an integrated way?

Focus exercise: Reliability

Reliability is about consistency in assessment. It not only refers to the instruments that may be used to assess achievement of the learning outcomes, but also the approach that is taken in assessing and the way that the results are interpreted.

Assessment instruments which are adaptable to a standardised approach and uniformity in marking can generate a high degree of reliability. Other instruments, such as extended essays or individualised projects, are likely to be less reliable because of the potential for a broad range of learner responses and teacher discrimination in marking and interpretation of the results.

Technically, a reliable assessment approach and instruments can be used over and over again with different learners, different assessors and different contexts and still achieve consistently reliable evidence about learner achievement. Such consistency is possible because the learning outcomes and criteria are clear and detailed; the quality and amount of evidence is specified and agreed, and uniform interpretations are applied objectively to the results by all teachers/trainers involved in the assessment event. The same also applies where an individual teacher applies uniform interpretations to different learner results over a period of time. The goal of

reliability in assessment is to largely eliminate the potential for subjective judgements about learner performance.

It is important to note at this point that ***reliable*** assessments are not necessarily ***valid*** assessments. Even when consistent judgements can be made by a number of assessors over a period of time, if the assessment does not directly assess the stated learning outcomes or competency standards, the end product cannot be valid.

Industry standards with their clearly defined competencies, performance criteria and range statements together with nationally developed modules, are an attempt to improve reliability of outcomes from vocational education and training. This national approach is designed to produce consistent outcomes from training which are generally understandable and comparable.

However, reliability in assessment is difficult to achieve. In institutional settings many teachers may be delivering similar modules. Even though they may have the best intentions, the more assessors involved in the assessment process, the less likelihood there is of consistency in approach. Different staff, different teaching and learning styles, different learner needs and different assessment settings will always mean that it is hard to replicate assessment to achieve completely consistent outcomes.

The situation is complicated further when there is a need to use assessment methods which are highly valid, but less reliable. Extended response essays are often used to assess higher level cognitive skills such as analysis, synthesis and evaluation. Confronted by a broad range of learner responses, individual teachers will independently use a considerable degree of personal discretion in making judgements about learner achievement.

Similarly, assessment events which require a learner to demonstrate a level of creativity, innovation or problem-solving can be highly valid, but do not lend themselves to the type of assessment approach which will generate a high degree of reliability.

Clearly, then, there can be conflict between achieving a high degree of validity and attaining an ideal level of reliability. As validity must be your highest priority, there needs to be an appropriate balance between these two key principles of assessment. Where reliability must be overtaken by concerns for validity, the best that may be able to be achieved is ***comparability*** in the approaches to interpretation of assessment outcomes.

In the planning of assessment, there is a need to weigh up where reliability is possible and achievable and then to

negotiate and agree on those situations where comparability will have to suffice. The demand for validity will be the determining factor in any decision-making. Regardless of the choices made, assessment needs to be carefully monitored and evaluated as part of a quality assurance process. In the end, assessment decisions must be justifiable and defensible.

Despite these problems, every effort should be made to make assessment processes, procedures and decisions as reliable as possible, and this can only be achieved by planning and coordinating your assessment strategies.

Focus exercise: Reliability

To check the reliability of your current practice, you may like to answer the following questions. If your responses are generally positive, you will be achieving a reasonable degree of reliability. Where your responses are negative, you will have to decide whether your approach is justified on the basis of a concern for validity or that other factors are influential.

Focus checklist: Reliability

1. Are the learning outcomes clearly defined?
2. Are the assessment/performance criteria free from ambiguity?
3. Are appropriate assessment instruments and sample responses available which will allow all teachers to consistently assess and interpret outcomes?
4. Are standardised procedures in place for implementing assessment?
5. Have agreed guidelines been established on how the results of assessment are to be interpreted?
6. Are comparable assessment instruments available for re-assessment of learners?
7. Is assessment a jointly planned process which involves all assessors in the decision-making?
8. Are procedures in place to monitor, evaluate and revise assessment?

Focus: Fairness in assessment

The principle of fairness relates specifically to the provision of assessment in a way that does not disadvantage any learner. Fairness is about equal access and opportunity to succeed, regardless of age, gender, ethnicity, disability, language/literacy level or employment status.

There are three important aspects of fairness. For any assessment to be fair, details of the processes and methods that are going to be utilised must be well documented and openly

shared with learners. Thus, the first critical aspect of an assessment strategy is ***quality information*** for dissemination to all who are involved in the assessment process.

Apart from the important aspects such as timing and completion requirements, the type of information that learners need to have are:

- detailed information on all procedures and methods to be utilised;
- the precise assessment criteria against which their performance will be judged;
- an explanation of how the results of a series of events will be drawn together to give a final result;
- the details of re-assessment processes and procedures;
- the responsibilities of both learners and teacher with regard to assessment, and
- any details of appeal procedures if they wish to challenge the results of any assessment event.

All of this needs to be precise, easily understood, prepared early and circulated to all learners and those delivering the program well before any planned assessment event.

An example of information given to learners in a Design Studies course is provided on the following pages. The information covers explicitly most of the important aspects of assessment.

ASSESSMENT INFORMATION

Remember	**There are some introductory comments on assessment in the Overview section of Infobook 94.** **The teaching approach for Design Studies in highly integrated. That is, although there are eight modules, a good deal of effort has been put into pulling them together. The semester is treated as a single, large unit of work - not separate, sequenced topics or discrete modules.** **Design Project provides the target of focus towards which most of the semester's work is directed.** **Each module description contains further details on assessment.**
What we assess and why	**The assessment determines whether you have reached all the standards needed for you to progress beyond Design Studies into your selected design specialisation. The Studio staff have to certify that you are competent in all the learning outcomes because later semesters depend on it.** **You need to be assessed in each module, even though they are taught in an integrated way. Therefore, assessment items have been established for each module.** **Details of each item of assessment are available separately. Also available are the assessment criteria that will be used to judge your work - they are in the Marking Guides.**
How to pass	**To pass Design Studies you need to pass each of the eight modules.** **To Pass a module you need to meet all the assessment criteria for that module.** **Perhaps an example will help. If one of the assessment criteria is that you must meet established timelines... and if you submit your work a day late...you will be deemed to have not met one of the assessment criteria - even if work is adequate in all other respects. The same applies for all the listed assessment criteria.**
What does pass mean?	**All modules other than Design Project, use an Ungraded Pass/Fail grading system.** **The grade of 'Ungraded Pass' means that you have met all the assessment criteria - just as the Studio staff will do. If you can, form teams with your colleagues and run 'crits' on each other's work before you submit.**

What does Pass mean?	**All modules, other than Design Project, use an Ungraded Pass/Fail grading system.** **The grade of 'Ungraded Pass' means that you have met all the criteria set for that grade - it does not mean that you have met 50% of the criteria.** **Design Project, the capstone module, has three levels of passing grade - Pass, Credit and Distinction. To be awarded any of these grades you must meet all the assessment criteria for that level of performance. Credit means that you have met all the criteria set for that level of performance - it does not mean 'getting more of it right' than Pass! Nor does distinction mean you 'got more right' than a person who got a Credit.** **When you submit your work for assessment, Studio staff make judgements about whether you have met all the assessment criteria. Inevitably, this involves a degree of subjectivity; Studio staff are required to exercise professional judgement and interpretation in determining the adequacy of your performances against the set criteria. No attempt is made to compare your effort with that of other learners.**
What does Fail mean?	**If your work does not meet all the criteria on the first attempt, you will be judged 'not yet competent' and offered one more opportunity to provide an assessment product that meets all the criteria.**
Good things to do	**The best thing you can do is to be very familiar with the assessment criteria and make sure your work is satisfactory in every respect before you submit. To find out what the assessment criteria are, read the Marking Guides; to understand what the assessment criteria mean, participate fully in all the activities of the Design Studies program.** **Being there and being in it will also help you to understand what the terminology means and the standards required for satisfactory performance.** **SCHOOL OF APPLIED ARTS AND DESIGN - CIT**

RIGHTS AND RESPONSIBILITIES

Your attention is drawn particularly to the following rights and responsibilities because they are so directly connected with your participation in Design Studies.

You have the right:	It is your responsibility:
To a course of study that meets current educational standards of presentation, content and organisation	To establish a place for your study amongst your personal priorities.
To expect that changes to course requirements will not disadvantage you, and that, if change is necessary, it will be made only by the proper authority.	To be familiar with the information available about your course of study and the factors which govern it within the Institute.
To have your work assessed against the prescribed criteria and in a manner which is prompt and helpful	To self-evaluate your work before you submit.
To be treated with respect and in a non-sexist, non-discriminatory way.	To treat others with respect, including the work of others.
Of appeal against any assessment and on any grievance.	To raise and discuss issues which affect the good management of your study program.
To copyright protection of your work.	To ensure that the work you submit for assessment is your own work.
To have your personal information secured from all but those authorised to access it.	To respect the personal information of others.
To information which will assist you to choose and manage your study program.	To accept a high degree of responsibility for the management of your own learning.
To information about assessment requirements and criteria.	To familiarise yourself with the assessment requirements and criteria and to seek clarification where necessary.
To a positive and helpful learning environment.	To contribute constructively to the learning of others.

SCHOOL OF APPLIED ARTS AND DESIGN - CIT

DESIGN PROJECT

Purpose

The purpose of this module is to develop in learners the ability to take a design project from the initial interpretation of a given brief through the design development and monitoring processes to completion and presentation. The project builds on the concepts and skills developed in the pre-requisite modules and the need to explore and search in order to create innovative design solutions.

Prerequisites

Before attempting this module learners should have completed:

- **Design Thinking and Processes**
- **Research Skills**

Corequisite

- **Presenting Information**

Learning Outcomes

A learner completing this module should be able to:

- **Establish from a given brief, the parameters of a design project.**
- **Formulate a range of design solutions.**
- **Develop a chosen design solution to preliminary presentation stage.**
- **Install/Present a design solution.**

Assessment

- **Assessment is made on the basis of a single integrated design project in which the learner develops, presents and justifies a design solution to a given brief. The brief is given in the theme 'A Wing and A Prayer'.**
- **It is your responsibility to select and submit works which meet the assessment criteria. This requires a good understanding of the assessment requirements and the assessment criteria. You will only be able to make an informed decision if you participate fully in studios, workshops and tutorials and complete the brief for the theme 'A Wing and A Prayer'.**
- **Grades available are Distinction, Credit, Pass, and Fail, determined using a standards-based system.**
- **A grade at any level requires that all the criteria for that level be met. It is not possible to achieve a grade by meeting 'most' of the criteria or 'more than 50%' of the criteria for that level.**

Assessment Criteria

To be considered for a passing grade, you must present the installation and associated work for the theme 'A Wing and A Prayer'. This must:

- **be submitted on time; and**
- **be completed with minimal supervision/teacher intervention; and**
- **meet the specifications of the brief; and**
- **document the evolution of the design solution; and**
- **be complete in terms of content and attention to finishing detail.**

An installation which meets these basic criteria may then be considered for a grade higher than 'Pass'. This will be determined by a consensus decision of a panel of experts drawn from the staff of the School of Applied Arts and Design and judged against the criteria in the following table:

Criteria	0	1	2	3
Originality of design solution				
Unity and coherence of composition				
Sensory impact and attraction of the installation/presentation				
Strength of function displayed by the design as a solution to the brief				

In the above table:

- **'0' denotes that the project has not met the criterion.**
- **'1' denotes that the project has met the criterion by achieving all the explicit requirements of the design brief.**
- **'2' denotes that the project has met the assessment criterion by making reasonable interpretations of the intentions of the brief, extending beyond the explicit requirements of the brief.**
- **'3' denotes that the project has met the assessment criterion by interpreting the brief in ways which are both imaginative and reasonable, and which extend well beyond the explicit requirements of the brief.**

The grades for the module are determined as follows:

- **A 'Pass' grade is awarded when the consensus decision of the assessment panel is that the project has achieved at least '1' against all criteria.**
- **A 'Credit' grade is awarded when the consensus decision of the assessment panel is that the project has achieved at least '2' against all criteria.**
- **A 'Distinction' grade is awarded when the consensus decision of the assessment panel is that the project has achieved '3' against all criteria.**

SCHOOL OF APPLIED ARTS AND DESIGN - CIT

The second aspect of fairness relates to the methods used to assess learners. When selecting the techniques to be used, careful consideration must be made as to whether any individuals will be disadvantaged by the instrument or event chosen.

From the beginning learners with special learning and assessment needs should be identified and procedures put in place which will allow them to fully participate in assessment. Some learners may require support in the assessment, or the use of ***alternative assessment strategies*** which more appropriately suit their particular needs. For example, an inappropriate emphasis upon pen and paper tests can disadvantage those who have limited language or literacy skills to the point that assessment becomes a barrier to learners progressing further with their training.

Where particular levels of language, literacy or numeracy are explicitly required by learning outcomes, industry competency standards or on entry to a particular occupational, however, alternative assessment strategies may not be appropriate. Under these circumstances, learners should be encouraged to access additional support to enhance these skills.

The third aspect of fairness relates to the concern that assessment tasks do not involve activities which go beyond those which would reasonably be expected in the workplace. To ask learners to submit complex technical written reports or the like in a course, just for the sake of assessment, is neither fair to the individual nor a valid form of evidence. If assessment involves learners in assessment activities which require skills and knowledge that are not normally expected for persons entering the relevant industry at the level equivalent to course completion, then such tasks should not be utilised for assessing learner achievement within a program of training.

The major concerns with utilising different strategies for different learners, however, lie with the validity and reliability of the methods that are used. Alternative strategies must still provide appropriate and sufficient evidence of learner achievement of the learning outcome. In offering an alternative way of completing assessment, teachers and trainers need to be confident that an approach does not water-down the skills and knowledge being assessed to the point where the standards are not compatible with those stated in the curriculum or the underpinning industry competency standards.

Focus exercise: Fairness

Again you may like to relate the following questions to your own assessment practice. How fair are your current procedures and methods? Are there aspects of your assessment

approach which could be improved to ensure fairer assessment of learners?

Focus checklist: Fairness

1. Are learners provided with detailed information about what is required of them with regard to assessment?
2. Are they provided with the assessment/performance criteria against which their performance will be judged?
3. Are your assessment procedures and methods equitable to all learners?
4. Are the standards demanded of learners appropriate?
5. Are learners made aware of their responsibilities with regard to assessment?
6. Are learners made aware of teacher/trainer responsibilities with regard to assessment?
7. Is there opportunity for flexible/alternative assessment for learners with special needs?
8. Are comparable assessment instruments available for re-assessment of learners?
9. Where practical and appropriate, is assessment negotiated with learners?
10. Are there clearly documented mechanisms for appeal against assessment results?
11. Are learners provided with information relating to appeals?

Focus: Flexibility in assessment

In the broadest terms, flexibility is about making appropriate modifications to assessment procedures and methods to suit the particular needs of learners and adjusting the way that assessment is undertaken to suit the variety of contexts in which learning might be taking place. Flexible assessment may also mean that learners are more actively involved in the assessment process.

Recognition of prior learning (RPL) is a major element in flexible assessment. RPL offers learners the opportunity to provide evidence of experience and expertise previously gained, and to receive recognition and credit for it regardless of where or how it may have been acquired. Documents, interview reports, references about the learners abilities and authenticated products of their performance in other settings constitute the evidence upon which final judgements may be made. In developing a strategy for recognition, descriptive criteria, clear guidelines for candidates and explicitly detailed information for those involved in the assessment and decision-making process are essential.

As previously outlined under fairness, reasonable adjustments can also be made to assessment to suit the specific requirements of individual learners or groups of learners. Flexible assessment may be as simple as replacing assessment instruments that depend upon a language/literacy ability with questioning, interviews or some other more 'user-friendly' approach.

Flexible assessment can also involve learners in self- or peer assessment, or it may involve learners negotiating individual assessment or learning contracts. When considering these types of assessment, you need to realise that learners will require clear information on their roles and responsibilities and the opportunity to practice what may represent an unfamiliar approach to assessment. In the learning contract developed by the National Laboratory Science Technician Curriculum Project included on the following page, the specific roles and responsibilities for both learner and workplace supervisors are clearly identified. After reaching agreement about the parameters of the task, the learner, teacher/trainer and workplace supervisor then sign and date document to formalise the contract.

Where teaching and learning is taking place on and off-the-job, assessment may be integrated to take account learner performance in both settings. In this situation, evidence can be gathered at times when learners are actually performing the required tasks and applying their knowledge as part of their normal work. Such an integrated approach, however, will require teachers and trainers to enter into negotiated partnerships with supervisors/assessors in the workplace.

PRACTICAL PROJECT - LEARNING CONTRACT

As the learner I will:

- **establish the project parameters with my supervisor**
- **negotiate the use of equipment, materials and facilities with my supervisor and/or relevant personnel**
- **use allocated resources efficiently to achieve the agreed outcomes within time and budget constraints**
- **perform all project work safely and in accordance with recommended workplace procedures**
- **consult my supervisor immediately in the event of an accident, or damage to equipment or facilities**
- **record all procedures and data accurately**
- **provide information regarding the project's progress/outcomes (eg. project plan, progress reports, final report, seminar) in the agreed format and at the agreed times:**

Project plan	**eg. February 20**
Progress report 1	**#**
Progress report 2	**#**
Progress report 3	**#**
Final report/seminar	**#**

- **submit work that is mine and acknowledge the contributions of others.**

As the Supervisor I will:

- **provide accurate advice regarding project design**
- **provide, or arrange access to, necessary information and resources**
- **provide specific performance feedback and coaching at agreed and other appropriate times**
- **provide details of all assessment instruments and marking criteria.**

Courtesy National Laboratory Science Technician Curriculum Project

Given explicit information about the learning outcomes, the assessment criteria and the types of evidence that are required, learners may also be given some responsibility for gathering some of the evidence themselves. Authenticated log books, portfolios and referee reports drawn from outside the usual learning context may be used to supplement that which is collected in a more formal way.

Flexible assessment can also be about providing learners with the opportunity to request assessment when they consider that they are ready. To ensure that learners do not overestimate their capacity to perform the assessment tasks, they will need assistance to help them make sensible decisions about whether they are ready or not. Effective and efficient on-demand assessment can be achieved if learners are well prepared and well informed. They also need the opportunity to practise using self-assessment or peer-assessment checklists.

Whilst flexibility is an important principle, in an institutional setting it can be both costly and difficult to organise and manage. Administrative requirements for timetabling and reporting, together with budgetary constraints need to be thought through prior to the development of alternative assessment approaches. Consideration also needs to be given to the validity and reliability of any alternative options selected and whether the requirements for flexibility will compromise the quality of the evidence and the judgements made about learner performance. It may be that flexibility is an aspect of assessment which is best addressed in a formative way and that a balance between flexibility and quality assurance will need to be struck.

Focus exercise: Flexibility

You might now consider what flexibility is built into your current assessment practice. Do you see areas where you may be able to assess in a manner which allows a degree of flexibility?

Focus Checklist

1. Is there opportunity for flexible/alternative assessment for learners with special needs?
2. Where practical and appropriate, is assessment negotiated with learners?
3. Are learners involved in assessing their own performance?
4. Are learners able to have their previous experience and expertise recognised?

Validity, reliability, fairness and flexibility are principles which underpin good assessment practice. In developing any assessment strategy, you need to confirm that your assessment procedures and methods are technically sound; equitable, credible and acceptable. To ensure this, you need to focus on the principles which underpin good assessment practice: ***validity, reliability, fairness*** and ***flexibility.***

Further reading

For further details on the principles of assessment you might again read ***Assessment Practical Guide*** (1994) by David Rumsey. Guidelines for improving validity, reliability, flexibility and fairness in assessment practice are given on pages 17 to 22. Examples of their application in a variety of settings are also provided.

For a more detailed approach to the principles, you should read ***Assessment Technical Manual*** (1994) by Hager, Athanasou & Gonczi (pp. 12 - 16).

In Chapter 6 of ***Student Assessment: A handbook for TAFE Teachers*** (1986), Peter Thomson discusses the meaning and the importance of validity and reliability in a TAFE setting.

For the technically-minded, Chapter 9 in Gronlund's ***Constructing Achievement Tests*** (1982) provides an in-depth description of validity and reliability.

The example of information for students included in this section was provided by the School of Applied Arts and Design, CIT and the Practical Project - Learning Contract was drawn from the ACTRAC National Laboratory Science Technician Curriculum Project

Part 2: Focussing on planning, managing and evaluating assessment

In this section you will find:

2.1	**Planning your strategy**	**Identifies a series of steps to assist in the planning of an assessment strategy and provides planning pro formas to guide the planning process.**
2.2	**Managing your strategy**	**Identifies elements to be considered in implementing and managing assessment, including the preparation of learners, reassessment, recording results and reporting outcomes.**
3.2	**Evaluating assessment**	**Outlines a framework for the formative evaluation of an assessment strategy and identifies the aspects of assessment and possible sources of information and data that may be included in the review process.**

2.1 Planning your strategy

Systematic planning is a vital element of good assessment practice. It is not something that can be done in a hurried manner, nor is it an activity that should be carried out in isolation by individual teachers and trainers. A planned approach to assessment requires the allocation of time and the active participation of all teachers/trainers who are going to be involved in teaching and assessing in particular programs. Everyone should have a say in the assessment decision-making process. Hopefully, this will generate a feeling of ownership and confidence in the processes and procedures that are finally agreed upon.

If you are the only one involved in delivering a program, there still needs to be time dedicated to planning assessment and to consulting with others to ensure that your approach is sound. Other teachers/trainers can be used as your sounding boards, even if they have limited understanding of the course or program which you are delivering and assessing.

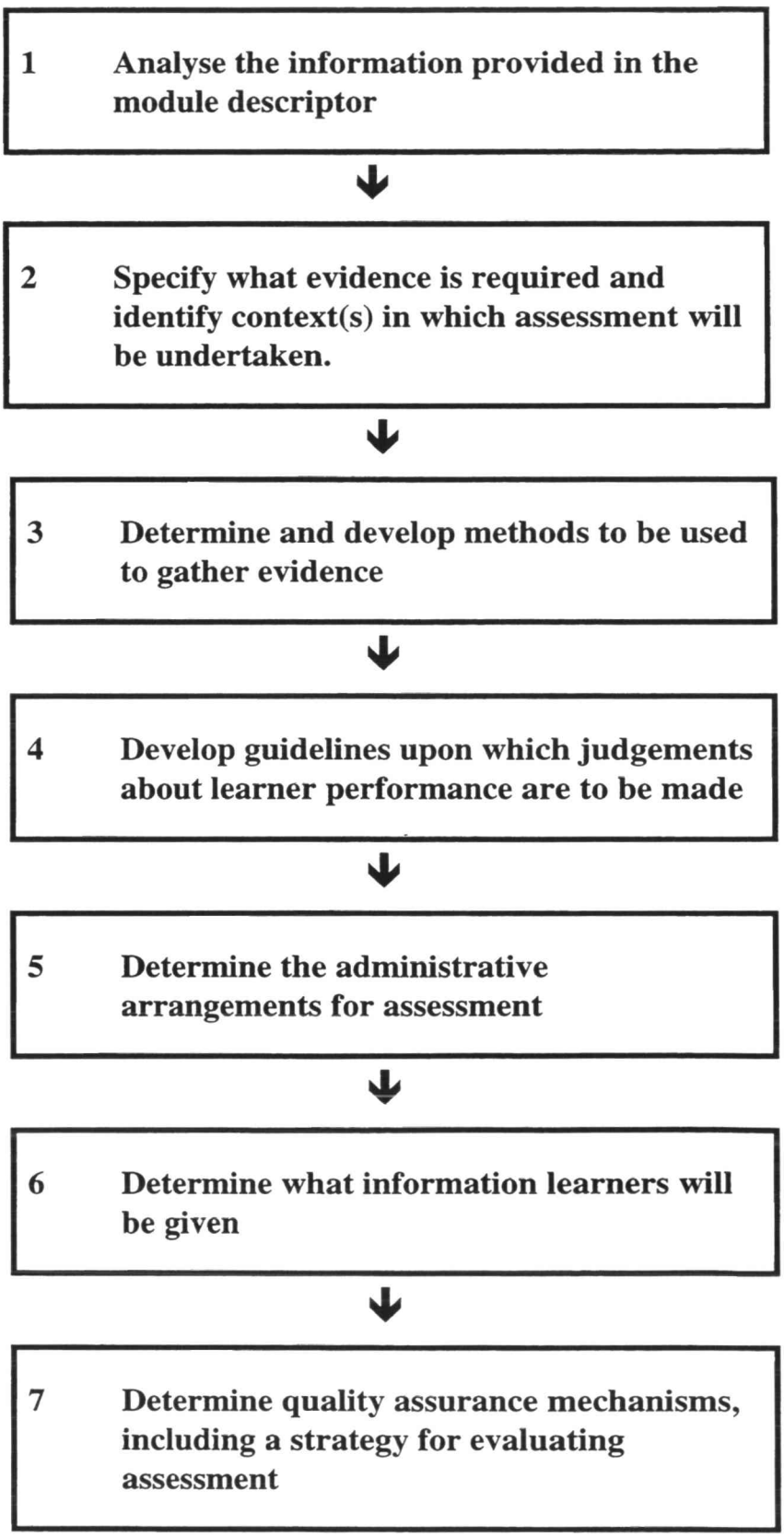
In both instances, the input of time and effort in the design and preparation stage will ultimately save time and effort later on. Furthermore, if sufficient time is allowed for planning, there is a greater likelihood that the approach will be well balanced, involve a more effective use of resources and be as ***valid, reliable, fair*** and ***flexible*** as you can make it.

This allocation of time for planning applies whether you are involved in developing a new curriculum, or in delivering familiar modules in locally written training programs or nationally developed modules. In the latter case, the task may be made easier if the modules are accompanied by some supporting information on assessment.

This section focusses on planning assessment at an ***individual module*** level. It involves working through seven interlinked steps. Each step has a specific aim and requires particular ***decisions*** to be made. If you are- working with modules with well-defined assessment strategies, some of these steps may be unnecesssary. For those who are using curricula with minimal assessment information, or if you are involved in developing a new course, then all steps will be helpful in planning an assessment strategy.

The steps are outlined in the following diagram.

STEPS IN PLANNING AN ASSESSMENT STRATEGY AT INDIVIDUAL MODULE LEVEL



Each step also requires you to think about the:

- ***practicality,*** and
- affordability of the assessment strategy you are planning.

Commonsense and a concern for the shrewd use of scarce resources are essential skills in the planning of assessment.

In the following pages, each of these steps in the planning process is summarised and their major elements discussed. At various points through the steps, focus checklists and pro formas are provided as tools for assisting in planning and decision-making. In working through the seven steps, the information and decisions for one step will form the basis for gathering further information and making further decisions required by the next step, and so on.

A fully worked example of the way that this seven-step planning process can be used is included at the end of this planning section. The module, ***Load Placement and Security,*** has been selected for this purpose. It was drawn from an entry-level course in Transport and Distribution and includes both on- and off-the-job training.

A full set of the planning pro-formas and checklists are included in the appendices, and can be copied if required.

STEP 1: Analyse the information provided in the module descriptor

In this step,

YOU NEED TO DECIDE:

- **how assessment criteria are to be interpreted.**

In Part 1A under ***What Criteria?,*** the suggestion was made that it is important to go through a process of clarifying the learning outcomes and their associated assessment criteria and assessment method(s) in order to establish agreement on their meaning. This step, therefore, requires you to focus firstly on the overall outcome of the module (defined in the module purpose) and the learning outcomes (which when drawn together should directly mirror the module purpose) so that this shared understanding can be reached. It will then be possible for a decision to be made on what everyone will use to ***assess*** the outcomes and how the criteria will be ***interpreted.*** Achieving a consistent approach by all those involved will improve the reliability of your processes and judgements.

