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AUTHOR	Shelley, Diana
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ABSTRACT

This booklet introduces techniques and concepts that can be used for alternative styles of lesson delivery within the context of the autonomous learning approach and self-managing teams that are characteristic of resource-based learning. Much of the information is designed to help teachers enable learners to make good use of information resources. The booklet is divided into five sections that address: (1) role and definitions of resource-based learning; (2) ways to teach that promote, rather than block, learning; (3) increasing learner motivation by letting the learners teach; (4) procedures for running effective adolescent or adult learning groups; and (5) teaching learners to evaluate and assess each other. The latter three sections, which form the bulk of the document, include explicit, step-by-step instructions for facilitating the learning process. The appendixes include brief teacher guides on how to prepare multiple choice questionnaires and how to plan assignments for learners and a learner's assignment preparation guide, which assists learners to assess information needs and resources. (Contains 5 references.) (KRN)

Looking into Resource-Based Learning

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Diana Shelley
Logan College of TAFE
1991.

LOOKING INTO RESOURCE-BASED LEARNING

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WHAT'S RESOURCE-BASED LEARNING ABOUT?

TAFE teachers become aware when industry introduces new processes or terminology. For example, when the process of developing *Quality Circles* to implement *Quality Management* techniques replaced the earlier practice in manufacturing industries of end-of-line inspection for quality control, this process had to be dealt with within TAFE teaching programs.

The words *autonomous learners* and *self-managing teams* are part of the vocabulary of the 1990's. If teachers are to keep education and training methods at the cutting edge of industry management and work practices, they must understand and implement the practices that go with the new vocabulary.

The modules in this package provide teachers with methods for planning learning sessions that will enable learners to be more responsible for their learning, as well as skilling them to function effectively as part of a team. These methods reflect both recent research into effective motivation of adolescent and adult learners and the most up-to-date industry management practices.

So that our graduates go out into industry familiar with current industry expectations and practices, we need to introduce autonomous learning and self-managing teams of participants into classrooms. It is important that we give our students the skills that enable them to fit into the work-place and to be able to learn and function effectively there.

When we accept into our classrooms mature people who wish to up-date their skills, we need to use modern methods to manage their learning to increase understanding of the new work place approaches to training.

The fee-for-service clients who come to us expect us to use the teaching and skilling practices which industry has proven can raise quality and productivity by up to 30%. We must not fail them or we risk losing our credibility with industry as an effective training organisation.

These are student related reasons for changing the way we manage teaching and learning. There are also pressing difficulties which TAFE teachers experience daily that need to be addressed. Absenteeism, behavioural problems and failure to complete assigned work are some of the difficulties teachers face when learners are unmotivated. Most teachers welcome new methods if they are effective in providing greater learner involvement, motivation and commitment to the learning process.

Recently reported research in Queensland indicates that between 15%-25% of students at high schools are in part-time employment.[1] This means that, as well as our mature age students, many of our young students may have been in the workforce at least part-time for several years before coming to TAFE. It is not surprising if they expect at least as much autonomy, responsibility and control over their learning at college as they have experienced in their work environments.

This booklet introduces techniques and concepts that can be used for alternative styles of lesson delivery.[2] If the methods of facilitating learning in our classrooms outlined in this booklet can assist learners become more self-managing, while simultaneously raising the quality and productivity of their learning, then I believe most teachers will be interested to explore and develop them.

Diana Shelley

1. Middleton, M. 1990, Address to Agenda 2000 Conference of TAFE Business Studies Teachers, Griffith University, Brisbane.
2. For background reading see Hicks, R.F. & Bone, D. 1990, *Self Managing Teams: A Guide for Creating and Maintaining Self Managed Work Groups*, Crisp Publications, Los Altos.

HOW TO STOP TEACHING FROM BLOCKING LEARNING

Motivation is a key issue. Unless students are motivated they will not be effective learners nor will they gain satisfaction from learning.

A critical factor for both the motivation and the learning success of adolescent and adult learners is the teacher/learner relationship. One of our current understandings about adolescent and adult learners is that the ineffectiveness of many training programs is really a reflection of misunderstandings of how to manage this relationship. Traditionally, the learning environment has been one in which the teacher, as the person with the knowledge and/or skill, controlled the selection of the content, the method of learning and the pace of progress. Such an arrangement required a considerable degree of compliance from learners. Such compliance is very demotivating for adolescents and adults.

From about 12 years of age individuals are moving rapidly from the dependency of immaturity to the self-reliance and autonomy of maturity. An authority figure who is perceived to be hindering that movement is likely to arouse resentment. The extent of the resentment will vary with individuals, but it is often very intense.

Resistance to control and direction is typical behaviour during any period where the individual is experiencing a strong drive to progress to a new level of maturity and independence as a self-responsible adult. This is why some mature age students react similarly even though they are well past adolescence. In the learning situation, resistance may show itself in a range of behaviours from apathy and absenteeism to non-compliance and aggression.

Self-identity, self-reliance and self-esteem come fairly quickly for some, but for others there is a substantial struggle that is not completed until middle-life or later. Therefore the reactions discussed here may occur in any teaching situation with both adolescent and adult learners.