In the next phase of this step,

YOU NEED TO DECIDE:

- **whether learning outcomes can be grouped together for assessment purposes.**

Grouping learning outcomes for assessment is known as taking a 'holistic' approach to assessment. This means simply that where there is a common and sensible thread running through several learning outcomes within a module, it may be appropriate and sensible to assess them together.

By adopting a grouping approach, it is possible to gather evidence which covers all or some of the important aspects of learning, such as:

- actual practice and workplace tasks;
- tasks that require integration of a range of competencies and associated underpinning knowledge and understanding;
- the use of analytical abilities to solve problems associated with the task(s);
- a combination of theory and practice.

Rumsey (1994), *Assessment Practical Guide*, p.12

This concept of holistic assessment has largely come about because of concerns that assessing at the individual learning outcome level tends to emphasise trivial aspects of learning and can lead to over-assessment and/or some unnecessary reassessment.

By using holistic assessment events it is possible to:

- avoid, to a large extent, the problem of fragmenting learning;
- lessen the potential for over-assessment of learners;
- more efficiently utilise limited time and financial resources;
- better match activities which occur in the real world of work, and
- make assessment of teaching and learning outcomes more relevant and understandable to all involved.

Focus: On what basis can grouping be done?

Grouping involves the identification of common threads that exist in the learning outcomes, the context within which assessment is to be undertaken, the type of evidence required and the assessment methods or events that are used to gather the evidence.

The following are examples of possible grouping approaches:

1 Where the one assessment event can cover ***a series of learning outcomes*** either fully or partially, for example:

> a practical performance test in a simulated setting which may cover the gathering of evidence on process and product.

2 Where the one assessment event can cover ***a common element*** drawn from a series of learning outcomes, for example:

> a multiple choice test which is designed to assess a wide sample of the underpinning knowledge included in the module.

3 Where one assessment event in a ***specific context*** can cover a series of learning outcomes either fully or partially, for example:

> a project which covers the application of practical skills, knowledge, organising and problem-solving ability and attitudes in a real work setting.

Later considerations about the evidence that required, the context in which assessment will be undertaken and the selection of assessment methods will provide the additional information needed to make a final decision about grouping.

Pulling together a series of learning outcomes for assessment purposes may also be extended beyond an individual module.

STEP 2: Specify what evidence is required and identify context(s) in which assessment will be undertaken.

In this step,

YOU NEED TO DECIDE:

- **the type and quantity of evidence that is required to make valid judgements about learner achievement.**

As described in ***What Evidence?*** in Part 1A, evidence can be:

- **direct evidence:** observation of real work tasks in actual workplace settings;
- **indirect evidence:** observation of performance in simulated settings, and
- **supplementary evidence:** collected through pen and paper or oral testing and generally concerned with underpinning knowledge and attitudes.

At this stage, you need to think about whether the collection of direct evidence is feasible and affordable, or whether indirect and supplementary evidence drawn from a variety of sources will satisfy the requirements for ***quality*** and ***sufficiency***. There is also a need for agreement on what constitutes enough evidence for confident judgements to be made about what learners can do.

A simple cross-check of the module purpose, the learning outcomes and the assessment criteria will allow a list to be made up of the evidence that is required. But any decisions about the type of evidence that can gathered will be greatly influenced by decisions about the appropriate context(s) for assessment.

When assessment (and learning) occurs in context, it is done in settings and ways that are not only directly relevant to the learning outcomes, but also to the discipline area or occupation for which learners are preparing. In addition, context is about whether assessment will be done totally in the workplace or off the job, in simulated work settings or during actual work, or in a mix of any of these possibilities.

Therefore, also in this step,

YOU NEED TO DECIDE:

- **in what context(s) learner performance is to be assessed**

The following is an example of the process that you may need to go through to determine the context(s) for assessment:

- if some assessment in a work setting is desirable, can it be organised?
- if assessment at work is feasible, will it be assessment of actual work or will some arrangement need to be made to provide assessment in a simulated manner in the workplace?
- would a simulated assessment event conductedaway from the workplace be just as effective?

A mix of contexts may be highly appropriate, but the possible advantages of various combinations need to be weighed up **against** how cost-effective and practical they are to implement.

STEP 3: Determine and develop methods to be used to gather evidence

In this step,

YOU NEED TO DECIDE:

- **on the mix and number of instruments or methods that are to be used to gather the required evidence.**

The first phase of this step involves looking at the range of methods that could be utilised in the module, and then directly matching each method to the learning outcomes to identify the mix of assessment events which will generate quality evidence from a reasonable sample of learner performance.

It is very important at this point to constantly reflect back to ensure that the principles of validity, reliability, fairness and flexibility are being taken into account. It is also equally important that there is a balance between the principles and that which is achievable given the resources that are available. As you work through this phase, any opportunities for grouping learning outcomes for assessment in a holistic way can be confirmed.

Also in this step,

YOU NEED TO SELECT OR DEVELOP:

- **the methods/instruments that are to be used to gather the required evidence.**

Whether you select instruments which are already available or choose to develop new ones, it is important in this step that some evaluation of possible instruments or methods is undertaken before they are utilised to assess learner performance. This need only be a simple process of making judgements about whether the selected methods represent a holistic approach and are fit for the purpose (valid), reliable or at least comparable, fair for all learners, practical and cost-effective.

At this point in planning a strategy it is also wise to give some thought to alternative assessment strategies or methods that may be required by learners with special needs.

Decisions about the type and number of assessment events needed for a module or learning outcome should be made using the information on evidence that were identified in the earlier step. If you are a teacher or trainer assessing on your own, you may like to ask others to assist you in making this evaluation. For others who are carrying out assessment together, a panel approach can be an effective way of achieving this internal verification process. Whatever mechanism is employed, it is time well spent as it will lessen the potential for confusion, assessment errors and appeals from learners at a later stage.

Many module descriptors will already provide the information on assessment that is required, including exemplars or suggested methods for assessing various outcomes and guidelines for making judgements about learner achievement. Other curricula, however, may be less helpful. Part 3, ***Focussing on Assessment Methods***, provides detailed guidelines for selecting appropriate assessment methods/events and helpful hints on the construction of a range of assessment instruments.

One of the simplest ways to work through Steps 2 and 3 is to use an assessment matrix such as the one which is included as ***Planning Focus Sheet 1*** on the next page. This is accompanied by a checklist of focus questions and a listing of possible assessment methods which may guide your decision-making.

The ***Planning Focus Sheet*** is designed so that you can record and cross-check the details of your assessment strategy to ensure that the various important aspects of assessment are covered in a balanced and practical way.

STEP 4: Develop guidelines upon which judgements about learner performance are to be made

In this step,

YOU NEED TO DECIDE:

- **on the specific standards that will be applied by all involved in the assessment of the module.**

Having established the type and quantity of evidence required and the methods by which the learning outcomes are to be

assessed, there now needs to be clear definition and recording of the way that the assessment criteria are to be interpreted. These guidelines should be prepared and supplied to all those who will be involved in assessment prior to commencement of delivery of the module so that consistent interpretations of the criteria can be applied and comparable judgements made. It is appropriate at this point to confirm with industry experts to ensure that the guidelines for interpretaion will generate standards that are appropriate.

Where teachers and trainers are working with modules that have been developed and endorsed nationally, guidelines for interpreting the assessment criteria and the standards required may already exist. These, too, need to be validated as being appropriate at the local industry or enterprise level.

This validation process need not be a highly structured and formal process, but it is an important quality assurance step that will generate a sense of confidence in the judgements that are ultimately made about the achievement of the learners who successfully complete the program of training.

PLANNING FOCUS SHEET 1: ASSESSMENT METHODS

ASSESSMENT METHODS/EVENTS							
Learning outcomes	❷	❷	❷	❷			**Write in action verb from each learning outcome** ❶
1	❺			❻			
2		❺		❻			
3		❺		❻			
4	❺		❻				
5		❺	❻				
6	❺		❻				
7							
Information on context, grouping	❸		❼	❼			
Timing	❹						

KEY TO USE OF PLANNING SHEET:

❶ Inclusion of the action verb allows a double-check of how well the assessment method addresses the learning outcome.

❷ Assessment methods or events.

❸ Identification of specific context for each assessment event.

❹ Indication of best timing for assessment event.

❺ Formative assessment providing feedback about learner's current level of performance and progress towards meeting the standard specified in learning outcome and assessment criteria.

❻ Summative assessment event used to determine whether the learner's performance meets the standards specified in the learning outcomes and assessment criteria.

❼ Indication of opportunities for grouping of outcomes for the purposes of assessment.

Remember a fully-worked example of this pro forma is included at the end of this section

Focus checklist: Planning sheet 1

1. Where appropriate, does your assessment approach involve some grouping across learning outcomes?
2. Are the number of assessment events kept to the minimum required to satisfy sufficiency of evidence?
3. Are the assessment methods appropriate for the type of evidence you require and the outcomes you are assessing?
4. Are you using a variety of assessment techniques to gather your evidence?
5. Having regard for feasibility and cost, is assessment being undertaken in relevant settings using a variety of contexts?
6. Is your evidence being gathered in different ways over a period of time?
7. Does your approach assess skills, knowledge and attitudes in an integrated way?
8. Are opportunities available to formatively assess and provide direct feedback to learners ?
9. Is the blend of formative and summative assessment appropriate?
10. Is the time required for summative assessment no more than around ten percent of the module duration?

ASSESSMENT METHODS:

Alternative-response		Practical excercises	
Matching		Simulations	
Multiple Choice		Role Plays	
Short Answer/Completion		Aural/ Oral	
Extended Response Essays		Assignments	
Restricted Response Essays		Projects	

ALTERNATIVE ASSESSMENT STRATEGIES:

Oral questioning		Oral reporting	
Video/Audio presentations		Peer supported assessment	

Also in this step where appropriate,

YOU NEED TO DECIDE:

- **on the criteria for grading learner performance if it is indicated in the curriculum document.**

Where there is a requirement to grade learner performance, agreement needs to be reached about what learners need to achieve at each grading level. ***The criteria for each grading level should be clearly defined during the planning of the assessment strategy.*** This may entail developing additional assessment criteria beyond those that will be used as a basis for judging satisfactory performance, or by identifying a set of standards within the existing assessment criteria that indicate attainment at a higher standard or standards.

The assessment matrix can be used again to determine weightings for particular assessment events, if that is the mechanism to be employed. But, regardless of the approach taken, it is vital that successful learner profiles for each grade level are clearly defined and documented so that there can be consistency in application and interpretation of the criteria. Criteria for grading are included in the example of the Design Studies information for learners in the section, ***Principles of Assessment.*** Recognising differing levels of learner achievement is raised again in Part 4, ***Focussing on Issues in Assessment.***

STEP 5 : Determine the administrative arrangements for assessment

In this step,

YOU NEED TO DECIDE:

- **on an implementation strategy for assessment.**

Any decisions about how an assessment strategy is to be implemented are largely governed by the context in which the training and the assessment of the outcomes of that training are undertaken. With so many variations in the range of possible contexts, it is inappropriate to suggest hard and fast rules about implementing any assessment strategy. Differing organisational policies and procedures, different settings and different training cultures make for different approaches to implementation.

However, whether teaching and learning is being undertaken wholly in the workplace or in institutional workshops or enterprise training rooms, or whether learners are being assessed individually or in larger groups, there are common

implementation aspects that require thought and careful planning.

The aspects to be considered are:

- guidelines for assessors;
- information for learners;
- assessment timing and sequencing;
- organisation of assessment events;
- resources to support assessment;
- recording and reporting processes and procedures, and
- security arrangements for instruments, records and reports.

Planning Focus Sheet 2 on the next page identifies these aspects of assessment, and provides some indication of the types of tasks that might be involved under each heading. These are designed to focus your thinking, and should only be considered as ***examples of possible activities***. When developing an implementation strategy for assessment, some of the things you may include in ***What it Involves*** will probably be quite different.

Two critical elements in planning an implementation strategy are that the roles and responsibilities of personnel and the timing of the activities are clearly identified. In developing timeframes for each of these elements, a clear idea of the practicality of a potential assessment strategy can be gained. Where timeframes are too tight or personnel are over-burdened, then adjustments to the approach need to be made to make the strategy more workable.

STEP 6 : Determine what information learners will be given

In this step,

YOU NEED TO DECIDE:

- **on the information on assessment that will be provided to learners at the commencement of the module.**

As previously outlined in the section on ***fairness***, clear information for learners is an essential element in assessment. Where groups of learners are to be assessed together, a fairly standardised approach to information

PLANNING FOCUS SHEET 2: IMPLEMENTATION STRATEGY

ASPECT OF ASSESSMENT	WHAT IT INVOLVES	WHO IT INVOLVES	TIMING
GUIDELINES FOR ASSESSORS	■ Prepare and develop guidelines for assessors, including: • general instructions re procedures • standards to be met • instruments and marking schemes • sufficiency of evidence details • checklists for observations • model answers for knowledge-based items • reassessment: number of opportunities and timing		
INFORMATION FOR LEARNERS	■ Preparation and production of handouts for learners		
ASSESSMENT TIMING	■ Timing and sequencing of assessment events ■ Timing of reassessment ■ Production of Assessment timetable		
ORGANISATION OF ASSESSMENT EVENTS	■ Location of assessment venue(s): whether on or off-job, training room or during normal workplace activity ■ Procedures for notifying workplace or workplace supervisor		
RESOURCES	■ Development or collection of resources for assessment: paper-based & other ■ Identification of personnel other than assessors who are responsible for equipment eg. supervisors, technical officers ■ Produce instruments		
RECORDING AND REPORTING	■ Identify recording and reporting needs for all users including learners, teachers/trainers, employers, authorities; ■ Where needed, develop recording and reporting forms; ■ Establish how and how long records will be kept, and if necessary develop database(s)		
SECURITY	■ Identify security requirements: storage and methods of maintaining security of instruments over period of time and multiple use; ■ Identify security requirements for assessment records and reports		

dissemination may be required. Inconsistency can cause confusion and can ultimately lead to appeals against assessment results. Information on criteria, policies and procedures needs to be consistent for all learners who are undergoing assessment for the same module in the same period of time. Assessors, therefore, need to agree upon the approach to be taken and the contents of any documentation to be given to learners.

Also in this step,

YOU NEED TO DECIDE:

- **on the format and content of formal feedback that will be given to learners and other users of results.**

Feedback is a vital element in assessment. Quality feedback has the potential to motivate, to acknowledge individual learner effort and inform the learning and teaching process. Poor feedback, on the other hand, can dishearten learners and leave them not understanding where or how they can improve.

Feedback may be:

- the individual responsibility of the teacher or trainer or standardised for all teachers and trainers;
- simple and general or more complex and specific to the assessment criteria;
- verbally given or delivered in written form, or both;
- tailored to suit particular assessment events or uniform for all assessment activities.

The ultimate decision must be a balance between the cost in assessor time and effort and the positive outcomes that can be achieved with thoughtful, personalized and informative feedback which is provided ***as soon after the assessment event as possible***.

The following focus checklist can be used as a guide in the preparation of assessment handouts and feedback sheets for learners.

Focus checklist

1	Are learners provided with detailed information about what is to be assessed?
2	Are they provided with the assessment/performance criteria against which their performance will be judged?
3	Are all assessment procedures and methods clearly outlined?
4	Does the information cover learner responsibilties with regard to assessment?
5	Are format requirements and submission dates detailed?
6	Is there an indication of when marking and return will take place and in what form learners can expect feedback?
7	Is there an explanation of the marking scheme, including information on grading or how the results will be drawn together for a final result?
8	Will learners know what to do if they are having difficulty keeping up with assessment requirements?
9	Has information on reassessment been included?
10	Are learners provided with information relating to appeals?

Feedback to and from other interested parties in the assessment process also needs to be considered at this time. Where teachers or trainers are delivering courses in an off-job setting, there may be a need to gather information about learner performance in the workplace. Where training is being undertaken in a work environment, some information on learner progress may be required from an off-job training provider. Therefore, mechanisms for reporting and recording this information need to be determined, the timeframes established and the appropriate contacts made.

STEP 7: Determine quality assurance mechanisms, including a strategy for evaluating assessment.

In this step,

YOU NEED TO DECIDE:

- **on mechanisms for ensuring the quality of assessment processes and procedures.**

Quality assurance is about attaining and maintaining consistency, credibility and confidence in assessment processes and outcomes. It can be achieved with clear guidelines for assessors and systematic and ongoing monitoring, networking and staff development.

Quality assurance mechanisms include:

- regular and on-going staff meetings where information is shared about best practice and specific assessment issues and problems;
- the use of mentors who are able to advise, coach and informally develop the skills of those who are less experienced;
- formal staff development activities that are geared to addressing the real problems of practitioners and raising the general level of knowledge about competency-based training and assessment;
- a checking system for consistency of interpretation within individual assessment events and across groups of teachers or trainers;
- feedback from learners and employers on the usefulness of assessment information;
- an effective policy which clearly outlines assessment requirements and the roles and responsibilities in the assessment process;
- personnel with specialised assessment skills who have the responsibility for overseeing the assessment process and supporting assessors;
- internal quality control processes which monitor the quality of assessment instruments and outcomes, and
- organisational support for and commitment to quality.

Assurance of quality is both an individual and collective responsibility. If you are a teacher or trainer operating independently, or in a small team and you are concerned about quality assurance, you may need to establish a supportive network or quality circle with other practitioners to implement some of these mechanisms.

In larger training organisations, active group participation in the planning of assessment will assist greatly in setting up mechanisms for ensuring quality.

Following on from the establishment of quality assurance mechanisms is the overall evaluation of assessment processes and outcomes.

Thus in the final phase of this step,

YOU NEED TO DECIDE:

- **on a plan for evaluating your assessment strategy**

This aspect of assessment is covered separately in *Evaluating Assessment* on page 75.

WORKING THROUGH THE STEPS

Included in the following pages is an example of how the seven steps can be applied to plan an assessment strategy for a module.

The sample module, ***Load Placement and Security***, is drawn from an entry-level training program for the Transport and Distribution industry. It involves delivery in a mix of contexts, including:

- an off-job training room;
- a simulated work environment off the job, and
- in the workplace during real work.

Assessment organisation and administration, and the maintenance of records and reporting results are the responsibility of the off-job provider. There is a requirement for close collaboration between teachers and workplace supervisors.

Class Size: 10 trainees

STEP 1: Analyse information provided in module descriptor.

MODULE TITLE:	**LOAD PLACEMENT AND SECURITY**
Nominal Duration	**24 hours** → limited time for assessment
Module Purpose	**This module aims to provide students with the knowledge and skills required to safely and efficiently load and unload a commercial freight vehicle and restrain and protect the load, in accordance with vehicle load regulations and occupational health and safety requirements.**
Relationship to competency standards	**Complies with National Competency Standards 0003-0004 developed by the National Road Transport Industry Training Committee Ltd.** **This module also explicitly addresses the following Key Competencies:**
Common theme through all modules – need to address all here	***Planning and Organising Activities: Performance Level 1*** ***Working with Others and in Teams: Performance Level 1*** ***Using Mathematical Ideas and Techniques: Performance Level 2*** ***Solving Problems: Performance Level 2*** ***Using Technology :Performance Level 2***
Prerequisites and/or corequisites	**Introduction to Dangerous Goods, Transport Calculations and Manual Handling**
Summary of content	**This module contains:** **1. Regulations affecting loads** **2. Principles and practice of vehicle loading and unloading** **3. Load restraint and protection.**
Delivery	**As this module is designed to provide skills in loading and unloading, it is essential that the students are given opportunities to observe actual workplaces and practise the skills covered using actual vehicles.** **The module will require resources to facilitate both on- and off-job delivery strategies. These strategies may involve:** • **co-operative off-job provider/employer delivery sharing available resources;** • **alternative assessment methods may be used where appropriate to students' needs;** • **student records will be the responsibility of the off-the-job provider and formal processes for transfer of student information will be established.**

Learning outcomes	**On completion of this module the learner will be able to:**
Learning outcome 1	**identify appropriate state and territory road freight regulatory bodies and locate major regulations in documents affecting loads.**
Assessment criteria	**1.1 identify road freight regulatory bodies and briefly explain their roles.** **1.2 identify regulatory documents.** **1.3 locate requirements relating to load distribution and weight** **1.4 locate and explain regulations and requirements for load restraint.** **1.5 identify vehicle markings.**
Conditions	**Normally learning will take place in classroom and other suitable study environments.**
Assessment method	**Short answer written test with reference material.**
Learning outcome 2	**Load and unload a vehicle according to industry standards.**
Assessment criteria	**2.1 identify load characteristics to ensure that appropriate loading and unloading procedures are followed:** **- hazardous cargo** **- load weight and dimension** **2.2 load and unload a vehicle having regard for:** **- occupational health and safety requirements** **- safe working capacity of vehicle** **- manufacturer's specifications** **- hazardous cargo is loaded according to industry standards** **- legal/even weight distribution.** **2.3 Use lifting aids and appliances to load and unload vehicles.**
Conditions	**Load will be distributed to ensure** **- weight distribution to code** **- convenient load and destination sequence** **- protection of fragile components** **- safe configuration and situation of objects with dangerous projections** **- safe road handling characteristics** **Emphasis in this learning outcome is given to a practical 'hands on' approach to learning.**

knowledge

performance and application of knowledge — practical + questioning

Conditions	**Access to appropriate loading environments, vehicles, and a range of cargo including non-standard loads is essential. Lifting aids and appliances - ropes, slings, chains, conveyors, ladders etc should be used where available.**
Assessment method + questioning	**Practical demonstration of vehicle loading and unloading with two different types of vehicles, loads and destinations and to include individual and team work.** **A checklist is to be used for practical tests to identify the criteria to be employed in assessing student performance. The NRTITC Competency Standard is to be used in the preparation of the checklist.**
Learning outcome 3	**Secure and protect a loaded vehicle.**
Assessment criteria All performance	**3.1 secured load using appropriate securing equipment and lashed to anchorage points in accordance with enterprise/company securing system.** **3.2 tighten lashing equipment to vehicle to ensure security during travel.** **3.3 Arrange lashing and baulking to permit:** **- retightening of lashing** **- convenient unfastening** **- access with part-load deliveries** **- minimal equipment use.** **3.4 check pre-loaded vehicle for security for travel.** **3.5 cover load to protect from weather, dust and exposure to sunlight ensuring covers will:** **-shed water away from load** **-deflect headwind effect** **-facilitate lashing** **-permit part-load delivery access.**
Conditions	**Equipment: chocks, racks, lashings, ropes, chains, rain covers, dust covers. Access to appropriate vehicles, and a range of loads.**
Assessment method	**Practical demonstration of application of load securing and protection methods and equipment to two different vehicle types and vehicle loads.** **A checklist is to be used for practical test as set out in Learning Outcome 2.**
Suggested learning resources Use as 'open book' in knowledge-based assessment ?	**Class notes** **Workplace observation sheets** **Truck Loading Code AGPS, Canberra, 1981** **ARTF Handbook** **Australian Truck Driver's Manual, RTTA, 1992.**

STEP 2: Specify what evidence is required and identify context(s) in which assessment will be undertaken.

EVIDENCE:	SOURCE
PERFORMANCE-BASED EVIDENCE	
[1] DIRECT — Actual work = process and product	Not possible during module, but can be done during Work Placement with employers.
[2] INDIRECT — Best option — simulations - process and product.	* off-job at TAFE * off-job at Skill Centre * on-job - but simulated (if needed)
KNOWLEDGE-BASED EVIDENCE	
[3] SUPPLEMENTARY — Not required to recall info, but must be able to find the information in reference material and apply it in a practical way.	Classroom test ALSO during simulated activities — oral questioning for understanding. Requirement to apply knowledge in practical assessment events.

STEP 3: Determine and develop methods to be used to gather evidence

PLANNING FOCUS SHEET 1: ASSESSMENT METHODS

ASSESSMENT METHODS/EVENTS							
Learning outcomes	ORAL QUESTIONING	OBSERVATION 1 QUESTIONING -SIMULATED	OBSERVATION 2 QUESTIONING -ACTUAL WORK				Write in action verb from each learning outcome
1	F	S	S				IDENTIFY LOCATE
2		F + S	S				LOAD AND UNLOAD
3		F + S	S				SECURE AND PROTECT
4		ONE EVENT	ONE EVENT				
5							
Information on context, grouping	OFF JOB INDIV	OFF JOB TEAMS	ON JOB INDIV.				
Timing	WHEN READY	3 HRS					

NOTES:

1. Learning outcomes can be grouped for assessment - one simulated setting, other in workplace.
2. Additional knowledge-based evidence - in prac. events.
3. Teamwork - assessment ground rules needed - negotiate with learners
4. Literacy/ language may be an issue - eg. with reference material - alternative strategy not really a possibility. Must be able to identify and locate.

STEP 4: Develop guidelines upon which judgements about learner performance are to be made

GUIDELINES & CHECKLISTS CAN BE DEVELOPED FROM INDUSTRY STANDARDS — THEY ARE CLEAR AND LOGICAL.

* PERFORMANCE CRITERIA AND RANGE STATEMENTS CAN BE USED.

AGREEMENT NEEDS TO BE REACHED BETWEEN TEACHER AND WORKPLACE SUPERVISOR ABOUT FEDERAL AND STATE REGS. WHICH WILL BE INCLUDED IN CHECKLISTS?

CRITICAL ELEMENTS

* OH&S REQUIREMENTS
* HAZCHEM SIGNS
* LOAD DISTRIBUTION REQUIREMENTS
* SAFE ROAD HANDLING CHARACTERISTICS.

2 ASPECTS OF PERFORMANCE TO BE COVERED:

(i) INDIVIDUAL TRAINEES: KNOWLEDGE OF REGS. & HOW THEY APPLY IN THE WORKPLACE.

(ii) TEAMS: ALL PRACTICAL EVENTS — TEAMS ASSESSED, NOT INDIVIDUALS BUT TEAMWORK/ATTITUDES ETC TO BE INCLUDED IN CHECKLISTS.

IN SIMULATED EVENTS → NO OPPORTUNITY FOR RETESTS, TEAMS WILL NEED TO CORRECT MISTAKES AS THEY GO.

CONFIRMATION OF SUCCESSFUL PERFORMANCE MUST BE ACHIEVED BY THE END OF THE ASSESSMENT SESSION.

VERIFICATION OF INDIVIDUAL PERFORMANCE AND APPLICATION IN WORKPLACE BY TEACHER AND SUPERVISOR.

STEP 5 : Determine the administrative arrangements for assessment

PLANNING FOCUS SHEET 2 IMPLEMENTATION STRATEGY

ASPECT OF ASSESSMENT	WHAT IT INVOLVES	WHO IT INVOLVES	TIMING
GUIDELINES FOR ASSESSORS	TRANSFERRING STANDARDS: UNIT 3, ELEMENTS 3.1 – 3.4 IN 92-0003 & 92-0004 VERIFYING WITH WORKPLACE SUPERVISORS – RANGE STATEMENTS – CRITERIA – REGULATIONS	TEACHER INDUSTRY	BEFORE PROGRAM STARTS ✓
INFORMATION FOR LEARNERS	* TRAINING RECORD BOOK * DESCRIPTION OF ASSESSMENT TASKS : – DATES – CHECKLISTS – VENUES – ACCESS TO REFERENCE MATERIAL * TEAMWORK RULES TO BE NEGOTIATED & AGREED BY TRAINERS.	LEARNERS	START OF PROGRAM "
ASSESSMENT TIMING	24 HOUR MODULE EVENT ① SIMULATED – When teams think they are ready – teacher to confirm readiness EVENT ② WORK-BASED When ready and appropriate opportunity arises = Additional evidence from practice sessions	LEARNERS TEACHER SUPERVISOR ASSESSOR LEARNER	NEAR END OF MODULE END OF MODULE OR LATER

ASPECT OF ASSESSMENT	WHAT IT INVOLVES	WHO IT INVOLVES	TIMING
ORGANISATION OF ASSESSMENT EVENTS	TEACHER TO ORGANIZE : SIMULATED EVENT : * EQUIPMENT, CARGO VEHICLES COLLECTED [NEGOTIATE WITH EMPLOYERS] * KNOWLEDGE TEST * WORKPLACE NEGOTIATED	TEACHER EMPLOYERS TEACHER	BEFORE START
RESOURCES * IDENTIFY EQUIPMENT	* 1 LIGHT RIGID TRUCK * 1 10 TONNE FLATBED * MIX OF CARGO WHERE EQUIPMENT NOT AVAILABLE ORGANIZE LOAN SUFFICIENT FOR 2 GROUPS X 5 TO WORK SIMULTANEOUSLY → OPPORTUNITIES AT WORK MAY VARY → ROTATION ??	TEACHER EMPLOYERS TEACHER/ TRAINER	BEFORE START DATES NEEDED
RECORDING AND REPORTING	TRAINING RECORD BOOKS TO BE SIGNED OFF TAFE ASSESSMENT SHEET COMPLETED & FORWARDED TO STUDENT ADMINISTRATION	TEACHER & WORKPLACE TEACHER HEAD OF DEPARTMENT	END OF MODULE OR LATER "
SECURITY	N/A	—	—

STEP 6: Determine what information learners will be given

1. INFO ABOUT ASSESSMENT AS OUTLINED IN IMPLEMENTATION STRATEGY
2. FEEDBACK → VERBAL + RECORD BOOK

STEP 7: Determine quality assurance , including strategy for evaluating assessment.

1. MEETING – TEACHER & WORKPLACE SUPERVISORS/ASSESSORS/ TRAINER RE ASSESSMENT APPROACH & INTERPRETATION AND APPLICATION OF CRITERIA/QUALITY OF PERFORMANCE.
2. HEAD OF DEPARTMENT TO CHECK ASSESSOR GUIDELINES AND CHECKLISTS.
3. TEACHER TO SPEND TIME IN WORKPLACE TO CHECK CURRENCY OF KNOWLEDGE AND PROCEDURES.
4. ASSESSMENT APPROACH VERIFIED BY INDUSTRY REP.

THEN AT END OF MODULE

5. FEEDBACK FROM EMPLOYERS ON TRAINEE PERFORMANCE DURING WORK PLACEMENTS – TELEPHONE INTERVIEWS.
6. TEACHER & TRAINER/ASSESSORS TO COMPLETE SELF-EVALUATION QUESTIONNAIRE
7. VERBAL FEEDBACK FROM TRAINEES AND COMPLETION OF LEARNER QUESTIONNAIRE.

Too often planning of assessment is done in an ad hoc manner, with vital assessment decisions being made without full consideration of the potential results of such decisions. Careful planning and preparation of an assessment strategy allows an opportunity for teachers and trainers to critically reflect on their practice and to formulate an approach that will engender quality, cost-effective and defensible assessment outcomes.

Further reading

For further details on planning for assessment you might read ***Assessment Technical Manual***(1994) by Hager, Athanasou & Gonczi. Part 2, *The Process of Assessment Based on Competencies* covers planning of an assessment system and the design of an assessment framework.

2.2 Managing your strategy

Clearly, with vocational education and training being delivered in a variety of settings, there is great potential for diversity in the way that assessment can be implemented and managed. The approach adopted will largely be determined by the context in which teaching and learning is taking place and the established policies and infrastructure supporting the training. If learning is being undertaken in a large educational institution, a small training room, or on the factory floor when actual work is in progress, the approaches to assessment are bound to vary.

Further, if you are an individual teacher or trainer working on your own, the degree of decision-making control which you have over various aspects of delivery and assessment might be considerable. For example, as a part of your duties, you may have responsibility for setting up and maintaining an assessment system which will include the formulation of rules, regulations and reporting requirements relating to training and assessment.

On the other hand, where teachers and trainers are working as part of a team in a larger training environment, implementation and management of assessment are more likely to be governed by established organisational policies, guidelines and carefully structured administrative systems. In such circumstances, it is vital that the roles, responsibilities and procedures for assessment are known (and followed) by all individuals involved in the process.

Despite these differences, there are common issues relating to the implementation and management of assessment that need to be addressed by all assessors. Some of these may have been touched on already during the planning of an assessment strategy, but as teaching and learning commences, it is important to implement strategies for:

- the preparation of learners for assessment;
- the reassessment of learners, and
- the recording of assessment data, maintenance of assessment documentation and reporting of results.

Focus: Preparing learners for assessment

As previously explained in the section on fairness, quality information for learners is a critical aspect of assessment. As teaching starts, the information that has been previously prepared should be handed out to learners and time allocated for the contents to be openly discussed. Learners will require

an opportunity to clarify what is required of them, in what time frame, and in some cases, to request consideration of alternative assessment approaches to suit their particular needs.

Also, in the initial stages of delivery, it may be appropriate to negotiate with learners about how learning is to be assessed and the extent of their role in the assessment process. Cooperative assessment approaches, self-assessment and learning contracts if they are to be used should be discussed and the necessary guidelines agreed to by both learners and teacher/trainer.

A further aspect that requires attention is learner 'readiness' for assessment. A learner's capacity to critically reflect on his/her own performance and to determine whether the required standard of performance can be met, is not something that a learner may be able to do instinctively. Learners need to be given guidance on how to determine whether they are ready to be assessed and also to be given the time to practise and develop the skill of self-assessment. By introducing the concept of readiness and self-assessment early in the teaching and learning process, teachers and trainers can place some of the responsibility for preparation for assessment on the learners themselves.

Closely associated with readiness, is the concept of assessment on demand. This involves learners making a personal judgement about their own readiness and then asking to be assessed. If teachers and trainers and the organisational and administrative structures are able to handle this flexible approach to assessment, learners will need to be made aware of the rules or requirements relating to assessment on demand as soon as they commence the training program.

By itself, printed material on assessment may not fully provide the quality and depth of information that learners require. An open discussion and clarification of assessment requirements is likely to generate better learner understanding, acceptance and response to the process.

Focus: Reassessing learners

In planning assessment for a module, the timing and sequencing of summative assessment events will have already been identified and structured so as to ensure sufficient time and practice for learners to develop the skills and knowledge identified in the curriculum. But, as learners move on through the module, there may be a need for some reteaching and reassessment of learners who are unable to achieve the stated learning outcomes in the time provided.

Some assessors who are working one-to-one with learners, may have the opportunity to reteach and reassess on a number of occasions. Other teachers and trainers who may be working with large groups of learners, however, may have difficulty providing so many reassessment opportunities. As an assessor, you may be required either to conform to organisational policy on the procedures for and the number of resits that can be attempted, or to set rules on reassessment simply because there are limits to the time and resources available for the process. In institutional settings, especially, the demands of the timetable may well govern how reassessment will be handled.

In implementing and managing summative assessment, all assessors need to determine early the approach that is to be taken in the event that reassessment of learners is required. Whether time is allocated as the very end of the module or outside the teaching and learning time, such information must be passed on to learners so that they are aware of their options if they are unable to achieve the level of performance required at their first attempt. They need to be made aware of any opportunities for tutorial or in-class assistance and reteaching and the form that reassessment is likely to take.

Regardless of the type of approach to reassessing learners, assessors need to be prepared to manage resits for learners and to accurately record the details of reassessment outcomes as the results are an integral part of assessment data and documentation.

The concept of offering opportunities for reassessment in competency-based training is a major issue for many teachers and trainers and further discussion on the problems associated with the process are outlined in the ***Issues in Assessment***, the final section in this book.

Focus: Recording assessment data, maintaining assessment documentation and reporting

In documenting assessment outcomes, the major goal should be to ensure that accurate records of results are maintained and that results can be provided to the users of the information in a useful form.

During the planning process you will have given some thought to keeping records on the outcomes of assessment. In many vocational education and training settings decisions about recording of assessment data and the maintenance of assessment documentation will be pre-determined by existing organisational policy and procedures. In other cases, mechanisms for the recording and maintenance of assessment information will be a decision for individual assessors.

Whatever your situation, it is essential that you identify the type of data and the standard of documentation you are required to keep to fulfil your obligations to both your learners and the organisation. This requires each assessor to have clear guidelines and an understanding of the processes and procedures associated with recording and reporting assessment results. Such guidelines should include information on:

- any legal requirements relating to assessment;
- the appropriate method of documenting assessment results for summative assessment, RPL and advanced standing;
- the importance of accuracy in record keeping;
- the level of detail required in each specific case;
- the procedure to be employed where learners are involved in signing off results;
- the timelines for providing assessment information and to whom it should be provided;
- how results from other sources, such as those from on or off-the job, are to be integrated into a learner's overall assessment record;
- any procedures for verification prior to entry into official records (either paper-based or database);
- regulations relating to the dissemination of assessment information;
- the final form that learner records will take and in what format they will be provided to learners and other users, and
- any rules governing privacy and access to the records.

Decisions about the types of assessment data to be collected will generally be made on the basis of end-user needs. Therefore, thought needs to be given to the specific uses to which the results will be put so that when assessment outcomes are recorded it can done in a way that will ensure the end products of the assessment process will be useful. Learners, the training organisation, funding bodies, employers and statutory authorities may well require assessment records which are specifically tailored to suit their requirements.

Sometimes, simply reporting 'pass' or 'competent' against a module or training program may not offer sufficient information about learner performance for those who are interested in learners' achievements. The inclusion of log books, portfolios, workplace reports and other relevant ***qualitative*** material in a individual learner profile can give a much broader view of the outcomes of the learning process.

On the following pages is an example drawn from an Australian Vocational Certificate Training System pilot project in Clerical and Office Administration. The course is directly aligned to National Clerical-Administration Competency Standards (Private Sector). A work placement record book is used to generate some additional qualitative information about learner performance. Both learner and workplace supervisor

are involved in the assessment process. The record book remains with the learner after completion of the training.

In this example, the outcomes of the whole training program are reflected in learner achievement in nine generic outcome areas. These are 'signed off' by the workplace supervisor during work placement. Learners are also required to identify the tasks that they have completed against each of the units and elements of competency and these are verified by the workplace supervisor.

The extent of assessment information and the level of detail that is recorded, however, will be clearly influenced by the feasibility of gathering, inputting, storing and reporting the information. Profiling requires a considerable commitment of time on the part of teachers and trainers. It also requires a complex record keeping system. As with other aspects of assessment, there has to be a sensible balance between cost in both human and financial terms and the value of providing more extensive information about learner achievement.

A SUPERVISOR

1 ACHIEVEMENT IN THE NINE GENERIC OUTCOME AREAS

OUTCOME	OUTCOME ACHIEVED	
	SUPERVISOR's INITIAL	DATE
1.1 Completes all allocated tasks to the required standard according to instructions given by supervisor.		
1.2 Demonstrates an ability to work consistently with limited supervision.		
1.3 Participates in a team to achieve allocated tasks.		
1.4 Demonstrates occupational health and safety work practices at all times.		
1.5 Conforms to workplace attendance requirements and appropriate dress or other requirements as identified by the particular enterprise.		
1.6 Describes the key functions and structure of the enterprise in which work placement is undertaken.		
1.7 Locates and selects information and presents it in a useful way.		
1.8 Communicates effectively using a range of spoken, written, graphic and other non-verbal means of expression.		
1.9 Applies problem solving strategies to work situations.		

TEAM

Unit TEM 201 — **Participate in Allocation and Completion of Team Tasks**

ELEMENTS:

- **Participate in identifying tasks for team**
- **Complete own tasks**
- **Assist others to complete team tasks**

TRAINEE

Please list below the tasks you have performed that relate to the above Unit.

SUPERVISOR

VERIFICATION OF TASKS	.....	.....
	Supervisor's signature	Date

As an individual teacher or trainer, you also need to think about what assessment information you might keep informally on learners, and the uses to which this might be put. Assessment results and associated documents are a valuable source of information when evaluating teaching and learning and during curriculum review and development. They can also be accessed if additional information is required on learner performance. Further, records held by teachers and trainers can become crucial if a learner chooses to appeal against an assessment result.

Clearly, it is not practical to maintain large amounts of documentary material on learners, but informal assessment profiles can be collated in the short-term as a back-up to professional judgement. Information included can not only relate to learner achievement, but also with associated processes and procedures. Outlined below are examples of assessment information which might be included in these less formal profiles:

INFORMAL ASSESSMENT PROFILE
■ details of results for all assessment events within a module, including dates of submission of assessment items and brief comments on issues/problems
■ outline of evidence provided by the learner
■ progress reports (outline of formative assessment outcomes)
■ copies of pertinent sections of log books
■ copies of any written feedback provided to the learner
■ data on reassessment attempts and outcomes
■ reports on learner performance drawn from other sources such as those generated on or off-the-job.

If you choose to hold such information on assessment, issues of security and confidentiality must be addressed. When the information is used for evaluation purposes, learner anonymity must be maintained and strategies employed to avoid information being accessed inappropriately.

The way that the various aspects of assessment are managed is largely dependent on the context in which learning is taking place. The systems established to cater for reassessment, recording of results, and the dissemination of assessment

information will be influenced by such factors as the size of the organisation, the number of learners involved and the type of training being undertaken.

Accountability, however, must always be a vital concern for assessors. Whatever the system, assessment results must be accurately recorded and securely maintained; the outcomes of assessment must have integrity and assessment decisions must be clearly defensible.

Further reading

For further information on management of assessment, you should read Chapter 7 of ***Assessment Technical Manual*** (1994) by Hager, Athanasou & Gonczi. The authors discuss the management of assessment systems and include information on the recording of assessment results (pp.77 - 83) and providing feedback to learners (pp.83 - 84).

Further information on record keeping is provided in ***Assessment System Design*** (1994) by Toop, Gibb and Worsnop. Different approaches to assessment are outlined in a series of case studies.

In Chapter 7 of ***Student Assessment: A handbook for TAFE Teachers*** (1986), Peter Thomson covers the audiences for reporting results of learning and details various ways of profile reporting. A set of example profiles are included.

2.3 Evaluating your assessment

As previously mentioned in Step 7 of the section ***Planning Your Strategy***, an early decision needs to be made on a plan for evaluating your assessment strategy and the outcomes of the assessment process.

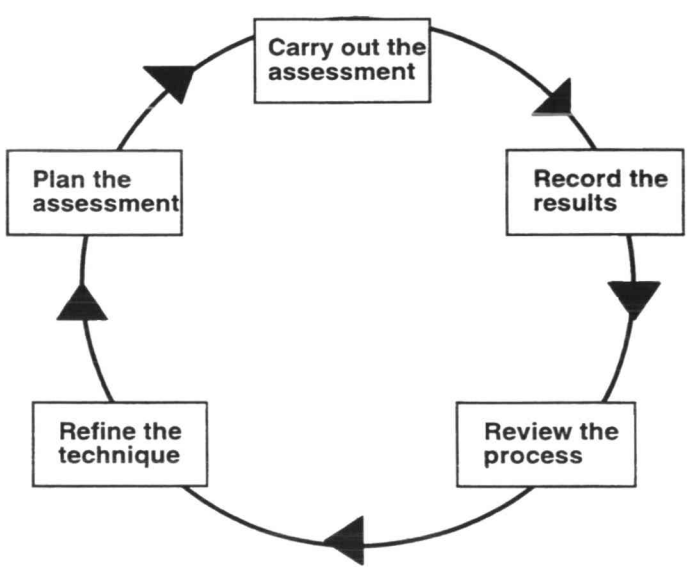
Focus: Why evaluate?

In simple terms, evaluation is about improvement. By gathering information on the efficiency and effectiveness of all aspects of your assessment approach in an on-going way, particular problem areas can be identified and the appropriate adjustments made to improve the quality of your assessment processes and procedures. However, to look at assessment in isolation without looking at the broader framework of the curriculum, delivery, program management, resourcing and the like will engender quite a false or skewed view of the teaching and learning process and its outcomes.

Evaluation of assessment, therefore, should be an intrinsic component of a total course review and revision process.

Evaluation is a cyclical, ongoing process. It is based on the concept that by ***doing*** it, ***reviewing*** it, ***reflecting on*** it and ***refining*** it, you shall be able to ***do it again - only better.***

The assessment cycle



Evaluation may be carried out in a summative or formative way.

Summative evaluation tends to be a fairly formal and structured process. It generally occurs at the end of a course or training program and is concerned with addressing aspects of curriculum revision and organisational requirements for accountability. The results of summative evaluation may also be used to inform the wider community about the quality of training outcomes and the maintenance of training standards.

Formative evaluation, on the other hand, can be carried out less formally as you progress through the teaching and learning process. This evaluation strategy simply entails having mechanisms in place for collecting and feeding back information on assessment and then, when need for modification is identified, immediately implementing the necessary changes.

Formative evaluation does, however, require the active participation of everyone involved assessment in providing information and making decisions about appropriate refinements.
It particularly requires:

- the development of strategies or instruments for the collection of information and data;
- a joint decision about when the information is to be collected;
- data collection and feedback;
- regular and on-going meetings to discuss problems areas as they are identified;
- agreement on what improvements are needed and how they can best be achieved;
- implementation of the revised approach to assessment.

Focus: Which aspects of assessment should be evaluated?

The important aspects of assessment which need to be evaluated are:

- the quality of the evidence collected and the consistency of the judgements made;
- the efficiency and effectiveness of assessment methods or instruments utilised for various assessment events, and
- the administrative procedures associated with preparing, implementing, managing, recording and reporting assessment.

In reviewing each of these, consideration needs to be given not only to the principles underpinning good assessment but to the cost of the process. The criteria against which each specific aspect should be evaluated are outlined below:

ASPECT	CRITERIA
1 Evidence and judgements	■ validity ■ reliability or comparability ■ sufficiency
2 Assessment methods	■ validity ■ reliability ■ flexibility ■ fairness ■ cost-effectiveness
3 Processes and procedures associated with the management of assessment	■ flexibility ■ fairness ■ efficiency ■ cost-effectiveness

Focus: The who, what, when, where and how of evaluation?

1 Who should be involved in the evaluation?

The first task in planning an evaluation strategy, is to identify the key people who can provide information about the particular aspect of assessment under examination. Generally, the key players will be:

- teachers or trainers who are teaching the program, assessing learners and making assessment decisions both on and off the job ;
- learners;
- administrators who are required to formally record and report on the outcomes of assessment;
- employers who may either be funding the training or wanting to employ graduates of a training program, and
- others, such as industry representatives, who may be interested in the outcomes of training.

It also important in the planning stage to identify who will have responsibility for collecting the data, disseminating the information and initiating meetings to discuss issues raised by the evaluation. If you are a teacher or trainer who has sole responsibility for assessment, this is a simple decision. But where there are a number of people involved, agreement will need to be reached on how the evaluation is to be managed. Both the lines of communication and the processes to be employed should be well documented so that roles and responsibilities are quite clear.

2 *What specific information needs to be collected during the evaluation?*

Keeping in mind that validity, reliability, fairness, flexibility and cost-effectiveness are the key criteria for gauging the quality of your assessment, the following checklists detail the specific facets of assessment that may be examined in a formative evaluation and the most likely sources of that information.

Again if you are an assessor who is working alone, you may choose to seek assistance from other teachers and workplace supervisors or assessors from outside your working environment to assist in evaluating the various aspects of your assessment.

Evidence and Judgements Checklist:

Specific facets of assessment to be examined	Source
■ Appropriateness and sufficiency of evidence	Assessors
■ Clarity of standards for learner performance	Assessors
■ Confidence about making judgements	Assessors
■ Quality of products, portfolios, work samples etc.	Sample of products
■ Consistency of assessment decisions	Records
■ Standards of performance achieved by learners	Industry/External Assessors

Assessment Methods Checklist:

Specific facets of assessment to be examined	Source
■ Validity of method for task being assessed	Assessors/Industry Reviewers
■ Appropriateness of level	Assessors/Industry Reviewers
■ Balance of coverage of skills and knowledge	Assessors/Industry Reviewers
■ Consistency of assessment outcomes	Assessors
■ Sufficiency of time for assessment/reassessment	Assessors
■ Ambiguities and weaknesses in items	Assessors/Industry Reviewers
■ Cost-effectiveness of methods	Assessors
■ Clarity of information/instructions	Learners
■ Adequacy of feedback	Learners
■ Fairness and flexibility of methods used	Learners
■ Value and relevance of assessment	Learners

Assessment Procedures Checklist:

Specific facets of assessment to be examined	Source
■ Adequacy of assessor guidelines	Assessors
■ Adequacy of checklists and marking guides	Assessors
■ Sufficiency of resources for assessment	Assessors
■ Sufficiency of resources for assessment	Assessors
■ Efficiency of recording and reporting processes	Assessors, administrators
■ Effectiveness of quality assurance mechanisms	Assessors
■ Information provided on assessment	Learners/Employers/Users
■ Fairness and flexibility of assessment procedures	Learners

Whilst these lists are quite extensive, much of the information can be gathered using either simple collection devices, or by the regular sharing of personal reflections on your assessment processes and procedures with colleagues.

3 How, when and where will the information be collected?

The next planning step is to work out when and where information on assessment is to be gathered and what methods will be used to collect the data.

Information from assessors, teachers and trainers:

This is best collected soon after each assessment event when assessors have had a little time to reflect on the assessment process and its outcomes. Although most people may quickly identify aspects that they want to change even before they have finished administering the assessment.

An extremely simple way of collecting information from assessor perceptions is by the use of a self-evaluation questionnaire, an example of which is included on the following page.

The self-evaluation questionnaire can be a standard format that can be used after each assessment event. This approach not only generates a high degree of consistency in the data that is collected, but it also helps to establish evaluation of assessment as a familiar and natural part of the teaching and learning process. When completed, these questionnaires can provide valuable insights into the strengths and weaknesses of the assessment process and the supportive evidence needed when issues are considered and revisions formulated.

Information from learners:

This is best collected at the end of a short training program or at the end of a module in a longer course. Feedback from learners can be gathered using a simple questionnaire, which again can be standardised for use with any assessment event. Try to keep it reasonably short and to the point, and explain to learners that their input is a valued part of the evaluation process. A sample learner questionnaire is included overleaf.

The results from learner surveys can the be analysed and compared with the results from other learners and the findings collected from other sources. In this way, a big picture view of assessment can be developed.

Self Evaluation Questionnaire for Assessors

Assessment Event:_____

Group:_____ **Date:**_____

Aspect of Assessment	✓	Comments
Did your assessment go according to plan?		
Were you comfortable using the standards outlined in the assessor guidelines?		
Was the assessment valid?		
Was the assessment reliable?		
Were you required to make adjustments to the assessment for any reason?		
Was the assessment fair to all learners?		
Was the assessment cost-effective?		
What changes would you make to the assessment before using it again?		
Why would you recommend these changes?		
Did you get any feedback from learners on the assessment? If so, what was it?		

Questionnaire for Learners

Module:_____ **Date:**_____

		Strongly Agree	Agree	Disagree	Strongly Disagree	Does not apply to me
1	I would have liked more information about this assessment at the beginning of the module	5	4	3	2	1
2	There was too much assessment in this module	5	4	3	2	1
3	The assessment in the module was just what I expected	5	4	3	2	1
4	I was not able to demonstrate my skills fully during the assessment	5	4	3	2	1
5	My assessor provided encouraging feedback during/after the assessment	5	4	3	2	1
6	The assessment was a waste of time	5	4	3	2	1
7	My assessment result was fair	5	4	3	2	1

What other comments do you have about your assessment?

Information from employers or workplace supervisors:and workplace supervisors

Where practical, it may also be appropriate to ask employers and workplace supervisors to make comment on the standard of learner performance in the workplace in those areas covered by particular assessment events. A short face-to-face or telephone interview may be sufficient to gather this type of information.

Information from assessment records:

In addition to the qualitative information gathered from assessors, learners and those in the workplace who have direct contact with learners, a check of assessment records should also be undertaken during an evaluation. Such an examination can assist in determining the consistency of assessment decisions. Any anomalies that may be revealed, can then be investigated further.

4 How will the evaluation findings be acted upon?

The final consideration in planning an evaluation strategy is to clarify:

- who needs to be informed about the results of the evaluation;
- how the results of the evaluation will be fed back into the planning process, and
- what the procedures will be for initiating changes to the assessment strategy.

Clearly such decisions will be influenced by organisational policy and this needs to be determined prior to implementing any evaluation of assessment.

Further reading

The emphasis in this section has be on a fairly simple ***formative*** approach to evaluating assessment.

Practical Evaluation by Michael Quinn Patton (Sage Publications, Beverley Hills, 1982) provides useful information on collaborative evaluation practice with groups and offers practical suggestions for data collection through thoughtful questionnaires and interviewing.

Part 3: Focussing on assessment methods

In this section you will find:

3.1	**Starting off**	**Covers issues which influence the selection of assessment methods including the nature of learning outcomes, the principles of assessment, time and cost and the concept of integrating assessment. Also listed are the basic rules for developing and reviewing assessment instruments.**
3.2	**Assessing skills**	**Outlines the various methods for assessing practical performance, including observations, practical exercises, simulations, role plays and projects. Uses, strengths and weaknesses are listed together with hints for designing practical assessment events using these methods.**
3.3	**Assessing knowledge**	**Outlines the various methods for assessing understanding and underpinning knowledge, including objective tests and essay items. Uses, strengths and weaknesses are listed, together with hints for construction.**
3.4	**Assessing attitudes and values**	**Raises the issues and concerns associated with assessment in this area and outlines mechanisms for integrating affective attributes into the assessment of skills and knowledge.**
3.5	**Including learners in the process**	**Outlines ways of involving learners in their own assessment. Covers collaborative, peer and self-assessment.**

3.1 Starting off

In this section, the focus is on what you need to consider when selecting a method of assessment and the basic rules for developing your own assessment instruments.

Focus: Selecting which method(s) to use

The choice of a particular method for assessing a learning outcome or group of learning outcomes can often be influenced by one or more of the following factors:

- how easy various instruments are to construct, to administer and make final judgements about learner performance;
- the amount of time available for development, administration and marking of particular types of instruments;
- the availability of an existing instrument that has, over time, proven easy to construct and revise, administer and mark (and reasonably painless for both assessors and learners alike) and finally,
- the level of confidence you have in your own ability to develop new assessment instruments.

If you are a teacher or trainer who is working with a curriculum and supporting material which include a full assessment strategy and guidelines for assessment, the question of which assessment methods to use to assess the learning outcomes may be a reasonably simple one.

But what if you are required to select your own assessment method and develop your own assessment instruments? Where do you start?

In approaching this task, it is important that you focus on four critical areas. These are:

- the nature of the learning outcomes being assessed;
- the principles underpinning good assessment practice;
- the amount of time and resources that you have available for the preparation, administration and marking of the outcomes of the assessment process, and
- the potential for integrating assessment of knowledge, skills and attitudes.

The nature of the learning outcomes

The decision on what assessment method to use for a particular purpose is largely influenced by the nature of the learning outcome(s) and the type of evidence that is needed to make a ***valid*** judgement about the achievement of those outcomes. Thus, the learning outcomes dictate the assessment method to be used.

To determine what approach is appropriate, you will need to carefully analyse the information that is included in the curriculum document, specific module descriptors and any supporting documentation that relates to the course or training program.

The wording of the learning outcomes themselves will give a clear indication of the evidence required and will guide the selection of the method or methods that may be appropriate to use to assess achievement of the outcomes. A few simple examples are included in the following table.