As well as resistance to control, two other features of learner behaviour during the struggle for autonomy create difficulties for teachers in traditional classroom environments. These are the tendency to reject authority and the strong need for peer affiliation.

Rejection of control usually shows itself in resistance to supervision, direction, and instruction. It is not the legitimacy of the authority being questioned, it is simply that the individual wants to assert his or her own self-identity and autonomy and to be recognised as self-managing.

While this drive for growing recognition as a mature, self-managing individual is occurring, a strong need for peer group recognition and collegiate affiliation generally develops.

Individuals actively seek the acceptance of their peers, and they form the reference group from which behaviour models and approval will be sought. Those teaching adolescent and adult learners need to recognise that many members of the peer group will be involved in a struggle for greater autonomy, and may reject as immature, an individual who is perceived to be compliant, or to be relying on authority figures.

One way a student can both show autonomy and gain peer group approval is by non-compliance, and by challenging the instructor. Another is to raise objections at the slightest indication of unfairness, and to use the group to demand justice.

It is important that teachers recognise these dynamics and take steps to prevent the development of apathy, resistance, or hostility and confrontation cycles. To do this methods are needed to shift responsibility and control in the learning environment to the learners, while still maintaining the advantages of the teacher's content knowledge and expertise. The material presented in this booklet has been compiled to assist in this shift.

INCREASING LEARNER MOTIVATION: LET THE LEARNERS TEACH

OVERVIEW OF THE METHOD

Here is one method for running effective learning sessions, particularly suited to theory content which is text book based, that enables the learners to be responsible for the teaching and learning, and then to assess their success at both of those skills.

Having the learners teach is productive. It's enjoyable! It acknowledges and uses the learners' drives for self-management, responsibility and peer affiliation. It provides genuine responsibility with accountability. It provides shared learning experiences which adolescents and adults find highly motivating.

It's time-efficient because each participant has to prepare, in depth, only a portion of the material to be learned, so a lot of subject matter is covered in a short time.

The method suggested here enables participants to learn the valuable skills of sharing knowledge and accessing information from their colleagues in the non-threatening environment provided by a small group of peers. It promotes more active learning. Each participant's preparation is likely to be more thorough than usual because everyone in the group is depending on his or her contribution for their learning of that segment of the content. The assessment feedback provides motivation for each participant to succeed both as a teacher and as a learner.

As a comprehension or competency test will reveal the extent of their knowledge of the entire content, learners are highly motivated to listen, question and clarify in a constructive way as each group member makes their presentation.

Afterwards, when the group processes are analysed, each person is able to evaluate his or her performance both as a receiver and as a communicator of knowledge in comparison with others.

On the following page is a list of the steps the teacher needs to take to implement this method of teaching. Following this is further information regarding each step.

LIST OF STEPS	
1.	Select the material to be learned.
2.	Form the learners into groups of between two and six members.
3.	Divide the resource material equally amongst group members.
4.	Have each member prepare their portion of the content so that he or she can teach it to the rest of the group.
5.	When the class meets, learners sit in groups and each group member then teaches the others their portion of the material.
6.	Give everyone a competency test on all the learning objectives for the material.
7.	Distribute an answer key with a rationale for each correct answer for self-scoring of the test.
8.	Interpret individual and group scores.
9.	Have groups review and assess their performance. Initially the teacher will do this until the students are familiar with the process, then students should do their own group performance assessments.

1. <u>Selection of the material to be learned</u>

Select material that can be divided into portions of approximately equal length and difficulty. There should be enough material so that each group member receives a reasonably sized individual portion.

Each portion of material should be able to be studied as a discrete topic without the individual needing access to the segments of material given to the other members of the group. This may mean having sections of material photocopied. It is important that each member of the group has their own resources for preparing *their lesson.*

Quantity will need to be suited to the time available for group sessions.

2. <u>Form the learners into groups of between two and six members</u>

This technique is most useful for teaching groups of students who have similar learning styles and ability. It can be used most effectively where there are only moderate differences among individuals. Extra help may be required for some individuals or groups during preparation time.

Learners need to have sufficient self-esteem and interpersonal skills to discuss and evaluate individual and group performances constructively.

If these skills are lacking, the teacher needs to help learners and ensure they gain these skills. They are important life-long learning enablement skills.

Groups can be random, but there are advantages if they are homogeneous according to reading ability, comprehension level and/or relevant experience.

3. <u>Divide the resource material equally amongst group members</u>

Divide the material into coherent portions of approximately equal length and difficulty, according to the number of members in each group. Each learner receives only one portion of the content. This portion will be their responsibility to teach to the other members of the small learning group.

Make sure each portion can be understood **without reference to the other parts.**

Portions should be challenging but not too difficult for learners.

Portions must be suited to the length of presentation time available to each group member.

When selecting the amount of material to be covered in the session, allow for the time required to complete a comprehension test and discuss the group process as well as the test results.

4. <u>Have each student prepare his or her portion of the content to teach it to the others in the small learning group.</u>

Give everyone a written outline of the intended procedures. This should include an order for presentations if there is a sensible order within the content, or a desirable sequence for learning the material.