Facet of learning	Learning outcomes require learners to:	Possible assessment method	Marking technique
Skills	perform, construct, use, carry out, design, create	Practical exercises, simulations, role plays, projects and assignments	Observation using checklists
Knowledge	describe, state, list, define, calculate	Written or oral questioning	Marking schedules and model answers
Attitudes and Values	perform, react, respond, define, determine, carry out	Interviews, role plays questionnaires, diaries, case studies and any of the methods identified for skills and knowledge	Observation using checklists and rating scales; marking schedules and model answers

The principles of assessment

Concerns for ***validity, reliability*** and ***fairness*** will also influence the selection of an appropriate assessment method.. The assessment methods chosen should directly assess what is described in the learning outcomes, have the capacity to be administered in a consistent way across time and groups of learners and be fair to all learners.

Even if you are utilising 'ready-made' assessment instruments, it is wise to check that they conform to the principles of good assessment practice. (Remember, the ***Focus Checklists*** included in each section of ***Principles of Assessment*** are designed to assist in this evaluation process).

Time and cost

At the same time, consideration should be given to the time and the cost involved in constructing instruments, gathering the evidence, interpreting the results and then making a final judgement about the quality of learner achievement.

Developing any assessment instrument requires time for preparation, production, review and revision and the more complex the process of assessment, the more time and resources may be needed to support it.

Clearly, concern for the principles of assessment will need to be balanced against the amount of time and resources that are available to construct, administer and mark a particular assessment method. Effectiveness and efficiency are both vital components of assessment. Where the amount of time and effort involved for both assessor and learners is tending toward being excessive, a slightly less valid alternative approach may need to be identified.

As a general rule, assessment should be kept as simple as possible.

The potential for integration of assessment

With a clear understanding of the outcomes of learning, the type and breadth of evidence required and a realistic view of the time and resources that are available to you, a sensible decision can be made about how the module assessment can be integrated. It may be possible to gather sufficient evidence about a learner's skills, knowledge and attitudes using a minimum number of assessment events.

Focus: Basic rules for developing assessment instruments

Developing effective assessment instruments is not an activity that should be done in a hurry. Whether you are an individual assessor or a member of an assessment team, it is vitally important that you prepare your items well before you actually intend to use them. As with other aspects of the teaching and learning process, there needs to be some time for reflection.

Preparing early allows you the opportunity to weigh up the strengths and weaknesses of your approach, to check it with other teachers and trainers and to make adjustments where necessary. In some circumstances it may also be appropriate to trial the instrument to evaluate whether it will achieve the assessment outcome you have planned for it.

During this period of reflection you should also double-check that you have observed the basic rules of good assessment. Essential to any assessment event, these general principles are set out in the following *Focus Checklist*.

As you prepare assessment instruments and then review them, ask yourself (and others) whether the approach you have taken adequately addresses all of the basic rules listed in the checklist.

Focus checklist:

Basic rules

1. The method selected is valid for the purpose and will provide clear evidence of learner ability in relation to the intended learning outcome or outcomes.
2. Instruments cover the critical elements of learning and not just what is relatively easy to assess.
3. The level of difficulty of assessment items reflects that required by the learning outcomes, assessment criteria and the conditions statement(s).
4. All instructions for assessment events and specific assessment items are clear about how answers are to be recorded and how they will be marked.
5. Written and oral assessment items are grammatically correct and the level of language used is appropriate for all of the learners who are being assessed.
6. Any gender or cultural bias is identified and eliminated.
7. Marking schedules and model answers are prepared in parallel with the development of assessment instruments.
8. The selected assessment method if fair for ***all*** learners.

Focus: An overview of the following sections

For ease of reading and layout, the following sections have been separated in a rather artificial way:

3.2 Assessing Skills

3.3 Assessing Knowledge

3.4. Assessing Attitudes and Values

In essence, the assessment of skills, knowledge and attitudes can and should be carried out in an integrated way. In some cases, however, key elements of learning such as foundation knowledge and understanding or basic manipulative skills, may need to be assessed by themselves. In many other instances, assessment can directly address the ***overall performance*** of learners against the module purpose, and this includes their practical skills, their ability to apply underpinning knowledge and their attitudinal approach to tasks, people and the organisation.

3.2 Assessing skills

The major focus in competency-based assessment is on gathering evidence and making judgements about what learners can do. These judgements are made after methodical observation of learners performing a variety of work or work-related tasks over a period of time and under a range of conditions.

Using learning outcomes and clearly defined assessment criteria developed from industry standards, teachers and trainers are assessing performance which includes the ***processes*** learners go through to complete tasks and the ***products*** that they create. Performance, however, must be sustained. As a consequence, teachers and trainers generally require learners to provide evidence of successful achievement of learning outcomes at the required level during a number of assessment events and using a variety of assessment methods.

In a workplace setting, trainers will have the opportunity to assess learner performance after observation of realistic work tasks and direct oral questioning of underpinning knowledge. Further supporting evidence may be gathered using simulated activities and work-based projects. In other vocational education and training settings, more emphasis may be placed on gathering evidence from observation of practical exercises, simulated exercises, role plays and work or work-related projects.

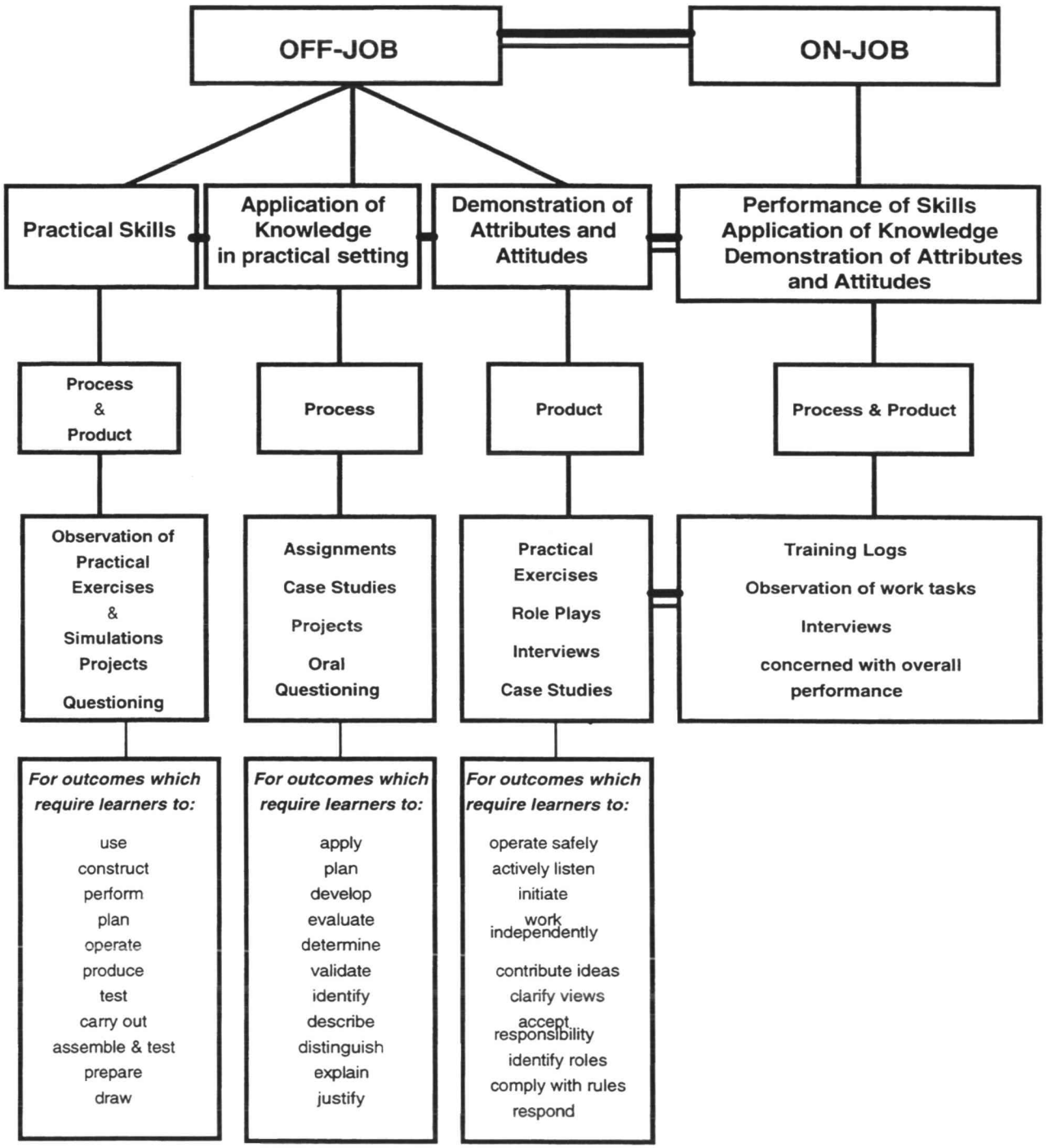
Regardless of the setting, the assessment methods are basically the same, although the choice and emphases may vary.

Focus: Methods for assessing skills

Manipulative skills, processes, products, underpinning knowledge, understanding and attitudes and values are all elements in the assessment of performance.

Assessment methods used in assessing skills/performance involve the use of systematic observation supported by checklist and rating scales. Some, such as practical exercises are most effective in the assessment of simple manipulative skills, whilst others allow the assessment of more complex or grouped learning outcomes. The range of possible methods for performance assessment are outlined overleaf.

METHODS FOR ASSESSING PRACTICAL PERFORMANCE



Across the range of methods suitable assessing performance, there is considerable variation in the amount of time needed to design the events and to carry out the assessments and make the judgements. All but role plays can be great consumers of material resources.

Observations require some time to prepare and considerable time to carry out. Practical exercises involving the creation of a product are less complex to assess than those requiring observation of processes. Simulations can be both time-consuming and complex to set up and assess as are role plays. Projects, on the other hand, are generally free from time-consuming observation but entail the expenditure of extensive assessor time in negotiating the process and assessing the product.

In designing and preparing assessment methods for performance, the issues of time and resources are highly influential factors in any decision about what method to employ.

Focus: A key to the following sections

The following pages contain information on the various methods appropriate for the assessment of practical performance.

Practical Assessment Methods	**S1**	Observation
	S2	Practical Exercises
	S3	Simulations
	S4	Role Plays
	S5	Projects

For each assessment method there is:

- a brief description;
- an outline of what it is best used for;
- a series of examples;
- a listing of its strengths;
- an outline of its negative aspects;
- a set of design hints, and
- issues relating to marking and making the assessment decision.

Suggestions for further reading are also included at various points through the section.

S1 Observation

Description:

Direct observation of learners demonstrating their practical and technical skills and their ability to apply underpinning in context is the key to assessment in vocational education and training.

Best used for:

Observation used in combination checklists and rating scales with practical exercises, simulations and roles plays and questioning provides highly valid evidence of the quality of learner performance.

Strengths of observation:

- ☑ Unplanned and planned observation can be combined to accumulate evidence of learner achievement over a period of time.
- ☑ A high degree of validity and a reasonable level of comparability can be achieved when checklists are developed from assessment criteria and all assessors apply similar standards to observation of learner performance.
- ☑ Observation is a vital tool for assessing the processes that learners go-through to perform tasks.
- ☑ Observation, checklists and rating scales are a useful method of assessing behaviours which reflect learner attitudes, values and opinions.
- ☑ Observation strategies can be developed for integrated assessment which covers manipulative skills, procedures, attitudes, work habits or products.
- ☑ Observation provides indirect evidence of knowledge/understanding especially when coupled with oral questioning.
- ☑ Observation is also a reasonably cost-effective way of assessing performance of simple tasks.
- ☑ Regardless of the situation in which assessment is taking place, observation remains an effective tool.

Negative aspects of observation:

- ☒ With observation there can be some difficulty of gathering a representative sample of learner performance and behaviour.

- ☒ It can be hard to achieve a balance between being an unobtrusive observer and being able to get a full view of the learner performing the tasks.

- ☒ Focussing on a limited range of learner performance may mean that other important aspects which are influential in the final assessment decision are missed/ignored.

- ☒ Effective observation requires considerable concentration. Over time, loss of concentration can be a major problem for assessors.

- ☒ Observation is time consuming and difficult to manage with large groups of learners.

- ☒ To gather sufficient evidence on which to base a judgement about the successful attainment of a learning outcome or group of outcomes, learners must be observed on a number of occasions over a period of time. It then becomes a major task for teachers and trainers to organise, manage, record and interpret multiple observations.

Some of these negative aspects can be partially eliminated through careful planning, structuring and management of observations. The following set of ***Design Hints*** can be used as a checklist when preparing assessment through observation. If a group of assessors are involved in observing learners performing the same tasks, the list will provide a valuable reference point for establishing mutual agreement on what satisfactory performance will look like.

Design hints:

Observations

1 Plan an observation well ahead of time and be very clear about the observation's purpose.

2 Make an early decision about how many observations will be needed before a judgement can be made about the quality of learner performance.

3 Prepare an observation checklist, guide or rating scale to make the observation systematic and objective.

4 Develop codes and categories to assist in recording.

5 Develop an approach to observation that is will not interfere with, or influence learner performance of the activities being assessed.

6 Focus on behaviours that are directly ***observable***, key examples of the evidence required and conveniently recorded.

7 Limit the number of behaviours being observed in one session to that which can be managed with relative ease.

8 Do a larger number of shorter observations rather than a few long ones.

9 Carefully record and summarise observations immediately after they have occurred.

10 To avoid the possibility of bias, leave any interpretation and decision-making until observations are completed.

11 Where appropriate, record performance with a video camera. This can provide a useful feedback for learners and additional evidence supporting the final assessment decision

12 Where several assessors are using the same approach it is essential that agreement is reached on what is to be observed and how it will be rated.

Making the assessment decision:

To formulate a judgement about learner performance from observations, information is recorded on a ***checklist***. These are generally developed using the relevant assessment criteria for the learning outcomes or groups of outcomes. To assess the quality of the performance against criteria, ***rating scales*** can be added to the checklists. If additional information is required, ***participation charts*** and ***anecdotal records*** are useful recording tools.

Checklists:

Checklist are extremely useful in assessing those performance skills that can be divided into a set of clearly defined, specific activities or behaviours. In its simplest form, a checklist is made up of a list of the criteria for performance and a space to record whether the learner achieved it or not. Two examples of this type of checklist are provided below.

When the learner performed the task, did he/she do the following?		Yes	No
1	check that the chair height was correct according to ergonomic guidelines and make necessary adjustments	☐	☐
2	check that the telephone was easily accessible	☐	☐
3	check that other frequently used items eg. stapler, teledex etc. were positioned for easy and quick access	☐	☐
4	use correct posture whilst working at workstation	☐	☐

SELF ASSESSMENT CHECKLIST Indicate assessment of competency by placing a *tick* in the appropriate box	
Prepare bread tins, tin up bread dough and give bread dough its final proof	***Competency Achieved***
1 Prepare bread tins using commercial lubricants so as to eliminate sticking and/or discolouration of bread.	
2 Place dough into bread tins to achieve a desired shape of finished product.	
3 Set temperature and humidity controls on proving cabinet as required by standard recipe.	
4 Place dough in prover to allow even flow of heat and moisture around tins/dough to ensure uniform proving or product.	
5 Visually determine when dough has reached 3/4 proof based on volume increase.	
6 Transfer dough from prover to oven in a manner which will not have any detrimental effect on final product eg. rough handling, cold draughts.	
7 Explain the operation of three different types of provers commonly used in the baking industry.	

School of Tourism & Hospitality, CIT

Note that the second of these examples is designed to be used as an assessment aid for teachers and trainers and as a self-assessment tool for learners to use to evaluate their own performance.

In developing a checklist it is important to:

- determine whether process factors, product factors or both are to be assessed. This will be determined by the learning outcome and the associated assessment criteria;
- list the skill components and important behaviours that make up the task;
- arrange the criteria into an sensible, efficient and easily scored format, and
- determine whether a yes/no response is sufficient or whether a rating scale of some type is appropriate.

Rating scales

Rating scales provide a systematic way of making, recording and reporting judgements about the quality of learner performance. They direct observations toward specifically defined aspects of performance and provide a framework for consistent assessment of all learners on the same set of criteria. Rating scales can be used like checklists but allow finer discriminations to be recorded.

A variety of ratings can be utilised, ranging from 'satisfactory/unsatisfactory' to the more complex. A five point rating scale is provided below as an example.

extensive improvement required	some improvement required	satisfactory performance	performance above level required	outstanding performance
1	2	3	4	5

The more detailed the rating scale, the more work has to be put into clearly and precisely defining what the quality of the performance is at each point on the scale. In the following example, a rating scale has been developed to assess the technical skill of using media and techniques.

begins to use media, techniques and equipment with some competence	Uses media, techniques and equipment with some competence	Selects and uses media, techniques and equipment with some competence, understanding and control	Selects and uses media, techniques and equipment with understanding, control and inventiveness	Consistently selects and uses media, techniques and equipment with understanding control and inventiveness

Participation charts:

Participation charts enable the observer to record frequency and type of participation by individuals in a group activity. An example is provided below. As the group activity unfolds, the teacher observes the interaction in the group, listens to the discussion and notes the contribution of each learner. Note that the criteria for each group member are included in the key.

Contribution	Jack	Jill	Peta	Van
significant	* *	*	* * *	* * *
secondary	* * *	* *	*	* *
doubtful				
irrelevant	*	* *	*	

Key:

significant	**introduces important, significant new ideas**
secondary	**introduces important but minor ideas**
doubtful	**unable to evaluate contribution**
irrelevant	**introduces irrelevant ideas and contribution detracts from discussion**

Anecdotal records:

Anecdotal records are simply written descriptions of specific aspects of learner performance. This qualitative type of written information can be used to supplement or validate evidence collected in other ways. Records should contain a factual description of what happened, when it happened and under what circumstances or conditions the behaviour occurred. Listed below are basic guidelines for recording information anecdotally.

- Each anecdotal record should contain a record of a single incident.
- The incident recorded should be one that is considered to be significant and relevant to the assessment of the learner.
- Interpretation and recommendations should be completed after completing the written record.

Further reading

For more information on observation, rating scales, participation charts and anecdotal recording of learner behaviour read the appropriate sections in Kubiszyn & Borich (1990) ***Educational Testing and Measurement***, 3rd. ed. or Mehrens & Lehmann (1984) ***Measurement and Evaluation in Education and Psychology***, 3rd. ed., Holt, Rinehart & Winston, Boston.

S2 Practical exercises

Description:

A practical exercise consists of any activity which involves learners performing manipulative or psycho-motor skills and behavioural skills directly. The learners are assessed on their performance of a skill or combination of skills and/or on the standard of the product that they produce.

Best used for:

Practical exercises are essential for learning outcomes which require learners to demonstrate manipulative skills, and their ability to follow established processes and produce an artefact to the standards demanded by the assessment criteria under the conditions outlined in the conditions statement.

Practical exercises are also appropriate for assessing groups of outcomes which integrate practical performance with underpinning knowledge, understanding and attitudes and values in sensible units which mirror the standards and realism of the workplace. This approach ensures that a reasonably high degree of validity is achieved.

Examples:

Product example:

Construct a window frame to given specifications

Process example:

Set up ladders and scaffolding to regulations

Process and product example:

Mix and process a 2 kg Instant Bun Dough to produce:
3 x 550 grams High Top
3 x 550 grams 3 Strand plaits
Products to be glazed and finished to a commercial standard

Strengths of practical exercises:

- ☑ Practical exercises assess realistic and relevant skills directly.
- ☑ Assessment of products provides concrete evidence upon which to make judgements about the quality of learner performance.

Negative aspects of practical exercises:

- ☒ With large groups of learners, practical assessment exercises can be difficult and time consuming to set up and manage.
- ☒ the resources required to support this type of assessment can be excessive, especially when allowing learners numerous practice opportunities.
- ☒ Even with carefully constructed checklists, reliability can be difficult to achieve.
- ☒ Often practical tasks performed under assessment conditions are not truly representative of what occurs in the workplace.
- ☒ This assessment method may not provide the learner with the chance to display the breadth of his/her knowledge and understanding.
- ☒ In a workplace setting, practical exercises are dependent upon the availability of supervisor and assessor and time can become an issue.

Design hints:

Practical exercises

1 When setting up practical exercises for assessment, make them as realistic as possible.

2 Combine exercises into a unit of work which is clearly relevant to a real work situation.

3 Develop and disseminate to learners specifications of the assessment including the tasks to be completed, the conditions under which assessment will be conducted, the resources required and the criteria against which performance will be judged.

4. Use observation, checklists, and where appropriate, rating scales to assess and record learner performance.

5. Assess both process and product and include criteria to cover attitudinal aspects such as safety, neatness and teamwork where learning outcomes indicate they are appropriate.

6 provide learners with the opportunity to practise the tasks prior to carrying out the assessment.

7 Assess process as it is happening, while product can be judged after the assessment event is over.

Making the assessment decision:

The interpretation of learner performance is achieved by observation, followed by comparison against the assessment criteria for the learning outcome or outcomes. The reliability of assessment may be improved by extending the assessment criteria into an itemised checklist which is specific to the particular task or context.

Clearly one assessment of skills is not sufficient to determine satisfactory performance or mastery. Therefore, it is important that several opportunities are provided for learners to be assessed. Learners can be formatively assessed when they are practising tasks and the results can be used as evidence to support the final assessment decision. Some of this formative assessment can involve the learners self-assessing or assessing each other.

S3 Simulations

Description:

Simulations are extended practical exercises which require learners to organise and complete realistic work-related tasks with conditions and environments that closely resemble natural workplace environments. In institutional settings, assessment activities may take place in autobays, in training restaurants, in practice offices and on building sites which replicate to some degree settings in real workplaces. Simulations can also be computer-based.

Cost, safety issues, licensing regulations and lack of access to real workplaces and real work make simulations a sensible alternative.

In a workplace environment, the setting up of assessment events are dependent upon the availability of supervisor and assessor and time can be an issue. Often it will be inappropriate for training and assessment activities to be carried out during the production of work. Thus, simulated settings and assessment events can also be a feature of workplaces.

Effective simulations provide the highest degree of validity in assessment outside assessment of the performance of real work.

Best used for:

Simulations can be used to assess a full range of skills, knowledge and attitudes. They are particularly effective for grouped learning outcomes which require learners to prepare tasks, organise work schedules and equipment and safely perform tasks under workplace-like conditions.

Examples:

Prepare a three course meal in a training restaurant

Carry out the full range of office management duties in a practice firm

Perform fitness assessments for clients in a simulated fitness centre.

Strengths of simulations:

☑ Learners can carry out complex tasks in a controlled and safe environment.

☑ Simulated assessments provide learners with the opportunity to demonstrate the full range of their practical and technical skills, interpersonal skills and other attributes in an integrated way.

☑ The types of learning outcomes that are assessed in this manner allow learners to perform realistic and relevant tasks that may be directly transferable to the workplace.

☑ Knowledge and understanding can be inferred from the way learners carry out tasks in simulated settings.

☑ In workplace settings, simulations can provide supporting evidence for the determination of competence.

Negative aspects of simulations:

☒ To be effective, simulated assessment events need to be truly realistic, but it is difficult to replicate the atmosphere, day-to-day pressures, interruptions and I nconveniences that actually can occur in the workplace.

☒ Simulations are difficult to set up and manage with larger groups of learners.

☒ The way learners are likely to respond in simulated exercises cannot be totally controlled and reliability in making assessment judgements can be difficult to attain.

Design Hints for simulations are included overleaf. The degree of realism that is possible in simulated settings is largely dependent upon the availability of the equipment and the resources required to set up a near-to-real environment. In some areas of training, this will be easier than in other areas. For example, in the automotive area, service bays in skill centres and TAFE colleges can achieve a high degree of reality in what constitutes a simulated environment.

Design hints:

Simulations

1. When setting up simulated assessment, make them as realistic as possible.
2. Develop and disseminate to learners specifications of the assessment including the tasks to be completed, the conditions under which assessment will be conducted, the resources required and the criteria against which performance will be judged.
3. Use observation, checklists, and where appropriate, rating scales to assess and record learner performance.
4. Assess both process and product and include criteria to cover attitudinal aspects such as safety, neatness and teamwork where learning outcomes indicate they are appropriate.
5. Provide learners with the opportunity to practise the tasks prior to carrying out the assessment.
6. Assess process as it is happening, while product can be judged after the assessment event is over.

Making the assessment decision:

As with practical exercises, evidence of the standard of learner performance in simulated assessment events is achieved through observation and a comparison of that performance with assessment criteria for the learning outcome or group of outcomes. The reliability of assessment may be improved by extending the assessment criteria into an itemised checklist which is specific to the particular task or context and using rating scales to record the quality of learner performance.

S4 Role plays

Description:

In role plays, individual learners or groups of learners are provided with a scenario which represents a situation, problem or incident commonly occurring in a workplace setting. Learners select, or are allocated, a role to act out.

Best used for:

Role plays are best used for assessing the behavioural and interpersonal skills of learners in a simulated context. Thus, learning outcomes that require learners to demonstrate their communication skills, their ability to deal with clients and customers in a variety of settings and situations, their problem-solving strategies and their attitudes and values can all be assessed using this method.

Important: **Debriefing is a vital element in role plays.**

Learners need to be given the opportunity at the end of any role play to detach themselves from the role that they have been playing. Some learners take to their roles with great gusto and cannot let them go. Others may forget that they are play acting and they tend to take things that are said during a role play seriously and often, quite personally. As a result, it is essential that time is allocated at the end of any role play to discuss the outcomes of the activity and to clarify and dispel any uncertainties or clashes of opinion that may have occurred while learners were 'in-role'.

Teachers and trainers who wish to use role plays to assess learners need to gain some training in the area.

Example:

The information provided in the National Communication Skills module, ***Dealing with Conflict*** outlines the appropriate use of role plays for the assessment of communication skills. An example scenario, the learning outcomes and associated assessment criteria are detailed on the following pages.

NCS005	Dealing with Conflict
INTEGRATED ASSESSMENT - Learning outcomes 1, 2, 3	
Scenario	**Action Stores Warehouse** **Ken has worked at the Action Store warehouse for five years. His reliable, responsible work record has lead to his promotion, six months ago, to a junior supervisor's position. Ken tends to arrive for work ten to fifteen minutes past the starting time of 8 am at least twice a week. As a supervisor, he is not required to clock in which he did in the store, when he tended to be punctual. As a supervisor, his pay is not docked for lateness. He occasionally offers reasons for his lateness, including a sick child, flat tyre, traffic jam, engine problems, etc.** **Wendy is the Distribution Supervisor at the warehouse. She felt annoyed at not being able to consult Ken in relation to work matters first thing on some mornings. She has noticed that other staff have begun to comment on Ken's lateness. When she raised the issue with Ken she gained a commitment to Ken's being punctual. Wendy is perturbed that this commitment has not been honoured and Ken has been chastised by the Managing Director, whose office is based at the warehouse. The Managing director is a stickler for discipline and a firm believer in the need for management staff to lead by example** **<u>You will:</u>** **Describe the signs and possible development stages of the potential conflict in the above situation, and the likely causes.**

LEARNING OUTCOME 1	*Identify the signs, stages and possible causes of conflict in the workplace*
	<u>You will be assessed on:</u> ■ **describing the signs of potential or actual conflict** ■ **describing the stages of the conflict particularly the progression and escalation of the conflict** ■ **describing the effects of attitudes, values, beliefs and actions of the participants in the conflict** ■ **describing the factors within the workplace which relate to the developing conflict.** **<u>You will:</u>** **Take on the role of either Ken or Wendy and outline strategies to deal with a workplace conflict, which you perceive may have developed.**

LEARNING OUTCOME 2 ***Propose strategies to deal with a specified conflict in the workplace***

You will be assessed on:

- **outlining strategies which:**
  - **provide options for responding constructively to the conflict**
  - **enable established work relationships to continue**
  - **take account of economic and industrial complaints**
  - **are consistent with the organisation's requirements**

You will:

Role play an interaction with Ken and Wendy which uses communication skills to respond constructively to the workplace conflict.