Emphasise that everyone will be doing a test on the subject covering all the material assigned to the group. Explain that each learner will be required to prepare in depth, only one portion of material and teach it to the other members of his or her group. By giving each learner only one portion you ensure that the rest will have to be learned from the other members of his or her group.

Establish ground rules for presentations. These may cover items such as time, format and media use.

Ensure that, before they begin work, learners understand the criteria on which their work will be assessed. This is particularly important if you intend to assess presentation skills as well as assessing learning skills by testing knowledge of subject content.

Instruct learners on the best form of summary to make after the presentations. This may be based on the major objectives for inclusion of the topic in their subject content.

5. <u>When the class meets, students sit in groups, and each group member then teaches the others in the group, his or her portion of the material.</u>

When the class meets learners separate into their learning groups.

Each group member teaches the other members of the group their portion of the material.

If the material will be best understood if presented in a particular sequence, make sure each group establishes the sequence. Otherwise presentations can be in random order. Group members may use notes and teaching aids but should not refer directly to the original resources during their presentations.

Group members are encouraged to take notes, ask questions and clarify points during presentations. This will help them to get as clear and comprehensive a coverage of each segment as possible.

6. <u>Give everyone a competency test on all the learning objectives for the material.</u>

Learning objectives for the topic should be reflected in the test. Questions should be distributed equally across the allocated portions.

Relevant interrelationships and generalisations should be included to allow testing of comprehension. Design the test to allow for self-scoring by the learners.

7. Distribute an answer key with a rationale for each correct answer for self-scoring of test

The quality of each learner's preparation should be reflected in the answers to the relevant questions in the test.

The success of each member at communicating his or her knowledge will be revealed by the results obtained by other group members on the relevant questions in the test.

How much each member has learned from all the presentations can be gauged from total test result.

The skill members showed at co-operating both as teachers and as learners becomes apparent from the test and by comparing the results of the different groups of participants.

A key should explain the rationale for each correct answer and give a reference to the resource material. Having a rationale for each correct answer satisfies everyone as to why these are the correct answers to questions. References to the resource material allow for easy checking and revision.

Why self-scoring?

Self-scoring provides immediate feedback to the individual on how much more learning is needed to get a full comprehension of the material. It keeps control and responsibility in the hands of the learners. This is an important feature of adolescent and adult learning groups. Self-scoring also avoids dissatisfaction over incorrect marking.

8. Interpret the individual and group scores

The score of each member will show how much of the subject has been learnt.

The scores on individual questions will show members how well each prepared and taught his or her portion of the material. Students could be encouraged to discuss strategies for improving these skills.

A within-group comparison can be made of how skilfully each member communicated his or her knowledge of the work by comparing the score of the member who taught the section with the group average on that segment of the test. The closer the results, the more successful has been the communication of what he or she knew.

9. Have groups review and assess their performance

Group performance evaluation

If you decide to include this process (and it is strongly recommended) a sample appraisal could include the following items. Give a score from Poor, Average, Good, Excellent (P A G E) for each item on the schedule.

ITEMS	NAME			
	Peter	Lesley	Ian	Nicole
How confident was the presenter of his or her facts?				
How well did he or she explain and differentiate between major and minor emphases?				
How logical and ordered was the content?				
How well did he or she respond to questions?				
How well did he or she use teaching aids?				
How well did he or she obtain feedback to know whether the group understood the content?				

Reviewing performance

There are several aspects of group performance that can be reviewed:

- How appropriate were the time allocations set for each presentation?
- How well did the group manage its time?

- How well did the group stay on task and discriminate between relevant and irrelevant issues?
- What level of participation occurred in the group?
- How skilfully did individuals listen, probe, check, and analyse the presentations? Co-operation is an important key to success with this method of learning.
- Questioning is a skill. How useful to the presenter and to the group were the questions asked by group members during the presentations?
- How well did each member respond to the questions asked of him or her?
- How were conflicts managed?
- What were the strengths and weaknesses of each learning group? What strategies can each group use to improve its performance for the next session?

RESOURCE-BASED LEARNING GROUPS

OVERVIEW OF THE METHOD

This overview outlines another procedure for running an effective adolescent or adult learning group. Once again, by learning in a group, each student has the benefit of both expressing what he or she knows, and learning from all the other members of the group. Students also learn to use resource material, to be responsible for and in control of their learning. The method develops team skills and experience, and satisfies the learners' need for a collegiate environment rather than a teacher-centred classroom.

Read it right through so you know what has to be prepared before you try using this method. There is information on each of the steps listed, explaining both the preparation and management of the class session.

LIST OF STEPS

1. Select the material to be learned.
2. Present material to all learners.
3. Have learners complete a questionnaire to test comprehension of the material. Multiple-choice, true/false or other types of question may be used.
4. Form the learners into groups of approximately five.
5. Have each group complete a group copy of the test questionnaire.
6. Provide each learner with an answer key with a rationale for each answer.
7. Have learners score their and the group tests.
8. Complete a chart showing group learning efficiency.
9. Interpret the individual and group scores.
10. Have groups review and assess their performance.