LEARNING OUTCOME 3 ***Use communication skills that facilitate constructive responses to conflict in the workplace.***

You will be assessed on:

- **describing the factors which affect the timing and environment for the interactions**
- **use effectively nonverbal and verbal communication including:**
  - **body language**
  - **questioning**
  - **language style**
  - **active listening**
  - **reflecting**
- **giving feedback assertively and receiving it non defensively**

You will:

Role play an interaction with Ken and Wendy which uses communication skills to respond constructively to the workplace conflict.

National Communication Skills Module, ACTRAC

The additional advice given to teachers and trainers of this module is that ***learners require practice in role plays*** before the method is used for an assessment event.

Strengths of role plays:

☑ Provide a means of trialling possible behaviours in specific settings that relate to the world of work.

☑ Enable learners to receive specific feedback on their performance.

☑ Role plays can broaden the learners' learning experiences.

☑ They provide opportunities to practise a range of communication skills and behaviours in a simulated environment relatively free from the stress that would be present in a real situation.

Negative aspects of role plays:

☒ Role plays can be difficult to set-up and to manage with large groups of learners.

☒ This method of assessment does require training and practice to ensure that the experience is a positive one for learners and assessor alike. Teachers and trainers need some training prior to utilising the approach.

☒ Learners can be stressed by the process, either because it is appears potentially threatening to take on the role of another person or because they are not appropriately debriefed on completion of the role play.

☒ Learners from different cultural backgrounds may find some difficulty in actively participating in role plays.

☒ Because of variable conditions, and the diversity of possible responses and interactions that can occur in a role play, reliability is very difficult to achieve.

An alternative approach to role play

As some learners may find that taking on the role of someone else is a stressful experience an alternative strategy can be set up to achieve the same learning outcomes.

In a simulation approach, *learners participate as themselves* in interactive events which represent real situations without the additional pressure of taking on an unfamiliar role. Learners are expected to act as themselves and to respond and react as they actually would, given the specific scenario being assessed.

Again a set of design hints are included on the following page.

Design hints:

Role plays

1. Prepare learners for role plays by giving them clear guidelines on the process and provide a reasonable number of opportunities to practice the art of role play.
2. Carefully explain the issue of debriefing with learners and discuss strategies for dealing with situations that may possibly arise.
3. Select scenarios that are realistic and as relevant as possible to a real work situation.
4. Develop a list of the types of behaviours or attitudes that should be expressed during the role play. Whilst this listing is not designed to ***direct*** the action in the role play, it serves as a guide to learners.
5. Utilise simulations rather than role plays where appropriate.

Making the assessment decision:

A variety of assessment approaches can be taken with role plays. The assessor can simply rely on direct observation and record learner responses on a checklist based upon the assessment criteria . Observation can also be coupled with oral questioning on completion of the role play and debriefing.

Additionally, self and peer assessment are useful techniques with role plays. Peer assessment by the participants in the role play adds a new dimension to assessment as it has the potential to generate additional learning and evidence. Peer assessment:

> *...requires learners to work cooperatively, exercise judgement, invite constructive criticism , and recognise their own limits*
>
> National Laboratory Science Module,
> ***Laboratory Operations: Assessment Package***, p. 17

Self-assessment provides learners with the opportunity to reflect on their performance and to initiate change. The final assessment decision, therefore, can be made on the basis of observation and questioning by the assessor combined with peer or self-assessment.

S5 Projects

Description:

Projects are assessment events which are generally undertaken by learners over a long period of time and with only minimal supervision and direction from teachers and trainers. More open-ended than other assessment methods, the subject matter for these are usually initiated by learners or developed in consultation with teachers and trainers or workplace supervisors. As Thomson (1986) suggests:

> *A project is in effect a large-scale practical exercise from which time constraints have been largely removed (p. 58).*

- The types of assessment tasks that fall into this category are:
- written assignments
- research projects
- development of a model
- large scale constructions
- portfolios of art or design work
- case studies
- journals/diaries
- reports

Generally projects require learners to design, plan, research, collect and collate information, analyse, experiment, solve problems, generate recommendations and produce a final product or report.

Best used for:

Projects are best used for summative assessment at the end of a module, a group of modules or a complete course or training program, because they are a highly effective way of assessing underpinning knowledge, attitudes and values as well as practical skills in an integrated way. They are also particularly useful for assessing both process and product.

Projects can be used to assess both individual learners and groups of learners

Examples:

Case Study:

TROUBLE IN THE WORKSHOP

Learners in the later stages of the National Certificate in Business Studies are provided with a three page scenario outlining a series of problems in the workshop at Truck Sales and Service Ltd. They are required to read the report and complete the following:

Write the report requested by the Managing Director, using the steps in the decision-making model as a guide. The report should demonstrate your ability to analyse a problem and present a set of recommendations that, if implemented, would improve the situation.

The required elements in the case study are:

- **Problem definition**
- **Problem analysis**
- **Development of alternatives**
- **Evaluation and selection of best alternative**
- **Recommended steps for implementation**
- **Follow up and evaluation**

Learners are directed to make reasonable assumptions about other information that they may need to present the report and are allowed to make reasonable estimates of the costs of alternatives.

Manawatu Polytechnic, NZ

Research Project:

LABORATORY OPERATIONS

The research project allows the learner to investigate and develop an understanding of the integrated operation and management practices within a specific workplace. The learner is required to provide a detailed account of the organisational structure of a laboratory or technical workplace, the legal and ethical obligations of the organisation and staff, and the patterns of work and communication. The quality assurance, budgeting and safety procedures are to be examined in detail.

The research project is to be presented at the end of the module but aspects of it can be developed and completed earlier. For example, sections of the report can be submitted to the supervisor, in draft form, on a regular basis for comment.

National Science Laboratory Technician Project

Other such projects are producing a portfolio of photographs, designing and producing a range of clothes, constructing a set of stairs, writing a computer program, preparing a presentation in a foreign language or building a mechanical or electrical prototype of some description.

Strengths of projects:

- ☑ Projects provide learners with an excellent opportunity to demonstrate the range of skills that they have, including their understanding of and ability to apply the knowledge and skills that they have in a concrete and substantial way.
- ☑ Learners are able to demonstrate their initiative in the selection of the approach they might take and the outcome they want to achieve
- ☑ Learners are able to demonstrate their initiative in the selection of the approach they might take and the outcome they want to achieve
- ☑ Learners are able to demonstrate their initiative in the selection of the approach they might take and the outcome they want to achieve.

Negative aspects of projects:

- ☒ Because projects are devised by the learners in consultation with the assessor, the diversity of responses make reliability difficult to attain.
- ☒ Projects are time consuming for learners to prepare and assessors to judge.
- ☒ Where groups of learners submit a project, it is hard to determine the degree of commitment and quality of input from individual learners within the group.
- ☒ As much of the work for a project is carried out outside the teaching and learning environment, there will always be a potential authenticity problem.

Design hints:

Projects

1. Ensure that all learners have the basic skills and knowledge to complete the proposed project, for example, research skills.
2. When negotiating a project, write down the agreed details, timelines and other important factors so that you and the learner are clear on the process and the intended outcomes.
3. In negotiating projects, check that learners are able to access the settings and resources they require.
4. Encourage learners to be practical about what can be achieved in the timeframe.
5. Identify procedures for checking progress and submitting drafts, plans or prototypes.
6. Clearly identify the criteria against which learner performance will be assessed.
7. If the project is work-based, allow those who cannot access workplaces to seek alternative simulated settings.

Making the assessment decision:

Although projects are an appropriate way of drawing together all the key components of learning in a module, it should not be assumed that learners will be able to achieve the desired outcomes without some support and guidance.

A good way to ensure that learners stay on track and are actually addressing the agreed outcomes and criteria is to build into the process some form of interim reporting. This procedure is employed in the National Science Laboratory Technician example. By submitting draft reports at various stages, strengths and weaknesses can be identified and quickly addressed. It also gives the assessor the opportunity to make judgements about *process*. The completion of a learning contract is also a valuable method of ensuring quality outcomes in this type of assessment.

Making the final assessment decision about the products of projects is as difficult as making decisions about learner performance in open-ended essays. Firstly, there needs to be some mechanism for authenticating the project process and product to ensure that the work that is submitted by the learner is actually his/her own. Knowledge of previous performance will be a good guide in the first instance, but where there is uncertainty, the learner can be questioned about the project to confirm authenticity.

Secondly, because learners will have had a good deal of freedom on what they cover and how they tackle the piece of assessment, there is limited likelihood of there being consistency in what learners submit. Therefore, the criteria for judging performance must be clearly stated in information to learners and it may be appropriate to set up a panel of assessors to moderate the final judgements on learner performance.

The following are general criteria which can be applied in the assessment of many projects:

■ clear evidence of careful planning	■ content coverage and accuracy
■ adherence to planned timelines	■ construction according to specifications
■ problems identified and sensible solutions offered	■ organisation of ideas, coherence and structure
■ evidence of application, analysis, synthesis or evaluation	■ where directly specified by learning outcome(s), correct spelling, grammar, punctuation, style, citations, language.
■ originality, insight or creativity	■ appropriate length

Thirdly, it is vital that learners are not disadvantaged because they have been unable to access things like workplaces, equipment or funding to support their project. Every learner will not have the same opportunities to present the exotic and the expensive, so each project submitted must be assessed on its merits and the criteria established and disseminated before the commencement of the assessment event.

3.3 Assessing knowledge

Observing a learner carrying out a practical activity or a series of work-related tasks, offers an assessor the opportunity to gather evidence relating to ***process*** and ***product***. But to generate sufficient evidence for a confident judgement to be made about the quality of learner performance, it is often appropriate to assess whether a learner really ***understands*** the knowledge which underpins that practical performance.

The cognitive skills of comprehension, application, analysis, synthesis and evaluation are valuable assets for learners who ultimately will be required to achieve competence in all aspects of their work performance. As outlined by Hager, Athanasou and Gonczi (1994), competent work performance includes the following combination of skills, knowledge and attributes:

- performance at an acceptable level of skill;
- organising one's tasks;
- responding and reacting appropriately when things go wrong;
- fulfilling a role in the scheme of things at work; and
- transfer of skills and knowledge to new situations.

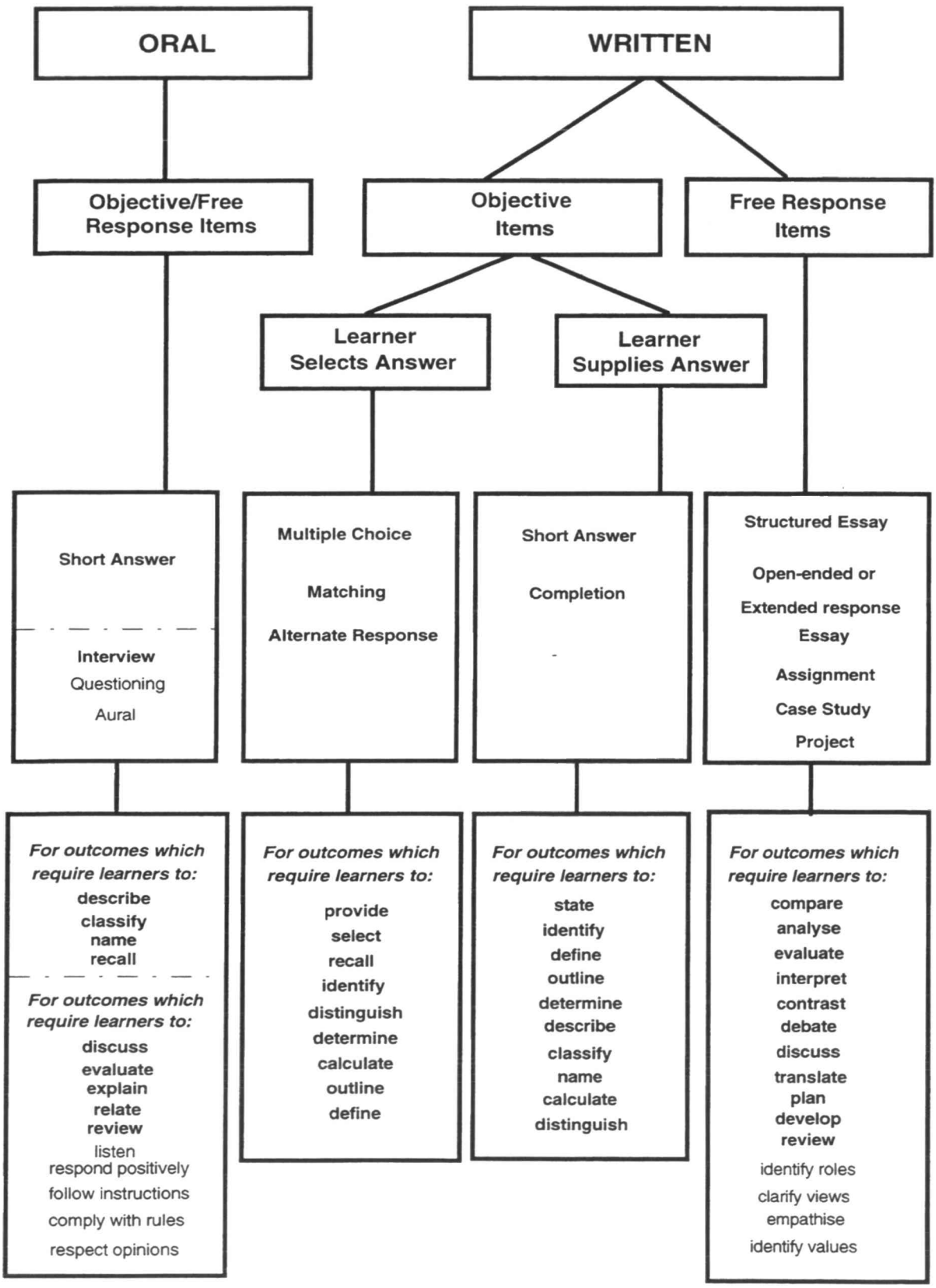
(Assessment Technical Manual, p. 10)

Furthermore, by assessing underpinning knowledge, teachers and trainers can collect additional evidence from alternative sources to support that generated by performance-based methods of assessment.

Focus: Methods for assessing knowledge

Underpinning knowledge can be assessed using either ***written or oral questioning*** techniques.
Assessment methods used in assessing knowledge extend from the highly objective multiple-choice test which simply requires the learner to select the correct answer on a test paper or computer screen, through to the subjective unstructured essay which allows the learner freedom of response.
The range of possible written and oral questioning methods for assessing knowledge are outlined overleaf.

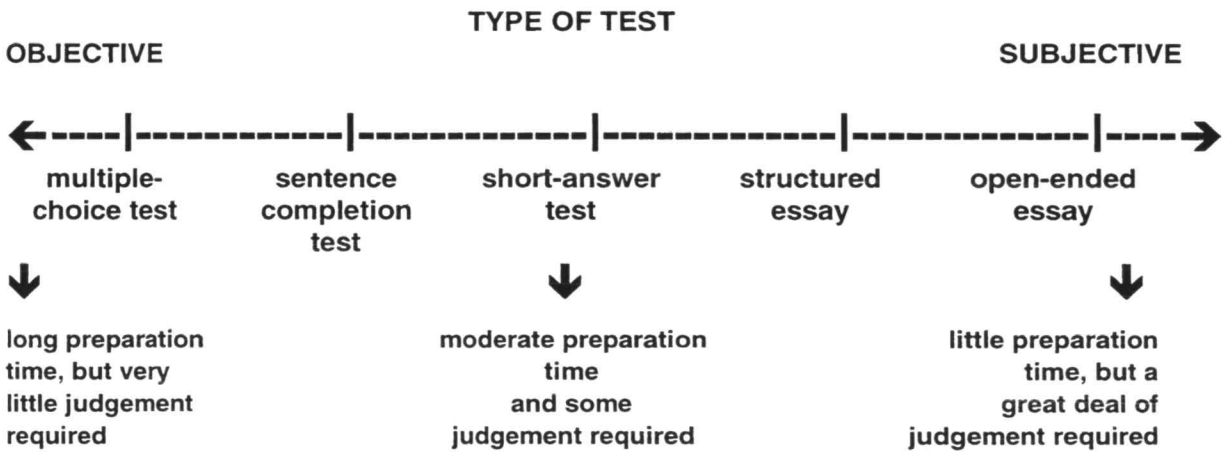
METHODS FOR ASSESSING KNOWLEDGE



Knowledge-based outcomes are often assessed using objective tests because they can be readily adapted to suit particular learning outcomes, assessment criteria and conditions statements. Methods that allow a free response from learners are generally used to assess the higher level cognitive skills such as analysis, synthesis and evaluation.

Across the range of assessment methods in this domain, there is considerable variation in the amount of time needed to construct and review the instruments. This wide variation also extends to the amount of professional judgement required in evaluating the responses that learners provide.

This continuum of assessor input into development and decision-making is outlined in the following figure.



(Adapted from Thomson, 1986, pp. 52 - 53.)

In simple terms, essays are easy to develop, but require a considerable commitment of time and effort to mark. Multiple-choice items, on the other hand, are much more time-consuming and complex to construct, but are extremely easy to mark. The former requires a carefully considered and structured marking schedule to be prepared and guidelines about how final decisions will be made. The latter needs only a decision about the cut-off point for satisfactory performance.

In preparing assessment instruments for understanding and underpinning knowledge, these issues of time and judgement are highly influential factors in any decision about what method to employ.

Focus: A key to the following sections

The following pages contain guidelines for constructing the various methods appropriate for the assessment of knowledge. The various methods are grouped below according to the amount of autonomy learners have in the way they answer questions.

The objective items require learners to either *select* an answer from a series of possible answers, or to *provide* a brief answer which they generate themselves. In contrast, the free response items allow learners much more freedom in the way they present their answers.

Objective Items	***Learner Selects Answer***	
	K1	Alternate response items
	K2	Matching items
	K3	Multiple-choice items
	Learner Supplies Answer	
	K4	Short answer/Completion items
Free Response Items	K5	Essay items
	K6	Oral and Aural Items

For each assessment method there is:

- a brief description;
- an outline of what it is best used for;
- a series of examples;
- a listing of its strengths;
- an outline of its negative aspects;
- a set of construction hints, and
- issues relating to marking and making the assessment decision.

At the end of the section, there is also an opportunity for you to try your hand at finding the faults in some not too well written examples. Information on assembling and formatting assessment material and further reading is also included.

K1 Alternate-response items

Description:

Alternate-response test items are those that require the learner to read a statement and ***select the correct answer*** from two possible responses. True/false and yes/no items are the most common form of the alternate-response method of assessment.

Best used for:

Alternate-response questions are best used for assessing learning outcomes which require the learner to recall information. However, as shown in the following examples, various aspects of knowledge can be assessed using alternate-response assessment items. With thoughtful construction it is possible to extend such items so that they assess a variety of higher level cognitive skills.

Examples:

T	F	*The arithmetic mean is a measure of central tendency*	→ **Factual knowledge/Recall**
T	F	*Kinetic energy is found in a wound spring.*	→ **Understanding**
T	F	*If heat is supplied at a constant rate to vaporize a substance, the temperature of the substance will also increase at a constant rate*	→ **Application**
T	F	*Where area = 20sq.m, length = 4.8m then width = 4.2m*	→ **Problem-solving**

The goal of a well constructed set of alternate-response items is to present the learner with choices which include correct statements together with incorrect statements which are apparently reasonable to those who do not have a complete grasp of the knowledge being assessed.

Strengths of alternate-response items:

- ☑ A large number of questions covering a broad sample of material can be asked and answered in a short period of time.
- ☑ The statements are relatively easy to write.
- ☑ Alternate-response items can be adapted to cover various types and levels of learning.
- ☑ Well constructed alternate-response questions have high content validity and reliability.

Negative aspects of alternate-response items:

- ☒ Without considerable care in construction, alternate-response items may merely assess a learner's ability to recall information.
- ☒ With only two possible responses, the potential for guessing is very high (50% chance of being right).

Construction hints:

Alternate response items

1. Construct only statements which can be determined to be unconditionally true or absolutely false.
2. Develop statements which are short, unambiguous, simply constructed, positively worded and centred on one central theme.
3. A similar number of true statements and false statements are included and each is of similar length.
4. Ensure that there is no predictable pattern in the desired responses.
5. Avoid the use of verbal clues such as *"all"*, *"none"*, *"never"* as they tend to indicate that the statement is false; and *"could"*, *"should"* and *"generally"* as they are most likely to be true.
6. Any statements drawn from class notes or texts, are reworded to avoid assessing memory rather than understanding.
7. False statements are written in such a way that they appear quite plausible.

Making the assessment decision:

Simple to mark, the major issue to determine with an assessment instrument made up of this type of item is what constitutes the cut-off point between satisfactory and unsatisfactory performance. This needs to be worked out at the time of development and the information provided to learners. Some allowance for human error would seem to be reasonable considering the type and level of knowledge that alternate response assessment items are generally used for.

Further reading

For further guidance on how to construct alternate-response assessment items, read Gronlund (1982) ***Constructing Achievement Tests***, pp. 54-56 or Theobald (1983) ***Classroom Testing: Principles and Practice***, pp. 10-12. Both good and bad examples of construction are provided.

K2 Matching items

Description:

Commonly matching items consist of two lists, a list of premises and a list of responses. Learners are required to match the premises in List 1 with the correct response from List 2.

Directions are provided which indicate the basis on which the matching is to be made and how this matching is to be recorded.

Best used for:

Assessing cognitive ability related to recall and understanding. Matching items can be developed to assess discrimination and understanding of relationships. For example, terms and their definitions, rules and examples, symbols and concepts, principles and illustrations, parts and their functions.

Example:

Directions: Column A lists features and Column B lists planets. Match the features with the planets by placing the appropriate letter in the space to the left of the number in Column A.

A planet name may be used more than once.

	COLUMN A		COLUMN B
1	closest to the sun	a	Earth
2	farthest from the sun	b	Jupiter
3	largest planet	c	Mars
4	many moons	d	Mercury
5	smallest planet	e	Neptune
		f	Pluto
		g	Saturn
		h	Uranus
		i	Venus

An extended version of matching requires the learner to match three or more lists.

Strengths of matching items:

- ☑ Reasonably easy to construct
- ☑ Efficient in respect of the time required to construct and mark
- ☑ Broad sampling of module material is possible

Negative aspects of matching items:

- ☒ It can be difficult to develop matching items which assess anything other than recall
- ☒ It is not always possible to find sufficient associated material or a constant common theme in a module which will substantially assess the learning outcomes.
- ☒ Although they appear simple, matched items are prone to minor defects in construction and require thorough checking.

Construction hints:

Matching items

1. Check that ***all*** options offered are plausible responses to ***all*** premises in a list.
2. To lessen the influence of learners guessing, make the list of options longer than the list of premises.
3. To avoid the potential for learners misreading or making clerical mistakes, keep the list of premises reasonably short.
4. Ensure all the items in both lists relate to a common theme.
5. In the directions, clearly explain the basis for matching and whether options can be used once or more than once.
6. Check that the listings are free from grammatical clues that learners can use to identify correct or incorrect matches.
7. Arrange premises and responses in a logical sequence - either alphabetically or numerically.

Making the assessment decision

Simple to mark, the major issue to determine with an assessment instrument made up of this type of item is what constitutes the cut-off point between satisfactory and unsatisfactory performance. This needs to be worked out at the time of development and the information provided to learners. Some allowance for human error would seem to be reasonable considering the type and level of knowledge that matching assessment items are generally used for.

Further reading

For further information on how to develop matching assessment items, read Theobald (1983) ***Classroom Testing: Principles and Practice***, pp. 17-19 or Denova (1979) ***Test Construction for Training Evaluation,*** Chapter 7. Again, both authors provide good and bad examples of construction and guidance on how to ensure quality assessment outcomes using this particular method.

K3 Multiple choice items

Description:

A multiple choice-item consists of the ***stem*** which states the problem and a list of suggested answers known as ***responses*** or ***options.*** The incorrect responses are called ***distracters*** and the correct answer is the ***key***.

These components of a multiple-choice assessment item are identified in the following example:

The colours used to represent the three phases of a 3 phase supply are:

(a)	red-yellow-blue	← ***distracter***	↑
(b)	red-black-green	← ***distracter***	***stem***
(c)	blue-brown-green/yellow	← ***distracter***	
(d)	red-white-blue	← ***key***	

↑
responses/options

In its simplest form, the learner is required to select the right answer from a list which includes the ***key*** (the correct response) and generally three or four other responses that are incorrect, but seemingly plausible or sensible to the learner who has insufficient knowledge to be able to discriminate.

An alternative form of multiple-choice requires the learner to select the ***best*** option from a series of responses which are correct.

Multiple-choice items can be either:

- present ***an incomplete statement,*** as in the example above, or
- ask ***a direct question.***

In addition, stimulus material such as text, pictures, plans, tables, graphs, technical drawings and the like can be included.

Best used for:

As in the example on the previous page, these items are often used to assess whether learners are able to remember previously learned material. Outlined in the following table are aspects of underpinning or associated knowledge which can be effectively assessed using a multiple-choice technique.

Knowledge of classification and categories:	*What are the main types of.....?* *What are the major classifications of.....?* *What are the characteristics of.....?* *Which of the following is an example of.....?*
Knowledge of methodology:	*What method is used for.....?* *Which of the following would be essential in making.....?* *What would be the minimum equipment for.....?*
Knowledge of principles and generalizations:	*Which statement best expresses the principle of.....?* *Which one of the following illustrates the principle of.....?*
Knowledge of theories and structures:	*Which statement is most consistent with the theory of.....?* *Which one of the following best describes the structure and organization of.....?* *What evidence best supports the theory of.....?*

(Gronlund, N. E.,1982, pp. 39 - 40)

Thus, multiple-choice items need not be limited simply to testing recall of facts and figures. Masters and McCurry (1990) suggest well written multiple choice questions can:

...assess 'higher-order' skills such as selecting an appropriate principle or procedures and applying it to a problem, using an understanding of several principles to develop an appropriate solution to a problem, and evaluating evidence and making judgements about the appropriateness or value of data (p.44).

However, as the complexity of the knowledge and understanding being assessed increases, the more difficult good multiple-choice items are to construct and the more time they take to develop.

Examples:

Incomplete statement:

One advantage of multiple-choice items over essay questions is that they:

A provide for the measurement of more complex learning outcomes.

B place greater emphasis on the recall of factual information.

C require less time for test preparation and scoring.

D* provide for more extensive sampling of course content.

Direct question:

Why should negative terms be avoided in the stem of a multiple-choice item?

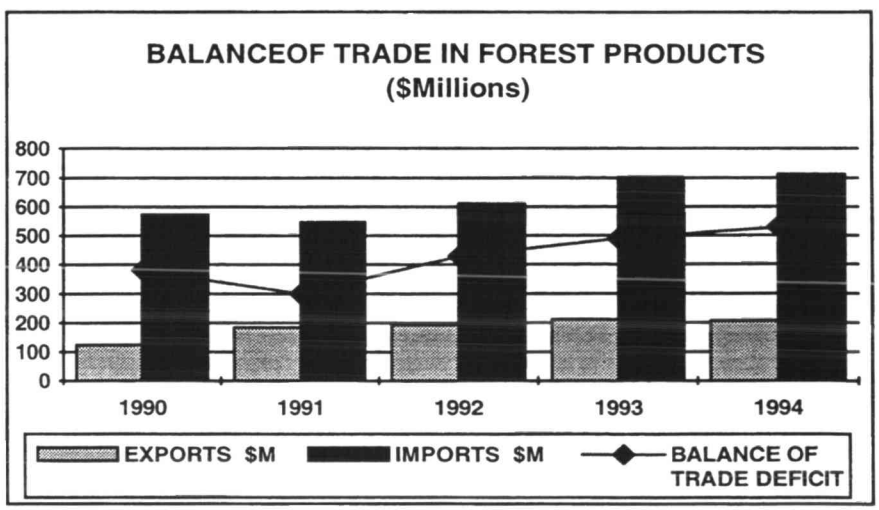
A* They may be overlooked.

B They tend to increase the length of the stem.

C They make the construction of alternatives more difficult.

D They may increase the difficulty of the scoring.

Using stimulus material:



In which year would the government have been least concerned about the level of imported timber products?

A	1990
B*	1991
C	1992
D	1993
E	1994

Strengths of multiple-choice items:

☑ Multiple- choice items are easily marked.

☑ As the items are standardised, they are reasonably reliable.

☑ Multiple-choice items can be used to assess key knowledge and understanding across a range of module material in a reasonably short timeframe.

☑ The degree of difficulty of the items can be regulated simply by altering the degree of homogeneity in the possible responses.

Negative aspects of multiple-choice items:

☒ Because of the need to develop options or distracters that are plausible, these items can be quite difficult to construct.

☒ The potential for learners to guess cannot be eliminated even with five possible responses (Learners still have 20% chance of guessing the correct or best option).

☒ Test-wise learners can eliminate poor distracters and improve their chances of guessing correctly.

☒ Good items can be time-consuming to construct and other approaches may be more cost-effective and efficient for use with individual learners or smaller groups.

☒ Multiple-choice items place a heavy emphasis upon an ability to read and comprehend, therefore they may not be appropriate for learners with non-English speaking backgrounds or those with low levels of literacy.

☒ Multiple-choice items that are simple to construct tend to assess only recall of facts and figures, whilst those that may be useful in assessing higher-order cognitive skills are usually more difficult and time-consuming to put together.

Note that in the construction hints which follow, guidelines are provided for developing the different components of multiple-choice items - the stem, the options or distracters and then general hints on the other issues associated with constructing this type of assessment item.

Construction hints:

Multiple-choice items

For the stem:

1 Ensure that the stem is a simple, clear statement that makes sense by itself and is free from extraneous information.

2 State the stem in the positive wherever possible. If negative wording is used ensure that it is ***underlined*** to avoid learners misreading the question.

3 Include as much of the item as possible in the stem without providing clues to the correct or best answer.

For the key and distracters:

4 Ensure that ***all*** distracters and the key make grammatical sense when linked to the stem.

6 Make sure that the distracters appear quite plausible or convincing options for the correct or best response. Clearly unconnected options will stand out.

7 If using an incomplete statement format, construct the items so that the options come at the end of the sentence.

8 Keep the wording of the options as simple as possible. if necessary, include more information in the stem to ensure that the options are a reasonable length.

9 Construct the distracters and the key so that they are approximately the same length. A longer key can be an unintended clue for learners.

Other issues:

10 Check that there is only one correct or obviously best response for each stem.

11 Alter the position of the right response in a set of questions to avoid establishing a consistent pattern of responses.

12 Avoid giving verbal or grammatical clues that will assist learners to determine the correct or best answer.

Making the assessment decision:

Simple to mark, the major issue to determine with an assessment instrument made up of this type of item is what constitutes the cut-off point between satisfactory and unsatisfactory performance. This needs to be worked out at the time of development and the information provided to learners. Some allowance for human error would seem to be reasonable considering the type and level of knowledge that multiple-choice assessment items are generally used for.

Further reading

Good multiple-choice assessment items are not easy to develop so a good deal of the literature on objective test construction contains detailed advice on how to develop them. Useful guidelines and examples are included in Thomson (1986) ***Student Assessment: A Handbook for TAFE Teachers*** (pp. 64-71); Gronlund (1982) ***Constructing Achievement Tests***, 3rd. ed., (pp. 37-54); Theobald (1983) ***Classroom Testing: Principles and Practice*** (pp. 12-17) and Chapter 6 in ***Test Construction for Training Evaluation*** (1979) by Charles C. Denova.

K4 Short answer/completion items

Description:

Short answer items are those that require the learner to *supply* an answer either in the form of a number, a single word, or a few brief sentences. Generally these items are constructed using direct questions or incomplete statements.

Examples:

Short answer variety:

1 One byte is equivalent to how many characters?

_____

2 Name four additives used in grease.

a _____

b _____

c _____

d _____

3 What does 'ergonomics' mean?

_____

_____

_____

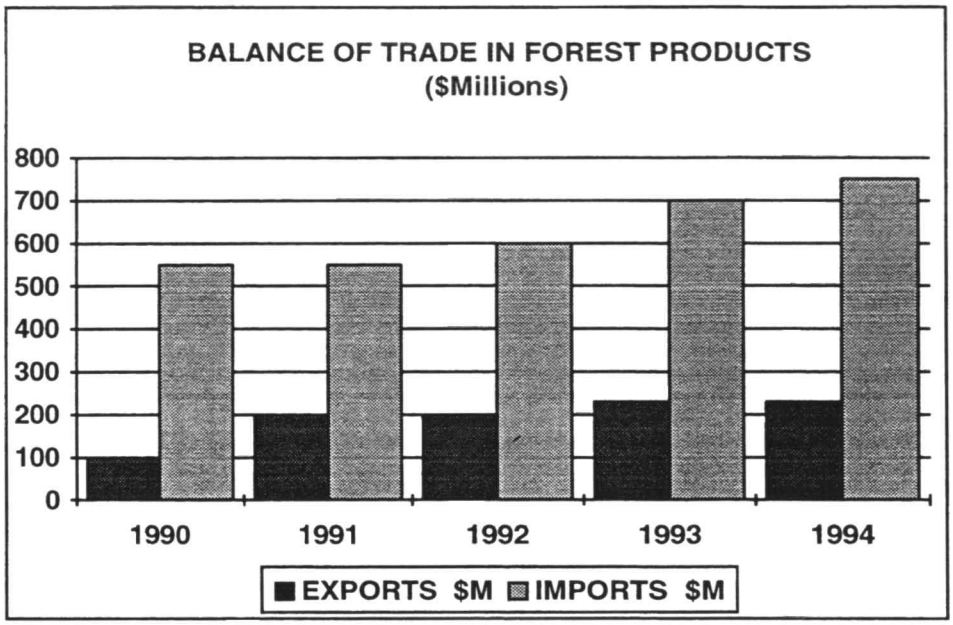
Completion variety:

4 An S.A.E. 15W -50 oil is classified as a _____ grade oil and has a _____ viscosity index.

5 One byte is equivalent to _____ characters?

Completion items can also be developed utilising graphs, diagrams or pictures as stimulus material.

For example:



Read the graph above and answer the following questions:

1 ***In 1993, what was the difference between the amount earned from exports of timber products and the amount spent on imported products?***

_____

2 ***Since 1990, what has been the major trend in the import of timber products?***

_____

Best used for:

Short answer or completion items are most appropriately used when recall is an important part of a learning outcome. Both can be employed to assess knowledge of terminology, facts, principles, methods, procedures, numerical problem-solving and simple interpretation of data.

Strengths of short answer and

- ☑ Both short answer and completion items are extremely easy to develop and take minimal time to construct and mark.
- ☑ As the learner supplies the answer, guessing is eliminated to a large extent.
- ☑ Neither short answer or completion items demand a high degree of language or literacy.
- ☑ Both techniques are easily adapted to oral questions when required or if an alternative assessment strategy is necessary.

Negative aspects of short answer and completion items:

- ☒ Short answer questions tend to emphasise recall and do not allow a learner to show how knowledge can be applied.
- ☒ Both short answer and completion items have minimal application in the assessment of higher-order cognitive skills.
- ☒ It can be quite difficult to construct these types of questions so that they have one and only one correct answer.

Construction hints:

Short answer/ completion items

1. Construct both short answer and completion items so that only one short, definite, correct answer is possible.
2. In completion questions, place the blank(s) at the end of the statement.
3. A direct question is generally better than an incomplete statement.
4. For completion questions, ensure that the omitted word(s) are those that relate to the key knowledge required in the learning outcome.
5. In completion items, check that there is enough of the statement left after taking out the key words for a learner to make sense of it.
6. Where a numerical answer is required, indicate the type of units wanted.

Making the assessment decision

Generally reasonably simple to mark, the major issue to determine with an assessment instrument made up of this type of item is what constitutes the cut-off point between satisfactory and unsatisfactory performance. Further, there may need to be some decision about whether minor variations in responses or incorrect spelling is to influence the final assessment decision.

Both of these need to be worked out at the time of development and the information provided to learners. Some allowance for human error would seem to be reasonable considering the type and level of knowledge that short answer or completion assessment items are generally used for.

Further reading

For further guidance on the development and use of short answer and completion questions read Chapter 8 of Denova (1979) ***Test Construction for Training Evaluation***

K5 Essay items

Description:

Essay questions can be either ***structured*** or ***open-ended.***

1 Structured or Restricted Response Essays

Structured essays are free response items, but the questions are written in a way that structures how answers are to be given by learners.

Answers can be limited by:
- the time allowed for a response;
- the length of the answer;
- the structure required;
- the scope of the topic to be covered, and/or
- the way that the essay question is phrased.

Thus, common structured essay questions ask learners to 'briefly explain .....', 'describe *two* methods of.....', or 'outline in no more than fifty words....' and the assessor has a measure of control over the outcome of the assessment exercise.

Thomson (1986) suggests:

A good structured essay presents a well-defined task that improves the reliability of marking while at the same time allowing the students sufficient freedom to organise and express their thoughts (p.62)

2 Open-Ended or Extended Response Essays

In contrast, open-ended essay items entail learners writing continuous prose on a particular subject virtually free from any restrictions on how they present their material. Commonly, the subject matter is identified and there will be a limit on the maximum number of words to be used.

Best used for:

Essays are an appropriate method for assessing learning outcomes which require learners to demonstrate high-level cognitive processes that cannot be effectively assessed using objective assessment instruments.
Both structured and open-ended essay items can be used to directly assess outcomes which specify that learners:
- analyse relationships;
- explain cause and effect;
- organise ideas or data to support a position;
- analyse strengths and weaknesses;
- integrate information from several sources;
- evaluate ideas or the quality of a product or action;
- generate an original solution or procedure, or
- compare similarities and differences.

Examples:

Structured Essay Items:

> *1 Select <u>one</u> of the following and discuss the environmental problems created:*
>
> *a) draining used oil on the ground*
>
> *b) pouring used oil down the drain*
>
> *Keep your answer down to no more than half a page.*
>
> *2 Describe the requirements that current legislation, codes of practice and standards impose on the health and safety aspects of laboratory operations.*
>
> *3 List and explain the factors you would consider in deciding whether to repair equipment in the field or return it to a workshop.*

Open-ended Essay Items:

> *1 Critically evaluate the impact of anti-discrimination legislation on Australian workplaces.*
>
> *2 What are the essential ingredients for successful mainstreaming of children with special needs?*

The Option of an Open Book Approach

How can learners be encouraged to concentrate upon demonstrating their ability to analyse, synthesise and evaluate in an essay rather than emphasising their ability to recall facts and figures? One method is to utilise the option of an 'open book' assessment event.

Masters and McCurry (1990) suggest:

There is always a risk in written tests and examinations that they will assess only the ability to recall factual knowledge and procedures. One way of reducing the likelihood of this is happening is to allow candidates access to reference books. If test constructors know that candidates will be able to find answers to factual questions in a book, then they are more likely to write questions that go beyond the demonstration of factual knowledge to the assessment of students' understanding of key principles and their ability to use facts and procedures. Such an assessment may focus on the candidate's ability to think in the manner of the profession and to provide information consistent with the intentions of competency-based assessment (p. 47)

Strengths of essay items:

Both open-ended and structured essay items are covered in the following listing. Where there are some marked variations between the two methods these are specified.

- ☑ Both structured and open-ended essay items are simple to produce.
- ☑ Essays are often the only means of assessing understanding and underpinning knowledge at a level required by a learning outcome or module purpose.
- ☑ Both types of essay items offer learners an opportunity to demonstrate the breadth of their knowledge and understanding, and open-ended items especially provide a chance for learners to demonstrate their creativity and their ability to generate, organise and express their thoughts in written form.
- ☑ Both methods can also produce supplemental information about learner attitudes and values.
- ☑ Structured essay items, because of the specification of the type or content of the response, are relatively easily marked.

Negative aspects of essay Items:

Both open-ended and structured essay items are covered in the following listing. As before, where there are some marked variations between the two methods these are specified.

- ☒ Because essay items allow freedom of response, there can be no /ingle correct answer. Assessors, therefore, must make a subjective judgement about the quality of a learner's achievement.
- ☒ Both structured and open-ended essays are dependent upon learners having reasonable language and literacy skills, which some may not have.
- ☒ With essay items of both types, it can be difficult for assessors to separate the quality and accuracy of a learner's response from the learner's ability to express their knowledge and understanding in written form.

☒ With open-ended essays, especially, there is considerable potential for inconsistency in marking.

☒ Open-ended essay items, in particular, require a considerable commitment of time from learners and assessors alike and, therefore, they are less efficient than other methods of assessment. Structured essays are less time-consuming because key elements are clearly specified.

CONSTRUCTION HINTS:

ESSAY ITEMS

1. Use essay items only to assess complex knowledge-based learning outcomes and relate the questions directly to specific outcomes.
2. Phrase essay questions so that they encourage the demonstration of high levels of understanding and an ability to generate, organise and express ideas.
3. Before developing an item, check that all learners have the foundational skills necessary to respond to an essay-type question.
4. Ensure that the question is written in a level of language appropriate to a learner or group of learners.
5. Write the question in a way that clearly and unambiguously defines the task.
6. For structured essay items in particular, ensure the question *directs* learners to the form and content of the desired response.
7. Provide written directions on the form that responses are to take and suggest a limit in either space, words or time as either a guide or 'law'.

Making the assessment decision:

Essay items, because they allow varying degree of freedom of response from learners, are much more difficult to evaluate than other assessment methods.

Assessors, therefore, are required to make subjective judgements about learner performance and the reliability of such judgements are potentially questionable.

To counteract the negative aspects of subjectivity in marking essay items, assessors can develop a set of precise guidelines on how these pieces of evidence will be assessed.

In the case of structured or restricted response items, the best mechanism for ensuring consistency in marking and the making of judgements is to develop a *model answer*.

This exemplar should contain *all of the key aspects* expected in a 'perfect' response to the particular question posed. Learners will rarely be able to achieve this level of 'perfection', so the next step is to decide on the weighting for each of the key aspects and how many of them must be covered for a learner's answer to be considered 'satisfactory'.

With open-ended essays, it is virtually impossible to determine a perfect response. Therefore, judgements are best based on an evaluation of responses against criteria such as:

- content coverage and accuracy;
- organization of ideas, coherence and structure;
- evidence of application, analysis, synthesis or evaluation;
- originality, insight or creativity, and
- where directly specified by learning outcome(s), correct spelling, grammar, punctuation, style, citation of references and appropriate choice of language.

Again, weightings will need to be determined for each of these components and a decision made about what will be accepted as the minimum required for an essay to deemed 'satisfactory'.

Regardless of the method employed to assess essay items, it is vitally important that learners are provided with details about the criteria against which their responses will be evaluated. This may be included as part of the instructions for the question.

Further reading

Useful guidelines on the development and marking of structured and open-ended essay items are included in Thomson (1986) ***Student Assessment: A Handbook for TAFE Teachers*** (pp. 59-63); Gronlund (1982) ***Constructing Achievement Tests***, 3rd. ed., (Chapter 5); Theobald (1983) ***Classroom Testing: Principles and Practice*** (pp. 22-27) and Chapter 3 in ***Test Construction for Training Evaluation*** (1979) by Charles C. Denova.

K6 Oral and aural items

Description:

Oral assessment methods include questioning using informal or formal interview techniques and presentations.
Aural assessment methods focus on listening skills.

Best used for:

Oral Questioning:

Demonstration of skills, allows teachers and trainers to gather evidence relating to process and product, but often for sufficiency and reliability reasons, it is necessary to check aspects of learning that are not directly observable during performance of tasks. This can be done by orally questioning the learner. Through informal questioning assessors can determine the level of learner understanding and generate ***additional evidence*** to support that gathered elsewhere. The same goal can be achieved using a more formalised interview.

Oral Presentation:

Presentations are a particularly useful tool for assessing learning outcomes which require learners to verbally communicate ideas and information either to an individual or a group.

Aural Questioning:

Aural assessment techniques are best used for learning outcomes which require learners to demonstrate their ability to listen and extract pertinent information from what is heard.

Examples:

Oral questioning:

Simple Form:	***"Why did you do that?"***
Clarification of process	***"What if.....happened? What would you do then?***

Extended Form: **Verification of knowledge and understanding**	***Identify a piece of workshop equipment and briefly explain what maintenance it requires.***

Extended Form: **Collection of additional supporting evidence of practical performance, attitudes and values and understanding**	***Debriefing interview after a period on field placement in a Child Care Centre: Discussion of issues, views on aspects of the learning experience and learner assessment of outcomes***

Oral Presentation:

Assessment of underpinning knowledge and ability to organise and express ideas	***Discuss the application of the tort of negligence in the context of work related accidents***

Aural Questioning:

Assessment of listening and interpretation or comprehension	***The following statement was made by the Prime Minister on last night's news. After listening to what he said, write down in own words the three major points that he covered.***

Strengths of oral and aural methods:

Questioning:

- ☑ The methods permit the assessor to determine how well learners can synthesise and organise their ideas and express themselves.
- ☑ Learners are required to give the correct response or an appropriate response rather than guess (which can happen using written methods of questioning).
- ☑ Interviews provide an opportunity for learners clarify a question that could have been misinterpreted because of ambiguous wording.
- ☑ Presentations and extended form oral questions give learners with a chance to respond freely and demonstrate the scope and depth of their knowledge
- ☑ Both interviews and presentations may be useful as an alternative assessment strategy with learners who have difficulty presenting their knowledge and understanding in written form.

☑ Questioning and oral presentations can elicit evidence relating to learner attitudes, values and opinions.

☑ Oral questioning carried out in combination with practical exercises gives learners the opportunity to display the level of understanding they have about the tasks they are performing.

Aural:

☑ An aural assessment event is the only way to validly assess learning outcomes which require learners to ***actively*** listen.

Negative aspects of oral and aural methods:

Questioning:

☒ Questioning and presentations are costly and time consuming as only one learner can be assessed at the one time.

☒ Generally both methods have a narrow focus which does not allow broad coverage of learning outcomes

☒ Without careful structuring and assessor 'discipline', reliability can be a major problem. In the case of oral questioning, much depends upon the interviewing skills of the assessor and the uniformity of the questions posed to each learner.

☒ Presentations and questioning can be unfamiliar territory for learners who are more used to written assessment. Therefore, they may be poorly prepared, lacking in confidence and find the process stressful.

☒ Recording responses is considerably more difficult than other assessment methods and, as with open-ended essay, ensuring reliability in the marking of responses can be a problem.

☒ Both questioning and oral presentations can disadvantage those learners who may have the knowledge, but not the level of language to express it in the most acceptable way.

Aural:

☒ Effective aural assessment events require quality reproduction and can be time consuming to prepare.

☒ Because of the nature of the activity, there may be a need to repeat and replay the material to ensure that all learners are able to listen and complete the set tasks.

Construction hints:

Oral assessment methods

Oral Questioning:

1 Provide learners with information about what is to be assessed well in advance of the event.

2 Ensure the wording of questions clear and concise and that each questions deals with only one central point.

3 Check that the level of language is pitched at the appropriate level for ***all*** learners.

4 In the short form variety, phrase questions in a way that directs the learner to the desired response. Use **open** questions - "*Tell me why you did that?*", **direct** questions that require the learner to provide a factual response or **probing** questions which ask learners to compare or explain- "*Which would work better? That one or the other one? Why?*".

5 Check that questions unambiguous and avoid asking leading questions or those that have questions within questions.

6 Give learners an opportunity to think about the question and to formulate their response.

Presentations:

1 As with interviews, provide learners with information about what is to be assessed well in advance of the event.

2 Ensure the subject matter for the presentation are precise and clear.

3 Determine standards of performance prior to the assessment event and establish weightings for the various elements to be covered by the learner

4 Develop a check list of the criteria against which learners are being assessed.

Construction hints:

Aural assessment methods

Aural Questioning:

1. Prepare well in advance and provide learners with clear details of the criteria and procedure for assessment.
2. Ensure that the material being presented is of the best quality possible and that the setting for the assessment event is appropriate for that purpose.
3. Allow sufficient time during assessment for the material to be repeated where necessary.

Making the assessment decision:

With interviews, presentations and aural assessment, it is important that the learning outcomes are clarified and the assessment criteria are fully developed prior to the assessment event and are given to learners so that they have some idea of what is expected of them.

These criteria can then form the checklist of key outcomes to be used during the actual assessment. In addition, a rating scale of some description may be added.

The checklist and rating scale one the following page is one example of the approach that can be taken. Additional feedback can be provided in the form of summary comments.

Any assessment decision needs to be made on the basis of the crucial criteria developed and circulated before the assessment event. Learners will then be aware of what is required to successfully complete the assessment.

There is a potential problem associated making assessment decisions on the basis of oral questioning, presentations and aural assessment events however. If a learner chooses to appeal against an assessment result there is generally no record of a learner's response. Therefore, it is important that the learner receive a copy of the checklist and the comments from the assessor.

Oral Presentation	*Critically discuss the types of outreach services for youth*
Presentation length:	*5 to 8 minutes*
Criteria for assessment:	• *content* • *organisation* • *language* • *delivery*

KEY ELEMENTS:	Yes	Part	No	Cant Say
Content:				
1 Was the speaker prepared? ❶	☐	☐	☐	☐
2 Were concrete examples given? ❶	☐	☐	☐	☐
Organization:				
3 Was the presentation logically sequenced? ❶	☐	☐	☐	☐
4 Were the main points clearly presented? ❶	☐	☐	☐	☐
5 Was the conclusion an effective summary?	☐	☐	☐	☐
Language:				
6 Were ideas presented in a concrete way? ❶	☐	☐	☐	☐
7 Was the language appropriate for audience?	☐	☐	☐	☐
Delivery:				
8 Was the speaker enthusiastic about topic?	☐	☐	☐	☐
9 Was the delivery spontaneous?	☐	☐	☐	☐
10 Was the length about right?	☐	☐	☐	☐

❶ indicates elements that require a positive response for a 'pass' in the event

Focus: Putting together written tests

When using any of the written assessment items, it is important that they set out in a way that makes them easy to read and easy to answer. Hopefully, then, they may be handed back in a form that will be easy to correct.

When assembling items, ensure that you address the following assembly rules. These reasonably simple tasks will help to ensure that you get the best possible outcome from your assessment instruments and the best possible outcomes from your learners.

Assembly hints

1. Arrange the questions sequentially from the easiest to the most difficult;
2. Group the questions so that all multiple-choice questions are together, all completion questions are together and so forth. This saves you constantly having to repeat different directions for answering the questions and allows learners to get into a comfortable and familiar pattern of responding;
3. Keep each individual question with its accompanying options or space for an answer together on the one page;
4. Allow plenty of space between each question;
5. Review the directions for answering all questions so that the potential for misreading or ambiguity is eliminated, and
6. Thoroughly proof read all questions and instructions.

Focus exercise: Written methods of assessment

The following page contains a test using alternate-response, matching, multiple-choice, short answer/completion and essay items. Most of the items have some serious flaws in the way they are constructed. In fact, the whole assessment instrument is totally defective. Using the lists of ***Construction Hints*** included with each assessment method section, together with the list of ***Assembly Hints***, identify the structural weaknesses of the items and any layout or other associated problems with the test.

Check in the ***Appendices*** for a listing of the defects (pages 197 and 198).

Focus exercise:

Instructions: Make a simple list of all the defects that you can identify in the following mock test.

Note: You do *not* have to put in your own answers or rewrite those that clearly need it.

TEST

Answer Questions 1 and 2, and then three of the others. Where possible, write the answers on the test itself

1) **Write an essay about the purposes of assessment.**

2) **What are the principals of assessment and how are they useful?**

3) **The cognitive domain focuses on a comprehensive and apparently complete list of mental processes to consider when identifying learning outcomes and provides a standard vocabulary for describing and classfiying learning outcomes. T/F**

4) **The _____ of _____ should be_____and _____ when _____assessment_____.**

5) **To assess a learner's ability to use higher order mental processes of logical reasoning, critical thinking, etc., the method of assessment used should be an (a) essay test (b) objective test (c) multiple-choice tests (d) problem test**

6) **Alternate response items are almost always used to assess recall T/F**

7) **Matching:**

a) formative assessments	i) not usually easy to achieve
b) validity	ii) valuable for assessing knowledge.
c) multiple-choice items	iii) identifies specific strengths and weaknesses in learning and provides feedback to teachers and learners.
d) open-ended essay items	iv) generally easy to construct.
e) summative assessment	v) most important principle of good assessment practise.
f) reliability	vi) Tertiary Entrance Scores

3.4 Assessing attitudes and values

"How can attitudes and values be assessed when they are not directly observable?" This must be one of the most common questions asked by teachers and trainers. Many assessors also appear to have little confidence in the decisions that they make about the quality of learners attitudes and values because they think that they will be seen as highly subjective and value-laden judgements.

This assessment dilemma can be even further confused when some competency standards and training curricula do not include outcomes which explicitly cover attitudes such as:

- empathy with clients or patients;
- sensitivity to the needs of others;
- acceptance of and respect for alternative viewpoints;
- confidentiality in dealing with customers and clients;
- accepting responsibility for one's own actions;
- awareness of cultural diversity;
- acting ethically in a given situation.

In a teaching and learning situation they may often be discussed, but their assessment is often neglected because it appears too difficult and open to challenge.

Nor do all competency standards or curriculum documents clearly define criteria for assessing attributes like learner independence, adaptability, flexibility, cooperation and reliability. But at the same time, teachers, trainers, employers and the wider community openly acknowledge that these are valued and vital components of vocational education and training and the world of work.

How, then, can this problem of assessing values and attitudes be addressed?

Focus: Attitudes and values as behaviour

It is true that attitudes and values cannot be observed as such, however, it is possible to draw inferences from the behaviour of learners and to make judgements about the achievement of learners on the basis of these inferences. In other words, the ***behaviour*** of learners during all types of learning and assessment activities ***reflects their attitudes and values*** and that behaviour is ***directly observable.***

For example, where a learning outcome requires that learners actively participate as a member of a team, the expected behaviours would be demonstrated in the form of sharing of information, listening to others, contributing ideas to the group, following instructions, respecting and considering the

viewpoints of others and accepting and responding to group decisions. All of these can be directly observed, noted on checklist, rated against a scale entered on participation charts during group exercises, role plays and in real or simulated work situations. In a less formal way, observation of learner behaviour can be recorded anecdotally.

Thus, direct evidence of learner behaviour can be collected and from this a judgement can be made about attitudes and values.

Focus: Agreement and openness

Concerns about the negative aspects of ***subjectivity*** in assessment will largely be allayed if teachers, trainers and learners are clear about what it is that they are assessing and even clearer about the criteria against which learner performance will be judged.