1. Select the material to be learned

The method works well across a range of subjects where:

- Learners need to gain a knowledge of facts, understand concepts or principles, or deduce consequences because in most cases they will enjoy exchanging information, explaining their reasoning to others and listening to alternative ideas.

- Learners have access to resource material to complete preparatory study and undertake the comprehension test prior to working in the group. Printed text, audio or visual material, computer programs, live events and field trips are all suitable resources.

- The learning outcomes are suitable for testing by questionnaire.

The quantity of material selected is a matter for professional judgement. You need to consider the difficulty level, the amount of pre-group study time available, and the length of the group learning session. Look at the appendix related to questionnaire and answer-key preparation, this may help you to clarify whether the material you are considering using lends itself to this presentation.

2. Present material to all learners

Each learner is to study the material alone and complete a questionnaire that will assess his or her knowledge of the content based on private study before coming to the interactive class session. They may refer to the resource material while completing the questionnaire. Doing this is motivating, and will probably increase the learners' understanding of the content. The participants need to know that they have a mutual responsibility as members of a group, and will be working as a team managing their learning.

3. Have learners complete a suitable questionnaire to test comprehension of the material

Suggested types of questionnaires suited to this teaching method are true/false and multiple-choice. (For preparation of multiple-choice questionnaires see Appendix One.)

Other questionnaire types, appropriate to this approach, are those where learners are required to classify items, sort them into a rank or an order, about which there could be sufficient doubt to generate useful discussion.

4. Form the learners into groups of approximately five

This method of learning will work with either homogeneous or heterogeneous groups. A random scheme can be used for forming heterogeneous groups, otherwise have learners choose the participants with whom they would like to work. Homogeneous groups will be established according to whatever criteria you decide upon.

If there are learners who tend not to prepare for group sessions, it may be useful to put them into a group together as this will prevent them being "carried" by the efforts of other students. This technique sometimes results in motivating these students to carry out greater preparation.

5. Have each group complete a group copy of the test questionnaire

When the groups meet everyone should have studied the material and should have completed his or her questionnaire. Each group is then given one fresh copy of the same questionnaire for the group session.

Learners are instructed to discuss the questions, agree on the correct answer to each question, and complete the group questionnaire. **They should not consult the original resources during group discussion time.**

A time limit should be established based on the difficulty level of the questionnaire, size of the groups and the time available for the session.

If group skills are lacking, additional procedures may be set down. For example, each member may be required to give the group his or her answer and the reason for that answer before discussion is commenced. Following this, group consensus will be sought on the most valid answer to the question. Groups may be advised to set aside questions about which they cannot agree and move on until they have reached agreement on as many items as possible. The group may then return to disputed items and attempt to reach a consensus on the best answer.

Students may need help to keep the group interactions constructive and not confrontational. Using expressions such as *I disagree with that* rather than making direct personal attacks such as *You are wrong* will assist. Groups should be seeking consensus - that is, agreement by all members based on reasoning and understanding. Majority voting is inappropriate.

Group leaders are not necessary. It is better for all the learners to feel responsible and to be self-regulating. Groups become increasingly effective as members gain experience in this style of learning.

6. Provide each learner with an answer key that includes a rationale for each answer

After the group discussion time, give everyone a copy of the answer key so that they can score both their own and the group questionnaire. Self-scoring keeps control and responsibility in the hands of the learners and is an important feature of effective adolescent and adult learning groups. It allows everyone to satisfy their curiosity about which of the answers is correct and why. Scoring both questionnaires enables each member to assess their learning efficiency at the preparatory learning task compared with the results of the group effort.

The group score indicates the success the group had at evaluating the information, facts and opinions of group members and arriving at consensus decisions.

7. Complete a chart for showing group learning efficiency

If the group work has been effective, the group questionnaire score will be higher than any of the individual test scores. This provides evidence of the benefits gained by effective group learning. A chart such as the one below will allow a comparison of the groups.

GROUP	A	B	C	D	E
Highest score					
Lowest score					
Average score					
Group score					
Learning efficiency score					
Rank					

Adapted from: Mouton, J.S. & Blake, R.R. 1984, *Synergogy: A New Strategy for Education, Training and Development*, Jossey-Bass, San Francisco.

Names of group members are not recorded on this chart, only the lowest and highest scores.

The group learning efficiency score is the difference between the average individual score of group members compared to the group score.

If the group score is higher than the average individual score, the group has gained from their learning activity together. If it is lower, the group has lost ground as a result of the activity. This enables members to calculate how well their group performed against **how well they could have performed** if they had used their resources effectively.

8. Interpret the individual and group scores

Group members should discuss their gain or loss. A group score exceeding the highest individual score shows that members combined their knowledge and reached a group understanding that was better than any individual member's understanding prior to the discussion. A group score well below the average individual score indicates that the discussion period wasn't profitable and that group processes prevented them from using their resources fully.

If the group score is close to the lowest individual score, it suggests that the least knowledgeable member may have been the most influential in the group. A small gain or loss indicates that there was little value in the group discussion. A significant gain that is still below the highest individual score in the group shows that resources in the group were not fully used.