As with skills and knowledge, learning outcomes and assessment criteria must be analysed to establish the intent of learning. Through open debate and discussion, teachers and trainers will be able to come to an agreement on what form the desired behaviour will take, the type of evidence needed to support a decision and the standards of performance that will be required to successfully achieve the outcomes. Once confirmed, this information then needs to be disseminated to learners and the issues and processes openly discussed and clarified. Where there is uncertainty about what behaviour can be reasonably expected in the workplace, this needs to be clarified through wider industry and community consultation. Whilst this is more appropriately a curriculum development issue, teachers and trainers need confirmation about these issues so that they will have confidence in the judgements they make.

Again, when it is time for the final assessment decisions to be made, assessors need to come together to check that all agreed criteria have been applied consistently by all assessors. For those who are working on their own, this may mean accessing industry representatives or assessors from other organisations to evaluate the quality of their judgements.

Focus: Taking an integrated approach

Andrew Gonczi (1994), rightly suggests that the only appropriate approach to assessing attitudes and values is to do it in an integrated way. In other words, attitudes need to be assessed at the same time that learners are being assessed performing work related tasks.

> *Experience has shown that where attitudes such as 'empathising with a patient' are important, they can be*

included in the performance criteria for appropriate elements. In fact it is less difficult to assess 'empathising with the patient' in realistic professional contexts where it is an important part of the performance of the element, than it is to assess 'empathy' in isolation.

Training Agenda, p. 11

Where real work is not accessible, assessment of attitudes should be taking place at the same time that integrated assessment events are covering performance of skills and application of knowledge in simulated work settings.

Focus: Methods for assessing attitudes and values

The knowledge and understanding-based components of attitudes and values can be assessed using methods which allow learners some freedom to formulate their own responses. Therefore, oral questioning, structured and open-ended essays are the most useful methods to employ for this purpose.

For learning outcomes which require learners to demonstrate behaviours that reflect their attitudes and values, assessment can be done through observation of practical exercises, simulated activities, work-based projects and actual work. Communication and interpersonal skills can be effectively assessed using carefully selected scenarios and role plays.

Focus: Assessing attitudes and values over time

As already discussed in previous sections, it is totally inappropriate to make a judgement about learner competence or achievement of learning outcomes on the basis of one assessment event. With the assessment of attitudes and values, it is probably not even appropriate to make such a judgement after several assessment events. Attitudes and values that are desirable attributes in the workplace, may in fact be gradually acquired by learners as they develop their skills, knowledge and understanding of the vocational area for which they are training.

This concept forms the basis for the following example.

Module Title:	***Animal Ethics and Welfare***
Learning outcome 1	***Clarify his/her personal values and ethics concerning animals and analyse how these values impinge on his/her actions at work.***
Assessment criteria	1 Discuss the various ways in which humans interact with animals. 2 Discuss the concepts of ethics, morals and values and their influence on decision-making. 3 Clarify and express his/her values concerning the way humans interact with animals. 4 Present the arguments both for and against a particular action in response to an ethical dilemma. 5 Discuss how public opinion about animal use is formed and influenced. 6 Assess the well-being of an animal and take action where appropriate.
Conditions	The learner will require access to relevant texts and readings. Participation in discussion groups is considered essential for exploring issues and expressing opinions.
Assessment method	This learning outcome is assessed separately from other learning outcomes. Formative assessment methods will involve teacher feedback to the learner during simulations, role plays, case studies and media analysis activities. Summative assessment will include an assignment where the learner outlines their personal code of ethics. This would not be expected until near the end of the course.

National Science Laboratory Technician Project

The approach taken in this assessment of attitudes and values can clearly be applied elsewhere. It has application in human service areas such as Child Care, Aged Care, Youth Work, Welfare as well as those areas where ethics are a vital component of an occupation.

Summative assessment of attitudes and values can be left either to the later stages of training programs, whilst supporting evidence is collected through numerous formative assessment events over a the life of a course. This latter approach, provides the opportunity for learners to receive feedback on the appropriateness of their behaviour, and the chance to make adjustments where deemed appropriate. Hopefully, then, learners will understand and value their ability to be flexible, adaptable, sensitive, independent, responsible and responsive workers.

3.5 Involving learners in the process

With vocational education and training occurring in a variety settings with a range of people, much more emphasis is now being placed on the amount of involvement a learner has in various aspects of the learning process. Many of our learners are adults, who are not only prepared to accept responsibility for their own learning, but are willing and able to extend that responsibility into the area of assessment.

But what are the advantages of learners becoming assessors?

Focus: The value of learner autonomy in assessment

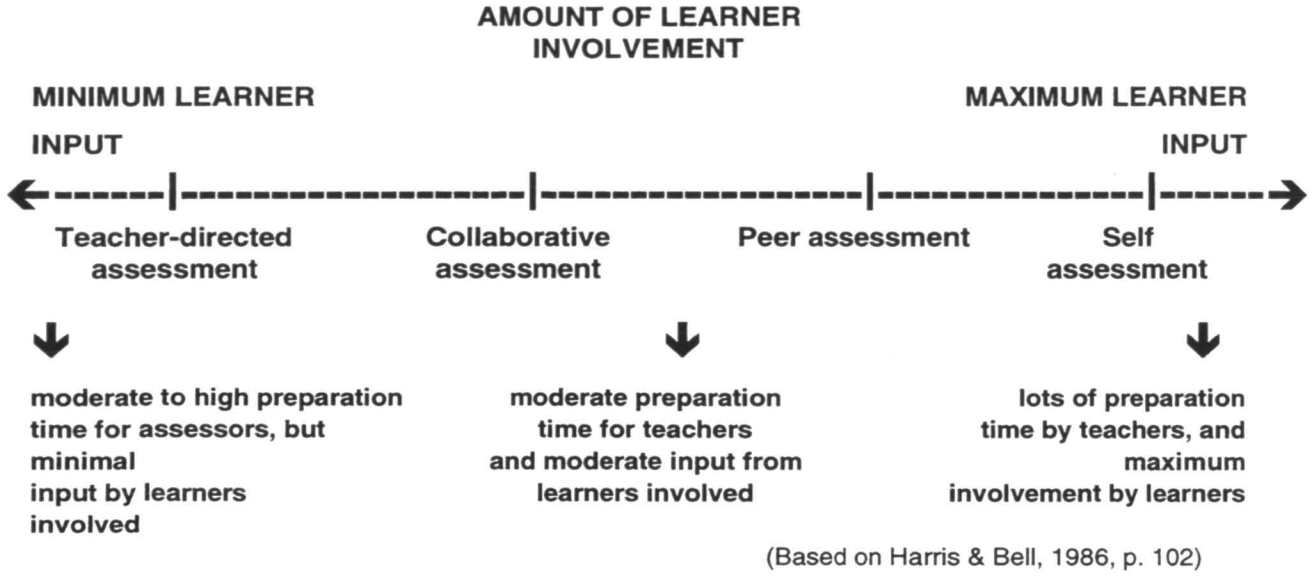
Extending learner autonomy in assessment will:

- engender an increased sense of ownership and responsibility for their own learning;
- enhance their understanding of, and generate a sense of confidence in, the fidelity of the assessment process.
- generate feedback which is first hand, instantaneous, meaningful and a powerful tool for informing further learning;
- encourage a commitment to quality, and most importantly,
- establish a pattern of critical reflection on personal performance, which can be carried on to further learning, the world of work and beyond.

The benefit for teachers and trainers is that learner autonomy will spread the assessment load so that additional time can be dedicated to teaching.

Focus: The extent of learner involvement

The extent of learner involvement can be moderate or considerable. The range extends from ***collaborative assessment,*** through to ***peer assessment*** and ***self-assessment.*** This continuum is outlined in the following diagram.



(Based on Harris & Bell, 1986, p. 102)

Collaborative assessment

Collaborative assessment involves individual learners or small groups of learners in negotiation with a teacher or trainer to establish the subject matter and the method for a particular assessment event. Through discussion, the assessment criteria against which learner performance will be assessed are clarified and confirmed. Assessment is still carried out by the teacher or trainer.

Collaborative assessment is most appropriate for the assessment of groups of learning outcomes which pull together skills, knowledge and attitudes in an integrated manner close to the end of a course or training program. It can be employed for either formative or summative assessment. A work-based project designed by an individual learner and utilising a learning contract negotiated by learner and teacher or workplace supervisor is a good example of this approach to assessment An example is included on page 36.

Peer assessment:

Peer assessment is also based on discussion and negotiation, but this time it involves individual or small groups of learners assessing each other. The assessment task and the criteria are confirmed by the teacher or trainer and the learners are provided with a checklist to guide their decision-making. In group-assessed tasks, peer assessment is a valuable mechanism for authenticating the input of individuals within the group.

Peer assessment, generally, is only used for formative assessment and is a valuable way of encouraging responsibility and ownership amongst learners. Many practical exercises, simulations, projects and role plays can be formatively assessed in this way, and the evidence gathered can, if deemed

necessary, support first-order or supplementary evidence drawn from other sources.

Self-assessment:

In some forms of self-assessment, learners can be given total autonomy. They can be responsible for determining the aims of their learning, the subject matter for the assessment, the method which will be used and the criteria they will apply to their own performance.

More commonly, however, learners are able to determine the way they will address the learning outcome(s), the design of the assessment task and the method that will be utilised to assess their performance. The criteria and conditions for assessment, however, remain firmly in place and reflect those that are prescribed in the curriculum document and the information to learners. The only difference between this approach and collaborative assessment, is that learners take on the responsibility of assessing themselves.

Focus: Preparing learners for the role of assessor

In designing collaborative, peer or self-assessment events, it is vital that learners are well prepared and fully informed of their role in the process. It cannot be assumed that they will take on the role of assessor as if it were a natural activity. Even peer assessment, if it is to be meaningful to learners, demands a commitment of time for preparation and practice.

Learners will need clear guidelines on what is expected of them and these should be developed in consultation with them. They will also require time to practise their observation skills and the process of matching the performance that they are observing to the stated assessment criteria on a checklist. They will need to start with relatively simple assessment events which involve practical exercises that generate a product, then they can move on to the more complex area of assessing process. Teacher or trainer support is essential, even if it is just to confirm that the new assessors are on the right track.

Focus: Making the assessment decision

Collaborative, peer and the structured version of self-assessment are useful tools for formative assessment and as there is no requirement for an assessment decision, they are approaches which have value for learners, teachers and trainers alike.

Credibility and acceptance, however, will always be issues if learners are involved in the assessment of their own learning. The obvious benefits that assessors may see in allowing

learners a degree of autonomy in assessment, may not be seen by those outside the workshop or training room as being appropriate. This is especially true when learners may be making judgements about summative assessment events. If the end-users of the assessment results have concerns about the procedures and the possible quality of performance of learners, perhaps this is not a route that should be taken.

This does not mean, however, that collaborative, peer and self-assessment cannot be utilised for summative assessment. As long as the evidence derived from these processes is supported by sufficient additional evidence drawn from other sources then the outcomes cannot be brought into question.

Further reading

For further information on collaborative, peer and self-assessment, read David Boud's 1989 article entitled "Can student assessments be used for formal assessment purposes", ***Research and Development in Higher Education,*** 11, 120 - 126; Harris & Bell (1986) ***Evaluating and Assessing for Learning*** or Kearney (1992) ***Collaborative Assessment Techniques***.

Part 4: Focussing on issues in assessment

This section addresses some of the issues related to competency-based training that are still being debated.

Questions that are commonly asked by teachers and trainers involved in assessment form the basis for discussion of each of these issues. The questions are:

4.1	**What is the role of professional judgement in competency-based assessment?**
4.2	**What constitutes a 'pass' in an assessment event?**
4.3	**How can reassessment be managed efficiently and effectively?**
4.4	**How can excellence be acknowledged in competency- assessment?**
4.5	**Can learning outcomes from several modules be assessed together?**
4.6	**How can learners be given sufficient time and diversity of experience to develop their skills prior to assessment?**

4.1 What is the role of professional judgement in competency-based assessment?

Despite the fact that learning outcomes and assessment criteria are clearly defined in competency-based curricula, it is not possible to make decisions about the quality of learner performance with total certainty.

Assessment involves taking a sample from the potential pool of evidence and drawing inferences about whether the learner has achieved the stated learning outcomes or not. Assessment decisions, therefore, involve an evaluation of a sampling of the evidence blended with a degree of subjective judgement. Such judgements are based on an assessor's expertise and grasp of the required standards of learner performance developed from experience over a period of time. This often unstated knowledge forms the foundation of professional judgement.

Rumsey (1994) suggests, among other things, that the critical criteria for assessors are:

- being highly skilled in the aspects of competence they wish to assess [and]
- having acknowledged competency in assessment and relevant technical areas (p.22).

Professional judgement, therefore, is a blend of current industrial expertise a knowledge of the industry standards required and skills in the technical areas of assessment.

Concerns about the subjective nature of professional judgement generally arise when there is a lack of openness in the process of assessment decision-making. To overcome such disquiet, the subjective elements need to be shared openly so that the bases for such judgements can be tested and validated by others concerned about the outcomes of the assessment process. This sharing, informs professional judgement and lessens the potential for negative subjectivity.

Focus: Informing professional judgement

Professional judgement, however, must be ***informed*** and it needs to be constantly built upon if it is to remain a valued and valuable asset. Therefore, it is essential that teachers and trainers maintain the quality and currency of their expertise. To achieve this, all assessors need to work actively to:

- enhance their skills and knowledge in the technical aspects of assessment;
- maintain a close relationship with skilled personnel in their relevant industry area;

- share information about assessment and work through the issues with others involved in assessment;
- consult with others involved in training ;
- evaluate their own assessment methods, procedures and decisions in an ongoing way, and
- ensure that their assessment decisions are verified within their own training environment and validated with those in industry who have specific knowledge of the skills being assessed.

However, successful maintenance of expertise requires organisational support and commitment to the concept. Therefore, the allocation of time for professional development and interaction with other teachers, trainers and industry is a vital component of the process.

Professional judgement is a valuable assessment tool which teachers and trainers should never be reluctant to use. Its important place in assessment is particularly clear in the following discussion on issues in assessment.

4.2 What constitutes a 'pass' in an assessment event or module?

In work-based training, the performance criteria, range statements and evidence guides detailed in the industry or enterprise standards clearly define what constitutes competent performance. Assessment may require the learner to carry out specific tasks in a mix of simulated or real work situations and to respond to questions which are designed to assess the learner's understanding of the knowledge underpinning the tasks being performed. Checked off against a listing of the performance criteria, assessors are then able to determine whether learners are 'competent' or 'not yet competent'.

In an off-job situation, the performance criteria in the standards will have informed the assessment criteria in the curriculum. These will guide the final decision about whether a learner should pass. However, in many instances, there can be no real determination of competence until a learner has had the opportunity to practice and perform in a sustained way in the workplace. (In some cases, for example Accountancy, graduates from off job courses are recognised by industry as already competent).

Focus: Critical skills, knowledge and attitudes

Where the curriculum includes an assessment strategy/package with examples, there should be a set of benchmarks against which learner performance can be judged. But where such benchmarks are not clearly described in the documentation, teachers and trainers will need to develop these themselves.

How are such benchmarks developed and what constitutes a 'pass' in an assessment event or module?

This task necessarily requires a careful examination of the curriculum document to determine what critical skills, knowledge and attitudes are essential to the achievement of the module purpose or the specific learning outcomes being assessed. It is these critical elements which dictate what is meant by a 'pass' or 'satisfactory performance'.

Critical elements are things like safety, key skills and knowledge and perhaps the ability to use and apply fundamental occupational/disciplinary terminology. These crucial elements form the foundation stones for future learning which are clearly essential to a learner proceeding successfully on to further more complex training.

Do all assessment events have to be passed?

Some skills and knowledge will reappear as common threads throughout a training program. Where there are other opportunities for practice, skill enhancement, and building on this base knowledge,...or, where an initial assessment task or group of tasks is subsumed into a later assessment event, it may be appropriate to allow a little leeway in determining satisfactory completion of an earlier event or module. Obviously, for this approach to be effective, teachers and trainers will need to be fully familiar with the whole program that is being delivered and not only that component which they are responsible for delivering and assessing.

Assessment should always be viewed as an integrated process throughout a course/module and not a series of isolated and unrelated events.

Do all learning outcomes need to be achieved?

If the module purpose, learning outcomes and associated assessment criteria clearly reflect what is written in agreed industry standards or confirmed through consultation with industry experts, the module purpose needs to be achieved. However, this does not mean that each learning outcome needs to be assessed on an individual basis. Several learning outcomes can be grouped together in an integrated way to generate the required evidence on which to make a judgement.

The important aspects to consider are that:

- there is sufficient evidence that all 'critical' elements have been achieved;
- that, where a learning outcome is assessed by several summative events, satisfactory achievement is judged overall and does not necessarily require satisfactory achievement in each event;
- there is an appropriate balance between the critical elements and that which can be defined as "nice to know";
- the evidence is drawn from not just one assessment event.

Focus: What about marks and percentages?

Teachers and trainers currently involved in vocational education and training are working in a period of transition between a measurement/marks and evidence-based approach to assessment. Many feel comfortable allocating marks and

percentages to describe learner performance for an assessment event or for determining a module result. For these teachers and trainers, a 'pass' is now no longer 50%, but is more likely to be 80% and sometimes 100%.

Does 100% suggests complete mastery? Insistence upon total mastery of what constitutes basic underpinning knowledge artificially separated from real or simulated workplace tasks, is both inappropriate and lacking in validity. What tolerances should learners be allowed? It is not realistic, practical, cost-effective, or even fair, to demand that learners complete an assessment task free from any error. In a real workplace situation, errors are likely to be identified by supervisors or peers and a learner will be required to note the mistakes, make the appropriate corrections and resubmit for assessment.

Furthermore, what do any of these percentages actually mean for those who want to interpret and use assessment results. Does an 80% standard acknowledge an acceptable allowance of 20% for human error?. In any case, the relationship between the percentages allocated and what the learner can actually do, is not at all clear. Marks and percentages are useful and understandable benchmarks for individual teachers and trainers, but for end-users of the records of learner achievement, they are not good indicators of a learner's actual abilities.

Therefore, if marks and percentages are used, it is vital that at some point these are translated into statements about the learning outcomes which have been successfully achieved. It is this information which can be recognised nationally and has the capacity to be directly related back to endorsed industry standards.

In the planning and preparation guidelines for assessment, there needs to be analysis of learning outcomes and the criteria against which learners are to be assessed including what will be deemed critical and how assessment of outcomes will be integrated. Also there will need to be mutual agreement on such things as the type and number of errors that learners will be allowed in various assessment events. This is where professional judgement becomes the most powerful assessment tool. If necessary, final decisions may be made after verification or validation by appropriate industry experts.

4.3 How can reassessment be managed efficiently and effectively?

The principles of flexibility and fairness support the concept of offering learners the opportunity to repeat an assessment when they are unable to achieve the required standard at the first attempt. In some settings where the numbers of learners seeking reassessment are small and the resource implications are not excessive, it may be possible to offer learners many opportunities to attain the necessary level of performance. However, where many modules are being delivered in a sequenced program, multiple opportunities for reassessment can be particularly difficult. This is largely due to the fact that:

- summative assessment events tend to occur towards the end of modules and there is minimal time in which to reteach and reassess those learners who have not yet been able to provide the evidence necessary to indicate successful achievement of a learning outcome or module purpose, and
- a module may be a prerequisite for entry to another which follows on close behind and a learner is required to achieve the outcomes before moving on into the next module, and
- learners who are undergoing a series of assessment events across a group of modules within a short period of time may elect to treat some of them as a 'trial run' because they know they have several chances to be assessed again.

The constraints of limited time can place pressure on both learners and assessors to the point where reassessment can become an almost unmanageable activity for teachers and trainers and a costly undertaking for a training organisation. Under these circumstances, then, the most sensible approach is to limit the number of attempts a learner may have to successfully complete any assessment requirements.

But what should the limit be? Is a blanket one assessment and one re-sit appropriate? Are there other strategies which can lessen the need for reassessment?

Focus: Determining the number of re-sits

Any decision on how many attempts that a learner should be allowed, should be made after an evaluation of:

- the type and complexity of particular assessment events;
- the time required to reassess and the time available to organise and implement the reassessment event, and
- the cost of resourcing the reassessment process.

Where the event is assessing a practical skill, some determination may need to be made about whether it is a matter of simply allowing sufficient practice time for the skill to

be learned. For example, if a learner is required to key in a number of words in a given time with a minimum of errors, one assessment and one re-sit will generally be inappropriate. In another case, a learner may be required to produce a weld according to the criteria in the curriculum and be offered only one other chance if the first is not to the required standard.

Where underpinning knowledge is being assessed, decisions about reassessment will also be influenced by the type of assessment event being used. Alternative short answer or multiple choice tests may be used when learners 'fail' their first attempts, but where projects and assignments are concerned, it may be totally impractical to suggest that these be repeated to achieve the level of performance required. In this latter case, it is more appropriate to request that learners re-submit the work in a given timeframe after addressing the areas of concern. The idea of re-submitting corrected work is particularly appropriate as it is a realistic reflection of what generally occurs in the workplace.

Will a single general policy on reassessment solve some of the problems that teachers and trainers are facing?

Depending on the type of activity and the time and cost involved, there may need to be different approaches to reassessment for different modules within the one training program simply because the subject matter and the skills and performance requirements to be achieved can be quite different from one module to the next.

Focus: Flexible approaches to reassessment

Other approaches to learners not achieving outcomes at their first attempt may be:

- additional tutorials for reteaching and reassessment, the cost to be borne by the learner;
- a decision that sufficient of the critical elements of the module have been achieved and that any deficits can be made up in future modules;
- presenting the opportunity for reassessment to only those learners who have 'earned' the privilege by submitting all work previously;
- offering learners the opportunity to provide current, authenticated, supplementary evidence drawn from another source, or
- making a decision that a learner does not have the skills and knowledge required to achieve the outcomes and counsel the learner to recommence the module.

Where programs are self-paced and assessment can be achieved through a learner accessing a comparable piece of assessment, the process can be simplified. However, there is still the issue of whether the mere passage of time will help a

learner attain the desired outcomes at the next attempt. It is more likely that there will be a need for some reteaching and practice prior to reassessment. It may also be unrealistic to expect that this reteaching can occur during the module, and therefore, the learner must either access additional contact time to develop the skills to an appropriate standard or start the module of learning again.

Whatever the policy or approach that is adopted, it is essential that learners receive clear information about the processes and procedures for reassessment at the commencement of any module. Further, by using holistic assessment events and preparing learners to evaluate their own readiness, teachers and trainers may be able to reduce the need for reassessment to something that can be effectively and efficiently managed.

4.4 How can excellence be acknowledged in competency-based assessment?

In a workplace training environment, the role of assessors is to determine whether learners are competent - that is, whether they can carry out discrete tasks to the level prescribed by the performance criteria in the relevant industry competency standards. Whilst excellence is not discounted, the main concern is to gather sufficient evidence from a variety of sources upon which to make a judgement about the competence of the learner.

In contrast, providers who are delivering courses predominantly off-the-job are concerned to provide the end-users of assessment results with an accurate profile of learners' achievement against the aims of the program of training as described in the course curriculum. These aims may reflect a much broader educational experience than that outlined by any set of industry competency standards since off-job providers consider that they have a role to prepare learners for something more than narrow workplace occupation.

Focus: Why recognise differing levels of achievement?

In a competency-based approach to vocational education and training, the achievement of learning outcomes is generally recorded as "pass", or "competent" and indicate that a learner has attained the minimum requirements set for a module or course. These minimum requirements reflect the quality of performance determined by nationally endorsed industry competency standards or equivalent standards agreed during consultation at the time of curriculum development.

However within institutional settings there is a genuine concern about recognising those instances where learners attain standards beyond those required by the standard assessment criteria. This concern, to a large extent, is a response to the pressure being applied by learners to have their levels of achievement in courses acknowledged when their results are reported by training organisations. For many learners, academic records which simply indicate that they have performed at a "pass" or "satisfactory" level do not truly reflect their educational achievement.

Others, such as employers and higher education administrators are concerned too that an ungraded system of reporting results gives them little guidance on the merit of learners' performance in courses.

The users of the results, therefore, are generating a demand for useful and useable information about the quality or level of achievement of individual learners who complete vocational education and training programs.

Acknowledging levels of attainment has a number of clear benefits. In particular graded assessment can:

- provide potential or existing employers with information on the level of learner achievement essential to the making of decisions about employment of graduates of training programs;
- provide learners with the incentive to perform to their full potential, reward them for the efforts that they put in and generate the evidence required by learners to give them a competitive edge in seeking employment or promotion;
- allow learners to compete for places in further or higher education where selection is made on the basis of merit, and
- provide teachers, trainers and interested industry and community representatives with valuable information about the quality of the training programs that institutions deliver.

More importantly, the concept of recognising the differing levels of learner achievement will engender a strong culture of excellence in vocational education and training.

Focus: When and where is grading appropriate?

It would seem quite inappropriate to implement graded assessment in a blanket manner across all modules in a course of study. For instance, assessment in introductory modules that provide learners with the foundational skills and knowledge need only to have successful completion of the learning outcomes acknowledged.

In the later stages of programs, however, more advanced modules which require learners to apply skills, knowledge and attitudes that they have learned in earlier modules in an integrated way. These are also the modules which will offer learners the opportunity to display their individual flair, creativity, professionalism, personal effectiveness or their ability to be innovative, to produce a quality product in a limited timeframe, to solve complex problems and/or to achieve successful outcomes with minimal supervision. Such aspects of learning can all be validly assessed using a graded assessment strategy.

In determining the approach to take, it is important to look at the module purpose, learning outcomes and proposed assessment strategy to work out whether grading is:

- suitable for the type of subject matter and the outcomes desired;
- possible to achieve within realistic timeframes and without extensive use of what are often limited resources, and

- clearly sensible to learners and helpful to the users of the results of the assessment process.

The next step is to establish whether grading will apply to all assessment events or to the overall module result. Given the subject matter which is to be assessed, ***will it be possible to clearly differentiate between levels of achievement?***. Clearly some assessment events will be more suitable for grading than others.

In general, where learners are given the opportunity to exercise control over the approach that they might take to complete the assessment task, discriminating between levels of achievement will be feasible and fitting. Research assignments, work-related projects and the like which require learners to initiate, plan, develop and present reports or quality products of some kind are good models for graded assessment.

It is important to remember, however, that recognising various levels of learner achievement does not involve comparing the performance of one learner against that of other learners (norm-referencing). Performance must be assessed against the stated criteria which are determined for each level of achievement.

Focus: On what basis are levels to be determined?

In her 1993 paper, Byrne identifies the following possible mechanisms for determining different levels of learner achievement:

- Profiling of students on completion of training;
- Grading on one or more variable;
- Grading on extra work, and
- Grading on superior quality.

(Byrne, 1993, pp.4 -5)

The first of these options entails the accumulation of descriptive information on individual achievement and scaled ratings of learner performance throughout a program of training. How feasible this approach would be in any institutional setting may be an issue. Ultimately, training providers would need to weigh up the obvious value that profiles can provide learners and other users of assessment information with the time and cost involved in collecting, collating and reporting the outcomes.

In the second option, variables such as the time taken to achieve required standards or the amount of supervision required by a learner when completing tasks are used to grade learner performance. In off-job educational settings, neither of these options would seem to be appropriate. In the first case, the assumption is that all learners will have the opportunity to work through a course as their own pace and in formal training programs this is not always feasible. Nor are the majority of assessment tasks likely to be carried out under supervision.

Hager, Athanasou and Gonczi (1994) quite rightly suggest that the third option of grading on extra work is "not a recognition of higher quality performance in the domains being assessed but a grade for diligence (p.90)".