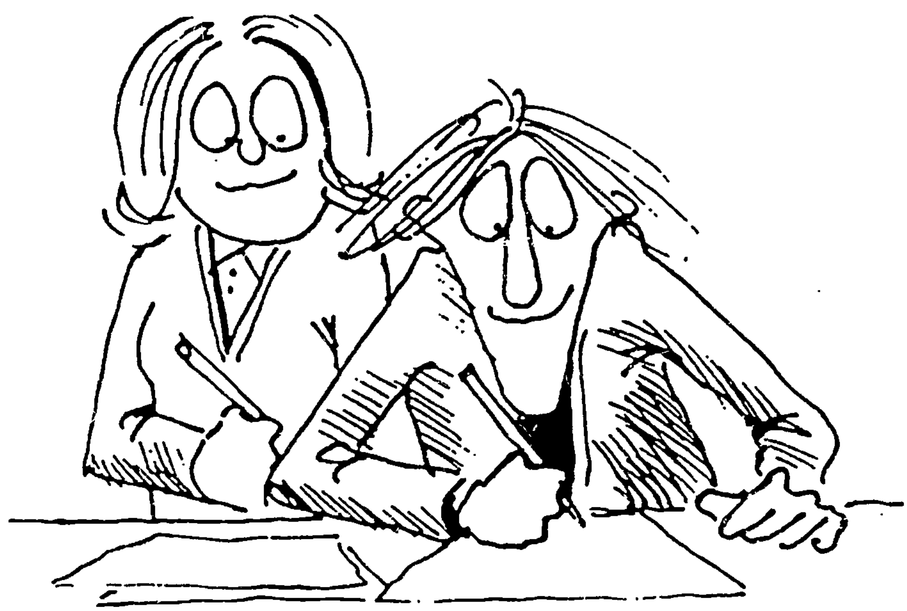
9. Have each group review its performance and assess it

The time required for the performance review depends on the experience of members. Once learners are familiar with the process, they become very effective and efficient at assessing performance. Suggested questions for the review:

- Did individual members of the group prepare sufficiently?
- Did any member(s) dominate?
- Did group members rely on majority rule or compromise, instead of considering the issues?
- How did the groups manage disputes?
- Did any person in the group have the correct answer to a question that was missed by the group? If so, why was that resource missed by the group?

✍ Were there any questions missed by all the individuals in the group which were answered correctly on the group questionnaire? If so, was there some strategy the group used (that members could benefit from using in future) that brought them to a correct conclusion even though none of the individuals knew the right answer?

✍ How could individuals prepare better for future group work?



TEACHING LEARNERS EVALUATION & ASSESSMENT

OVERVIEW OF THE METHOD

In most traditional learning situations the instructor assesses the learner's work. The grade given tells learners whether their performance is judged as poor, acceptable or excellent. Often the instructor's criteria and methods for assessing a piece of work are largely unknown. The lack of involvement in and understanding of assessment places an undesirable stress on adolescent and adult learners whose normal development requires that they be increasingly autonomous.

Skills audits and performance reviews are a feature of the new industry training initiatives. Knowing how to develop explicit criteria for assessing a performance or product is an important skill for learners. Mastery of this skill will enable learners to judge their own and other peoples' work in contexts outside a classroom situation.

The skills taught in this unit may not be suitable to all learners. **Learning to evaluate processes and assess one another requires that participants have the ability to work co-operatively and to give and receive criticism in a constructive way.** If in doubt about learner readiness, first teach the enabling skills that would prepare them for this method of teaching.

Before attempting to use the technique, familiarise yourself with the preparations required.

LIST OF STEPS

1. Select the skill(s) or task(s) to be learned.
2. Provide a set of standards for group members to use to validate the performance criteria they develop.
3. Form the learners into groups.
4. Obtain samples of learners' current performance at the relevant task.
5. Have groups meet and develop performance criteria.
6. Have groups compare and evaluate their performance criteria against the set of standards you have provided.
7. If the task and/or method of recording allows for anonymity, give each group member an unidentified sample from those obtained.
8. Have each member present and discuss the sample he/she has been given while group members make notes. The group compares each sample to the established criteria.
9. A written group assessment report is then prepared on each sample. The strengths and weaknesses, similarities and differences noted by group members are recorded in a brief report.
10. Samples are returned to their owners with the written report attached. Each member presents their sample to the learning group. The report is read and the member responds to it. Group discussion helps each member to interpret the assessment, understand its value and limitations, and how to improve the quality of the performance at the skill or task.
11. Until the desired standard is reached, repeat performances of the relevant task/skill are carried out with members using their previous sample and the assessment report to help them. Steps 8 - 10 are repeated.
12. The group process is evaluated.

1. Selecting the task to be learned

The method can be used to teach any skill for which effective assessment criteria can be developed. Some examples are written essays, use of a machine, an interaction with a customer, an interview and a demonstration of a skill. Recording sample performances of live work may require the use of resources such as video or audio taped recordings and photographs. These will not be able to be anonymous so it is important to have the agreement and co-operation of the students to use the samples.

Preferably, choose content where objective criteria can be used to assess a performance. Once learners understand the criteria and their rationale, they are able to apply them constructively to either their own or another person's performance. This is an important aspect of quality management and team-work in industry.

The technique works well for instruction where it is important to emphasise the relationship between concepts and application skills. Learners will become aware that they not only need to acquire knowledge, but also the skills, motivation and attitudes to be able to apply it. Use this technique where it is desirable that learners understand the criteria by which a set of skills or techniques can be evaluated as competent, so that they can adapt or extend their performance under varying circumstances.

2. Providing standards for criteria development

The facilitator must provide standards that are comprehensive and complete so that performance is not being judged by limited criteria. The standards should be valid and including, where necessary, a statement of their limitations. The standards must be readily understood by the learners and not include material outside their knowledge or experience. They must be unambiguous.

Depending on the content under study, the standards could include recognised industry practice, professional standards, licensing regulations, government codes or ordinances, expert advice or examples from a range of reference books.

For some situations a *critical incident* method could be used. Identify a positive or negative critical incident and establish the underlying causes. For example, analysing a marked increase in productivity or an on-site industrial accident may form the basis of the incident being considered. The idea is to establish valid criteria for practice either to ensure consistent repetition of a positive incident or to prevent recurrence of a negative.

Well documented research or reports of well-designed experiments are another useful source for standards.

3. Forming groups

Groups may be homogeneous or heterogeneous. Heterogeneous groups can exchange samples. Homogeneous groups should receive a representative sample from each level of the performance standards represented.

The size of groups is determined by the task, the time available, and the number of learners. However, in all cases, make sure the learners have a non-threatening constructive environment in which to learn these skills.

4. Obtaining sample performances

Each learner must provide a sample of their performance at the task either written, videotaped, role-played, shown or modelled. If the task lends itself to the sample being kept anonymous this is best.

The method can be used for any skill for which effective evaluation criteria can be developed. For example, written essays, use of a machine, an interaction with a customer, an interview, a demonstration of a skill may be used.

It is important to have some means of recording performances for evaluation so that learners do not have to rely on memory of the performance. Recording can show learners aspects of their performance of which they are quite unaware.

Samples can be obtained with or without the learners being aware that their performance is being recorded for sample purposes. Sometimes a better performance is obtained if the learner is unaware of the scrutiny. **Performances obtained in this way should not be used in the group session without the prior consent of the learner.**

For demonstrations and role-plays, detailed notes of the performance can be taken. The more spontaneous the performance, the more meaningful and useful the feedback is likely to be to the learner. The sooner a simulated performance is followed by the group session and the opportunity for a real life performance, the more useful will be the feedback.

5. Developing performance criteria

Learners are given a copy of the set of standards for study and discussion to help them in the development of their criteria.

Groups develop criteria to judge competent performance at the relevant task. The aim is for learners to understand the concept of *sound* criteria. That is, those that are explicit, clear and complete, and include relevant statements of time, conditions and standard of competency.

6. Group consensus on criteria

After the groups have each developed a set of criteria, the task is to compile a new set by reaching class consensus on which individual items are the best from the group sets. To do this, gather all the learners together. Compare the criteria with the standards provided to the learners and reach agreement on which of the criteria the different groups have developed will be used. This will result in a single set of criteria that everyone has agreed should be used to measure performance competency.

7. Distributing samples

Each group member is given a sample performance that he/she is responsible to present for evaluation and prepare the group assessment report on. If it is feasible, it is better if the sample is anonymous.

If the groups are homogeneous make sure that each group receives samples across the range of skill levels.

8. Group assessment of samples

Each group member presents the sample allotted to him/her while the group observes, listens, discusses, makes notes, and decides how each sample compares with the agreed upon criteria. A brief review is carried out by each group to ensure that there has been uniformity in the way the criteria have been applied to each sample.

9. Identifying strengths and weaknesses of each sample

A group assessment report is prepared on each sample identifying similarities and differences, strengths and weaknesses, against the criteria. The report on each should be written by the person responsible for the sample and should summarise **group** conclusions. It needs to be in specific terms so that the performer can gain maximum benefit from it. The majority of, if not all, comments should be expressed constructively.

10. Reading assessment reports

While learners are still in their groups, they identify their sample and it is returned with the assessment report. Learners present their sample to the group in which they are working and read the report. After each presentation, responses to the report are explained to the group by the learner. That is, the learner provides feedback on the assessment report. Group discussion follows using guide-lines such as those suggested below. These are to help the performer interpret the report, recognise both the value and limitations of it and receive suggestions for improving performance.

11. Guide-lines for evaluating assessment reports

When evaluating assessment reports, the following points may be considered:

- How complete fair and accurate is the report?
- How well did the sample performance represent the learner's skill?
- Does the group have suggestions that could help improve performance?
- Is there any knowledge the group has of the learner that makes members feel that something of significance has been overlooked in the assessment report?

12. Evaluating group process

Note: If this step is not going to be used go to the next section - Performance improvement.