Byrne's final option of grading on superior quality does, however, have the potential to provide the desired differentiation between levels of learner achievement. Such an approach requires the development of additional criteria for each of the modules in the later stages of a course which have been identified as suitable for grading. In some cases, it may also be appropriate to develop additional criteria for discriminating between levels of performance for a particular assessment event. Two examples of this approach are included later in this section.

Focus: How many levels of achievement are appropriate?

Any decision about the number of levels to be used in assessing a module must be done after considering the subject matter and the practicality of developing quite specific and unambiguous additional criteria for each level. Clearly the more levels, the more descriptive assessment criteria will need to be written and the greater the complexity and difficulty of achieving clear differentiation between each level. Criteria at each level must not only make sense to learners and assessors alike and also be easily interpreted by learners, teachers and trainers and other users of the results.

In the Fashion example which follows, three levels have been defined - 'pass', 'credit' and 'distinction', whilst the national Science Laboratory Technician project approach in the other example has been to develop criteria for a 'pass' level and a 'pass with merit' level.

Focus: Two examples of a graded assessment approach

In the development of the assessment strategies for both the Fashion and Science models, the descriptions for each of the levels of performance evolved after discussion and consultation with teachers, trainers and industry experts. Attempts have been made to identify and describe the skills, knowledge and attitudes which, in either a workplace setting or an educational environment, indicate a quality of performance which is beyond the minimum required to successfully achieve the designated learning outcomes. To a large degree the additional criteria have been formed using the ***professional judgement*** of those involved in describing what is meant by merit or excellence. These additional criteria, however, still directly relate to the learning outcomes that are nominated for the modules.

In the first example, the national Science Laboratory Technician module ***Practical Project*** includes information on the specific elements which a learner needs to display at each level together with guidelines to assist interpretation. The Fashion example is presented in case study form and also includes details on the assessment processes and administrative procedures which have been employed to achieve the desired outcomes. The assessment strategy covers the modules ***Design and Work Room Procedures*** and the corequisite module ***Commercial Range Development 4.***

EXAMPLE 1: Science Laboratory Technician

MODULE TITLE:	PRACTICAL PROJECT

Module Purpose	**The purpose of this module is to develop the learner's ability to apply their knowledge and skills in an unfamiliar situation through the design, execution, and documentation of a measurement based project.**
Learning outcomes	**On completion of this module the learner will be able to:** **1 Prepare a feasible project plan in consultation with a nominated supervisor** **2 Refine the project parameters as a result of background research and/or evaluation of trial procedures or prototypes** **3 Execute the project plan and analyse the outcomes** **4 Communicate the project's progress and outcomes to a nominated audience.**
Module completion requirements: **Pass Level**	**An holistic guide for assessing a learners project at the pass level is given below.** **To successfully complete a practical project the learner must:** • **achieve all module learning outcomes (1-4)** • **meet all obligations agreed to in the learning contract (eg. - timetable); and** • **in the supervisor's professional judgement, be capable of performing technical work at a level appropriate for technical officer at the end of entry-level training.** **Indicators of this would be:** • **technical expertise eg:** * **performs tests and measurements using defined procedures and obtains accurate and reproducible results** * **undertakes routine operation, calibration, and minor maintenance of instruments and equipment** * **records and validates data; provides accurate analysis, interpretation and/or conclusions; and documents outcomes** • **degree of assistance and/or supervision eg:** * **work is subject to periodic progress checks** * **assistance is sought when problems are encountered** * **supervision required is typically 10-20% of the nominal duration of the module.**

Module completion requirements: **Merit Level (optional)**	**Merit is defined as the learner's skills being in excess of what could generally expected of an entry level technical officer. The academic complexity of the project undertaken is not considered as a basis for awarding merit on equity grounds. Where institutions wish to adopt graded assessment for this module an holistic guide for assessing a learner's project at the merit level is given below.** **To successfully complete a practical project with merit the learner must:** • **achieve all criteria listed for the pass level of achievement; and** • **in the supervisor's professional judgement be capable of performing technical work at a level above that expected of a technical officer at the end of entry level training.** **Indicators of this would be:** • **efficiency eg:** ⋆ **plans tasks effectively to achieve project outcomes with minimal use of time and materials** • **independence eg:** ⋆ **works with infrequent progress checks** ⋆ **works with limited supervision, typically 5% of the module's nominal duration** ⋆ **persists with, and solves, difficult tasks and problems** • **innovation eg:** ⋆ **generates original ideas** ⋆ **when assistance is sought, defines problems clearly and suggests well thought out ideas and alternatives** • **adaptability eg:** ⋆ **modifies approach in response to new information or unforseen circumstances** • **self management eg:** ⋆ **sets achievable goals and monitors own progress** **It is left to the supervisor to specify whether some, or all, of these criteria will be required for merit and whether they form part of the learning contract.**

EXAMPLE 2: Fashion

Adventures in CBT or Raiders of the Lost Mark

The introduction of CBT in the School of Applied Arts and Design has led to some brave, cutting-edge adventures for the staff of the Department of Fashion. The experience of CBT-in-action has generated some valuable insights and lessons.

One of the major challenges to be faced was the use of a CBT approach with curricula not written in CBT terms - old curricula. In particular it was necessary to generate clear assessment criteria that were suitable for use in a CBT approach. Further, it involved working out how to retain a graded assessment system without losing the valued notion of competence. What emerged was really quite workable - we developed two sets of criteria for each module.

One set of criteria related to those aspects that could be assessed against a clear standard and where it was appropriate to use a 'satisfactory -unsatisfactory' marking scale. In large part, these criteria related to technical competencies, adherence to timelines and the like - but all deriving from the learning outcomes of the module.

The second set of criteria - also deriving directly from the learning outcomes of the module - related to aspects for which it was reasonable to establish performance levels. In large part, these criteria related to design thinking, concepts and processes.

In using these criteria, we judged student work first against the first set of criteria. Where students met these criteria we then judged their work against the second set of criteria, and this was the basis for forming their grade for the module.

The process for judging student work against these criteria was shaped by two major considerations. first, the courses clearly are about formal preparation for the workplace and, second, design is an area where judgements about what is innovative or imaginative are swayed easily by the background of the judge. Our solution to these concerns was to establish a panel or jury marking system and to bring onto the panels people from industry to work alongside the teaching staff. One of the great advantages of this was that the external people naturally focused on the outcomes rather than what was known about the student.

The success of assessment in the Department of Fashion derives directly from the good will and the concerted effort of the subject coordinators and the teaching staff of the Department. It hasn't been easy but, as in all true design efforts, these people persisted until a good solution was developed, and they continue to explore and refine.

Camille Ducker
Assessment Coordinator
School of Applied Arts and Design
Canberra Institute of Technology

Example 2: Fashion

PROCESSES AND PROCEDURES FOR ASSESSMENT*

1 **Where, modules are co requisites, the delivery is integrated rather than treating the modules as segregated.**

2 **The student can be judged against both graded and ungraded assessment criteria, and these are assessed and recorded separately.**

3 **Assessment against the graded assessment criteria for modules that are co requisites are conducted conjointly - that is, in the same marking session and by the same marking panel.**

4 **The assessment against the ungraded assessment criteria is managed, recorded and reported by studio leaders (coordinators) before the panel assesses against the graded assessment criteria.**

5 **Student designers may present work for panel assessment against the graded assessment criteria only if they have been judged as satisfactory against all the ungraded assessment criteria.**

6 **Studio leaders ensure that all assessment information - including assessment criteria, timelines and project briefs are issued to students in Week 1 of the semester.**

7 **The assessment information for modules that are co requisites are issued as a single, coherent package.**

8 **In order to allow student designers to accept a reasonable degree of autonomy in the management of their own work, studio leaders assist them to develop clear and shared understanding of the assessment requirements very early in the semester. In particular, this involves considerable discussion of the project and its requirements, establishment of timelines, structured exploration of the graded and ungraded assessment criteria, and explanation of the assessment processes - including the role of the assessment panel. Further, throughout the preparation and production processes, the studio leader works with student designers to clarify standards and expected learning outcomes.**

9 **The mode of assessment against graded assessment criteria is the panel or jury method, and all panels include external, industry members and at least one experienced educator - who may be the panel coordinator.**

*These processes and procedures were developed after considerable discussion and debate by all teachers involved in the delivery and assessment of the modules. The additional criteria were formulated after close consultation and validation with industry experts.

Example 2: Fashion

ROLES AND RESPONSIBILITIES

The procedures for panel assessment include:

It is the responsibility of the Head of Department to:

- **appoint a member of staff to act as panel coordinator for each assessment panel;**
- **explain to studio leaders the role of the panel coordinator.**

It is the responsibility of the panel coordinator to:

- **conduct a briefing session for the panel prior to the assessment session. The purposes of this briefing session are to establish a shared understanding of the modules, the project and the assessment criteria;**
- **issue to panel members module outlines and assessment details, prior to the assessment briefing session;**
- **ensure that the panel members are introduced to the student designers and that information about the background and current industry links of the panel members are provided to student designers;**
- **ensure that the maximum time for the assessment of any single student designers is 20 minutes;**
- **ensure that the panel maintains its schedule;**
- **facilitate the panel's deliberations, including consensus decisions about performance levels;**
- **record, collate and report the final assessment results.**

It is the responsibility of the studio leader to:

- **negotiate with the student designers the conditions under which the panel assessment will be conducted - for example, is it a public exhibition, is it a dynamic or static display, and so on;**
- **ensure that the roles of the panel and the panel coordinator are explained to student designers well in advance of the assessment session, and information is included in the initial assessment information issued in Week 1 of the semester;**
- **ensure that no student designer presents for consideration for a grade higher than 'Pass' (by assessment of the panel) unless they have satisfied all the requirements of the project, including the ungraded assessment criteria.**

The assessment information provided to student designers for the module, ***Design and Work Room Procedures*** it detailed on the following pages. A slightly modified version of this is provided to assessment panel members.

Example 2: Fashion

Module Title	**DESIGN AND WORK ROOM PROCEDURES**
Purpose	**The purpose of this module is to develop in learners the ability to complete the processes required to produce a range of garments to a professional plan of organisation**
Prerequisites	**Design and Work Room Procedures - Summer**
Co-requisites	**Commercial Range Development 4** **Computer-Aided Pattern Making 2**
Learning Outcomes	**A learner completing this subject will be able to:** • **Produce a winter range within given time constraints, to a design brief and art work prepared in Commercial Range Development 4;** • **Employ professional sequencing and an organised work approach to the processes involved in the production of a range of garments;** • **Employ commercial manufacturing procedures compatible with a specific range of designs;** • **Produce essential design documentation to a check list;** • **Implement a range promotion strategy.**
Assessment	• **Assessment is made on the basis of competence in the required processes involved in the production of a range, its promotion and one class test. The test is designed to enable the learner to demonstrate competence to present correctly sequenced cut work, with all relevant documentation, for construction by a sample hand.** • **It is your responsibility to ensure that you fully understand the requirements and standards to which you are working in this final design semester.** • **Design and Work Room Procedures is intended to simulate a real working situation. Learners are expected to attend class and conduct themselves, throughout the class contact time, in a business-like and professional manner.**
Marking Guide	• **Grades available are Ungraded Pass and Fail. To be considered for a Pass each assessment product must be judged as satisfactory against the assessment criteria**

Assessment Criteria	S	US
Submitted on time		
Test results indicate specified standard of competence		
Patterns produced to specified standard		
Garments are an accurate interpretation of the selected design sketches		
Garments constructed to specified standard		
Documentation of specifications and costing complete		
Logical and organised sequencing has been employed throughout		

In the table, the symbol 'S' means that the criterion has been satisfied; the symbol 'US' means the criterion has not been satisfied

Marking Guide for Graded Assessment

A panel of experts will indicate their judgement against performance levels of the assessment criteria for determining the grades

In the table below

- **'0' denotes that the project has not met the criterion;**
- **'1' denotes that the project has met the criterion by achieving all the explicit requirements of the design brief;**
- **'2' denotes that the project has met the assessment criterion by making reasonable interpretation of the intentions of the brief, extending beyond the explicit requirements of the brief;**
- **'3' denotes that the project has met the assessment criterion by interpreting the brief in ways which are both imaginative and reasonable, and which extend well beyond the explicit requirements of the brief.**

The grades for the module are determined as follows:

- **A 'Pass' grade is awarded when the consensus decision of the assessment panel is that the project has achieved at least '1' against all criteria.**
- **A 'credit' grade is awarded when the consensus decision of the assessment panel is that the project has achieved at least '2' against all criteria.**
- **A 'Distinction' grade is awarded when the consensus decision of the assessment panel is that the project has achieved '3' against all criteria.**

Assessment Criteria	0	1	2	3
Sensory visual impact of promotional display				
Strength of justification for garment styling				
Potential for success as a commercial range in terms of specified market				

Focus: Ensuring the quality of graded assessment

As in all other areas of assessment, any approach taken to recognise levels of learner achievement must be checked against the principles of validity, reliability, fairness and flexibility. Where additional criteria are developed, these should relate directly to the module purpose, the learning outcomes and associated competency standards and rules of evidence should still apply. Further, clear descriptive statements of the criteria for each level must be circulated and discussed with learners and assessors at the commencement of any graded module.

One of the strengths of the Fashion example included here is that the standards of performance are firstly validated and then verified by industry experts through their inclusion in the development of the criteria and in the assessment panel process. The end result of this approach is that there is a high degree of confidence in the results that are achieved by student designers. Quality needs to be discussed and determined openly so that all involved have a mutual understanding of what excellent performance will look like.

With regard to the fairness aspect of graded assessment, it is important that no learner be excluded from potentially having the quality of their work recognised simply because they are unable to access the resources, facilities or an appropriate environment such as a workplace. As indicated in the Science example, the complexity of a workplace project should not be an influential factor in determining which learners are accorded recognition of achievement beyond the minimum standards required for a module.

It may also be appropriate to offer learners the opportunity to elect at which level they wish to perform. Confident or high achieving learners may opt to perform at 'merit' level, whilst others may feel more comfortable working toward completing the minimum requirements successfully.

Ultimately what should be the guide in developing a strategy to recognise levels of learner performance is the ***value*** to the users of the results and the ***cost*** associated with putting teachers, trainers and learners through the process. Thus, any graded assessment strategy must be carefully monitored and evaluated. If the ***value*** is substantial and the ***cost*** minimal, the additional benefits are worthwhile for all involved.

FURTHER READING

For further details on recognising levels of learner achievement you might read ***The option of graded competency-based assessment*** (1993) by Judy Byrne, ***Beyond the norm?: An introduction to standards-based assessment*** (1992) by Roger Peddie, Chapter 8 of ***Assessment Technical Manual*** (1994) by Hager, Athanasou & Gonczi and Ivan Johnstone's paper entitled "Integration and merit: Future assessment strategies for science technicians" in ***Testing Times: Conference Papers***, NCVER, Adelaide, 1993, 115 - 134.

4.5 Can learning outcomes from several modules be assessed together?

The possibility of assessing learning outcomes from several modules can be determined during the assessment planning phase. By examining the curriculum, teachers and trainers who are delivering a variety of modules at the one time, can identify common threads running through learning outcomes and assessment criteria and plan assessment so that effective use can be made of time, resources and learning opportunities.

Focus: Assessing across modules

Assessment across modules can be planned in one or more of the following ways:

1 Developing joint assessment events for learning outcomes drawn from several modules.

For example, a small group of learners is required to plan the delivery of freight goods to a particular destination, calculate costs of cartage, areas and weight of the cargo, load the vehicle according to industry standards for manual handling and load placement and security and to unload according to requirements for delivery. This assessment event has the potential to cover six learning outcomes from four different modules.

2 Developing a series of assessment events in the one specific context or setting.

For example, during the one child care field placement, it is possible for a learner to complete a set of observations for one module, plan a series of play activities for another, and to do the research for a project on centre organization and administration for a third module.

3 Utilising a thematic linkage between assessment of a series of modules delivered concurrently.

In an example of this approach, three communication modules are delivered in the following sequence in one semester of a computing studies program. The delivery and assessment of all learning outcomes are integrated in the following way:

Module	Weeks
Report Writing	1, 2, 3, 4, 10, 16
Interviews	5, 6, 7, 8, 9, 17, 18
Oral Presentation Skills	3, 11, 12, 13, 14, 15

The learning outcomes for each module are listed below:

Module	Learning Outcomes
Report Writing	■ research material; ■ analyse information and develop/identify solutions; ■ produce a document that entails the investigation of a problem/issue such as a submission/proposal/briefing notes/analytical report
Interviews	■ plan and conduct an interview to achieve the specified purpose; ■ participate in an interview as an interviewee to achieve a specified purpose
Oral Presentation Skills	■ prepare an oral presentation appropriate to the audience and the speaker's purpose; ■ give an oral presentation appropriate to the audience and the speaker's purpose.

The assessment for the three modules requires learners to:

- investigate the operations of a local small business to assess the degree to which is using computer applications effectively;
- interview people from the small business to assess their needs, their current use of computers and the potential efficiencies that could be achieved by increased computer use;
- write a report presenting your findings and making recommendations [Final due Week 11];
- interview another class member about their investigation [Weeks 8/9]
- present an oral presentation explaining your analysis [Weeks 14/15]

A cross-modular approach to assessment makes sense because it permits a more efficient use of human and physical resources and provides the opportunity to integrate assessment of skills and knowledge in meaningful and realistic assessment events.

Focus: Elements in planning cross module assessment

Implementing integrated assessment events across a series of modules, however, does require a considerable amount of planning well before the delivery of the modules. Success will largely depend on there being:

- agreement from all teachers and trainers involved in delivery and assessment of all modules included in the exercise;
- an overview of assessment across a program of study;
- clear guidelines for learners and assessors;
- prudent timetabling;
- acceptance that it may not be possible for all learners to access extended assessment (for example, part-time learners in institutional settings);
- careful coordination;
- a realistic evaluation of what a learner and a teacher or trainer can achieve in the time allocated;
- a flexible record keeping system, and
- constant monitoring and evaluation.

4.6 How can learners be given sufficient time and diversity of experience to develop their skills prior to assessment?

In the current competency-based approach to vocational education and training, courses generally are made up of modules which involve teaching and then assessment in reasonably short and sharp bursts. In sequenced training conducted almost exclusively in an off-job environment, this can be a major concern for teachers and trainers, because it can be difficult to provide learners with:

- the practice time they need to achieve the standard of performance required by the curriculum, and
- access to the diversity of learning experiences and resources needed to ensure that a breadth of evidence is available upon which to make assessment decisions.

This is a particular problem with the development and application of practical skills.

As an example of the first point, a learning outcome in the National Office Skills module, ***Keyboarding - Speed & Accuracy*** requires a learner to:

> *'Key in data from straight copy in accordance with Australian Standard 2708 - 1991'.*

The assessment criteria indicate that a learner is to:

> 2.1 *key continuously using touch typing techniques for five minutes.*
>
> 2.2 *Achieve 98% accuracy using Australian Standards 2708 - 1991.*

Whilst the nominal duration for the module is forty hours, it is likely that some learners will need additional practice time to achieve the required standard. Simply on the grounds of fairness and cost, it would seem inappropriate to 'fail' learners who fall marginally short of the required standard, because they cannot achieve it within the time allowed.

Focus: Extending assessment

Where time for practice is a major element in learners successfully achieving designated levels of performance, extending final assessment may be an appropriate approach.

The concept of extended assessment involves learners being given additional time to practice their skills beyond the

nominal duration of the module and being offered the opportunity to be summatively assessed at some later stage in a training program. Such an opportunity should only be given to a learner who is clearly motivated and has provided sufficient evidence to indicate an ultimately successful outcome. The concept does not involve any additional teaching.

From an administrative perspective, both learner and assessor will need to negotiate a learning contract defining any conditions which might apply and the maximum elapsed time allowed before final assessment.

This approach to assessment contains an element of risk, and it is heavily dependent upon teachers and trainers making accurate judgements about whether learners have gained the foundational skills necessary for them to achieve the learning outcomes if they are given the extra time they need. It also requires a supportive record keeping system which is flexible enough to cope with what constitutes delayed results.

Focus: Opportunistic assessment

With regard to the second problem of providing learners with the opportunity to access a diversity of learning experiences and scarce resources, some assessment can take place when appropriate opportunities arise at various points throughout a program.

For example, in a course for veterinary nurses, learners are required to care for a range of animals. The possibility of providing all learners with the opportunity to handle birds, reptiles, fish, amphibia, horses, dogs, cats, cattle, marsupials, rats and rodents may be quite limited in an off-job setting. Additionally, there are ethical concerns associated with many learners practising their skills on the same few animals that may be available in an off-job setting. This breadth of experience may be equally difficult even during a practical placement in a veterinary surgery.

Therefore, so learners can gain access to the different learning experiences and resources, there needs to be some allowance for ***opportunistic*** assessment. In other words, when the chance arises (regardless of when and where it happens), they can take the opportunity to generate the evidence required for assessment.

Administratively, the concept of opportunistic assessment requires teachers and trainers to analyse the curriculum to determine which learning experiences and resources are going to be difficult to provide and to collate associated learning outcomes into a skill book. The underpinning knowledge and foundational skills are assessed in the normal way, but the

application of both skills and knowledge are assessed via the log book. It is then the responsibility of learners to take any opportunity that arises to have those skills assessed. Negotiation and verification of assessment is achieved through contact with the workplace supervisor.

These integrated assessment events may involved a series of learning outcomes from a wide variety of modules which when pulled together make a sensible collection of realistic, work-related tasks. These activities are best organised in actual workplace settings, but they may also be simulated. For example, in a program for animal attendants, learners rostered on duty in the animal house may have many opportunities to have a range of tasks signed-off by the teacher, trainer or animal house technical support staff.

In terms of record keeping, a signed-off log book may be deemed to be a completion requirement for the course or training program.

In some areas of learning, it will not always be possible to provide the resources and the range of experiences that learners will need to generate sufficient evidence upon which to make a valid assessment judgement. Where learners need contact with patients, clients, different seasonal conditions, or specific locations opportunistic assessment can be a useful way of achieving the desired outcomes.

As with the extended approach, opportunistic assessment needs to be carefully planned, monitored and supported by a recording and reporting system that is appropriately flexible. Learners and assessors, too, will require guidance and support.

Appendices

In the appendices you will find:

Assessment planning proformas	Blank planning pages and copies of Planning Focus Sheets which can be photocopied for multiple use.
Mock test focus exercise	Another copy of the Mock Test from p. 153 and a listing of the defects and lay-out problems.

STEP 2	Specify what evidence is required and identify context(s) in which assessment will be undertaken.

EVIDENCE:	SOURCE

STEP 3	Determine and develop methods to be used to gather evidence

PLANNING FOCUS SHEET 1: ASSESSMENT METHODS

ASSESSMENT METHODS/EVENTS							
Learning outcomes							Write in action verb from each learning outcome
1							
2							
3							
4							
5							
Information on context, grouping							
Timing							

NOTES:

STEP 4	Develop guidelines upon which judgements about learner performance are to be made

STEP 5 Determine the administrative arrangements for assessmen

PLANNING FOCUS SHEET 2 IMPLEMENTATION STRATEGY

ASPECT OF ASSESSMENT	WHAT IT INVOLVES	WHO IT INVOLVES	TIMING
GUIDELINES FOR ASSESSORS			
INFORMATION FOR LEARNERS			
ASSESSMENT TIMING			

ASPECT OF ASSESSMENT	WHAT IT INVOLVES	WHO IT INVOLVES	TIMING
ORGANISATION OF ASSESSMENT EVENTS			
RESOURCES			
RECORDING AND REPORTING			
SECURITY			

STEP 6 **Determine what information learners will be given.**

STEP 7 **Determine quality assurance , including strategy for evaluating assessment.**

FOCUS EXERCISE: MOCK TEST

TEST

Answer Questions 1 and 2, and then three of the others. Where possible, write the answers on the test itself

1 **Write an essay about the purposes of assessment.**

2 **What are the principals of assessment and how are they useful?**

3 **The cognitive domain focuses on a comprehensive and apparently complete list of mental processes to consider when identifying learning outcomes and provides a standard vocabulary for describing and classfiying learning outcomes. T/F**

4 **The _____ of _____ should be_____and _____ when _____assessment_____.**

5 **To assess a learner's ability to use higher order mental processes of logical reasoning, critical thinking, etc., the method of assessment used should be an (a) essay test (b) objective test (c) multiple-choice tests (d) problem test**

6 **Alternate response items are almost always used to assess recall T/F**

7 **Matching:**

a) formative assessments	i) not usually easy to achieve
b) validity	ii) valuable for assessing knowledge.
c) multiple-choice items	iii) identifies specific strengths and weaknesses in learning and provides feedback to teachers and learners.
d) open-ended essay items	iv) generally easy to construct.
e) summative assessment	v) most important principle of good assessment practise.
f) reliability	vi) Tertiary Entrance Scores

LIST OF DEFECTS: MOCK TEST

General Formatting Defects:

1 There are no directions to learners on the time allowed for the test, the allocation of marks or weightings for each of the questions, no indication of what module is being assessed or even a place for the name of the learner.

2 There are far too many questions to be squeezed onto the one page.

3 The instructions that are included are unclear and ambiguous. Answer Questions 1 and 2, and then three of the others needs to be reworded.

4 The suggestion that learners write the answers on the test itself it clearly ridiculous. There is insufficient space for the questions, let alone the answers.

5 The test has not been proof read. There are spelling errors, typographical errors and punctuation missing.

6 The first two questions are correctly grouped as they are essays, however, the two alternate-response questions need to be together as a group.

Question by Question Defects:

Question 1:

1 This is an open-ended question, which is far too open-ended. It does not define the task.

2 There are no directions on the form that the answer is to take, no guidance on the amount of time, number of words or pages that might be expected .

3 The wording of the question does not encourage the learner to demonstrate high levels of understanding or his/her ability to generate, organise and express ideas.

Question 2:

1 It is possible that this is meant to be a structured essay, as learners are given some direction with the words 'principals' (sic) and their uses.

2 As for Question 1, (2) and (3).

Question 3:

1 This alternate-response item is far too complex in structure.

2 There are too many concepts included in the one statement.

3 It is possible to answer ***T*** or ***F*** to various parts of the one statement. Construct only statements which can be determined to be unconditionally true or absolutely false.

4 Typographical error (*classfiying*=classifying)

5 The format of the question makes it almost impossible for learners to mark their response.

Question 4:

1 Responses to this short answer/completion item would be totally unreliable. It is so mutilated that no two learners are likely to answer it the same way.

2 Even if it was possible to answer this question, there is insufficient space to do so.

Question 5: (Oh, where do you start on this one??)

1 The format of this multiple choice item is totally inappropriate. Very few of the rules for the stem have been followed. The responses should be separated from the stem and organised in a list.

2 The use of an abbreviation (*etc.*) is unacceptable.

3 The use of "*an*" in the stem is a grammatical clue which eliminates all but 'a' and 'b'.

4 'd' is not a method of assessment and so not a plausible distracter.

5 There are no directions and learners will be uncertain as to whether the correct ('c') or best ('a') response ie required.

Question 6:

1 Alternate response should be a hyphenated.

2 '*Almost always*' provides a verbal clue that the response is ***T***.

3 The full stop is missing.

Question 7:

1 No instructions are given. This is important with this type of question because learners need to know on what basis matching is to be made and how it is to be recorded. An example question might have been useful here.

2 The rule of keeping the list of options shorter than the list of premises has been broken.

3 There are grammatical clues in the responses, which in this case simply add to the confusion.

4 '*Practise*' should be 'practice'.

5 The negative in (i) needs to be emphasised or removed.

A final note from the author:

She was tired they said and couldn't go on,
So there are plenty here, which are possibly wrong.
If you are clever, and have found even more,
To the top of the class with the very best score!!!!

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