For groups learning how to evaluate and assess performance, you could develop a set of criteria for evaluating a successful group performance and make that activity an additional exercise at the skill.

The following are suggestions for some aspects that you could consider:

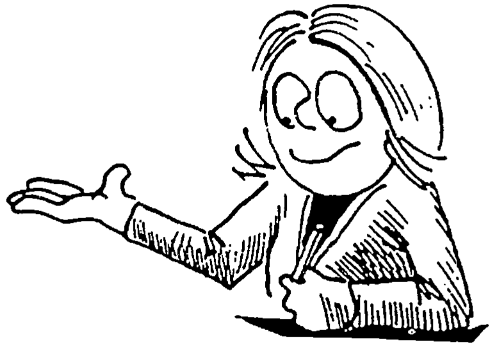
- How well did group members work together?
- How well did the group manage their time?
- Was there effective participation by everyone?
- How well were conflicts managed?
- Could explanations and viewpoints have been more clearly expressed? If so how?
- Did people listen carefully?
- Encourage the students to develop proactive listening skills by reflective listening, probing, clarifying.
- Did participants remain objective when giving feed-back?
- Were any group members uncomfortable giving and receiving constructive criticism? If *yes*, given that objective criteria were being used, how could that effectively be changed?

13. <u>Performance improvement</u>

Provide learners with a new task to perform using the same skills. If the previous performances were acceptable, then the new task should be intended to further upgrade the skill(s) and should have greater difficulty.

Encourage the learners to use the criteria developed and their previous sample and assessment report to improve their performance as they complete the new task.

Repeat the steps used previously until the desired level of skill is attained.



APPENDIX ONE

PREPARING MULTIPLE-CHOICE QUESTIONNAIRES

PLANNING THE QUESTIONNAIRE

Review your objectives for the learning segment.

Extract from resource material the information essential in ensuring that learners achieve the objectives. This information must be the focus of your questionnaire.

The questions should be distributed in accordance with the emphasis of the objectives of the learning segment.

The number of questions will be determined by the number of essential points in the material. Make sure you have restricted the amount of content material to allow time for discussion of each question when the group meets.

In multiple choice questionnaires, there is an opening statement and a series of alternatives from which the learner is to select a completion of the opening statement.

Opening statements need to be pertinent to orient the learner to the information and to be concise.

They must be written so that the answers can be concise. A feature of poorly constructed multiple-choice questions is that either the opening statements or the alternative endings are so complex that the reader forgets the contents of one half while trying to find the other!

To avoid prompting recall without comprehension, don't use wording from the original resources.

Multiple-choice questions can have as few as two or as many as five alternative answers depending on the degree of differentiation the learners need to make to meet the objectives.

The more thorough the understanding needs to be, the more choices, or questions, will need to be included.

Longer questions may take more group time to read, clarify, get consensus on meanings and discuss.

Here is an example of a well constructed multiple-choice question. The opening statement is concise and the alternative answers are all thought-provoking but clear. *(The answer is B.)*

The use of learning groups is to:

A encourage learners to value group co-operation.

B create a collegiate learning environment amongst learners who have a common learning task.

C provide an experimental situation for learners to role play solutions to problems.

D highlight to learners the issues involved in working in groups.

E overcome the lack of human interaction associated with programmed learning.

WRITING THE QUESTIONNAIRE

Write all the question statements with the correct answers first. Work systematically through the material to be tested. Write each statement and its correct answer on a separate sheet of paper and identify the answer as the correct one.

If alternative answers come to mind as you are writing, note them on the sheet, but generally leave the developing of alternatives until the whole questionnaire has been drafted. It is easier to adopt deliberately the *distracted* mind-set required to develop the incorrect alternatives once the opening statements and correct endings have been developed and edited.

WRITING THE ALTERNATIVE ANSWERS

Make sure the alternatives are sufficiently plausible to identify the learner who has only superficial understanding of the material. Incorrect alternatives can be obtained by giving a sample group of learners the statements in a question/answer format, and using their incorrect answers as *distracters*. There is no need to have the same number of alternatives for every item. Use sufficient alternatives that will be instructive for the learner to think about and reject.

An alternative quickly rejected as false by one student may be a troublesome distracter to another. Equally, a subtle false alternative is likely to be more difficult for a well-prepared learner than for one who has a shallow understanding of the material. It is good to have a subtle alternative, but only if the rationale for asserting its incorrectness can be fully comprehended by a discerning student. Don't offer alternatives that are obviously incorrect. There is no place for trivial statements that waste learners' time or for trick questions and answers that do not measure learning.

EDITING AND REVISING THE QUESTIONNAIRE

Make sure that the correct answer and the false alternatives are of approximately the same length. There can be variations among alternatives that increase the challenge, e.g., balanced pairs of long or short distracters or a long correct answer paired with a long distracter. The questions should be such that an unprepared learner could not answer them based on logic or common sense.

Incorrect alternatives that appeal to common sense are useful as they emphasise to learners the need to understand the material. Incorrect answers that are based on attitudes rather than on the facts explained in the learning material will help to distinguish between facts and opinions, but make sure there is only one clearly correct answer.

Reword statements to avoid the use of absolutes such as *all, none, always, never,* unless the restricted word is being correctly applied. Avoid using *all of the above* or *none of the above.*

Reword any statements that are expressed in a negative form. Decoding negative questions can confuse learners. Such confusion has nothing to do with understanding the material. Be sure that each option is a grammatically correct completion of the opening statement. Watch out particularity for phrases commencing with *a* or *an.*

Consider the arrangement of the items in the test. Should they follow the sequence of the original material so that the learners are able to recognise the same logical flow? Should they be arranged according to level of difficulty so that learners can build up confidence as they proceed and the group discussion can become more effective?

Make sure that the correct answers are presented in a random order.

PRETESTING THE TEST

If it is possible, have interested colleagues do the preparatory work and answer the questionnaire, keeping notes to explain their reasons for selecting the answer they did and for rejecting the alternatives.

PREPARING AN ANSWER KEY

Prepare an answer key and check it for accuracy. If possible have a reference notation with each answer so that the learners can locate and restudy any items they have answered incorrectly.

APPENDIX TWO

ASSIGNMENTS

The practice of having students undertake private reading, research, field activity or experiment on a given topic and then produce a report or presentation on their findings is well established. However, with the emphasis now being placed on competency based assessment, it is one that needs to be carefully reexamined.

With the arrival of sophisticated technological methods for the compiling, storing and retrieving information, many students do not have the skills needed to use the equipment and access resources that would enable them to complete some of these assignments, achieving a higher standard and thus receiving higher marks. If this is the case, then, besides the assignment, students are going to require instruction to competency level at these enabling skills. This will have to be considered by the teacher preparing the assignment.

In competency based teaching, student learning is the product or outcome. Teachers have the responsibility of ensuring that a proper cost/benefit analysis of the task has been done from the perspective of learning outcomes before using an assignment as a part of the instruction process. The *Teacher's Assignment Planner* provides some questions that will help you to do that analysis.

TEACHER'S ASSIGNMENT PLANNER

PREPARATION AND INFORMATION TO BE PROVIDED

Careful preparation and consideration of topics and the provision of key information to students will maximise the potential for them to complete the assignment to your expectations. The following review points may be considered:

- Are you sure this assignment is the best route to achieving a worthwhile learning goal?
- Have you a clearly defined topic, understandable by the learners?
- How **broad** or **narrow** do you intend the scope to be? Do you want the learners to do a survey of the **surface**, or produce an **in-depth** study?

✍ **Have you talked with the resource centre staff yet?** There may not be sufficient suitable resources available for the students. If there are, the library staff need to know what quantity, kind, and quality of resources will be required and over what time frame for learners to complete the assignment.

✍ Have you ensured that your learners have the knowledge and skills to:

- access and use all the resources the assignment requires?
- evaluate resources?
- select and record relevant material?

✍ Have you thought about the range of research and presentation techniques available? Can you give your learners the opportunity to experiment with different types of research and presentation to broaden their skills?

✍ What modes of presentation are most suitable for the learning goal and the content? Discussion? Debate? Argument? Comparison/Contrast? Case Study? Field Survey Report? Essay? Demonstration? Recording? Model? Experiment?

✍ Should the outcome be a written or an oral presentation? Illustrated or not? Can tapes or photographs be included?

✍ You want it WHEN? Many assignments embody unrealistic expectations of time required for their completion. Have you estimated **how much time the assignment will really take** - not for you the expert, but for the learners?

ASSESSMENT

Assessment procedures must reflect the emphasis on **research and writing skills** as well as on subject matter, or there is no incentive for the learners to gain the skills. It would not be inappropriate to inform learners of the criteria against which you intend to assess the content, research procedures, resource use and presentation.

APPENDIX THREE

LEARNER'S ASSIGNMENT PREPARATION GUIDE

This guide outlines the areas students need to have competence in when completing assignments. It's important for teachers to recognise that students may not have these skills when they arrive at TAFE colleges. Also, students may not be aware of the kinds of information that would be accessible to them if they were competent at information access and use. This is an area where the expertise of the library staff needs to be accessed effectively. Sequenced instruction by library staff during class time is one way to provide these essential learning-enabling skills for students. To be really effective, it is best if such skills are built into courses and address relevant subject assignment task/s so that the skills can be immediately applied.

Ideally the resource centre should be an essential reference point for teachers. Active collaboration between teachers and librarians in lesson planning and preparation could add significantly to the value of the courses. Librarians are essential members of the professional education team and are well qualified to provide students with information search and access skills.

We are in a high technology, fast changing industrial society. Vast quantities of information are now available, and it is essential that people are as skilled as possible at knowing about, and accessing the kinds of information they may need. Students and teachers need adequate access to the professional skills of librarians.

The following pages guide you to the information skills and procedures learners may need to undertake assignment preparation.

STAGE 1

<u>Defining the task</u>

If selection is available, choose the topic. Analyse the requirements. The questions you need to ask are:

- ✍ What is the purpose of the assignment?
- ✍ What audience is it intended for?
- ✍ How much time is available for preparing it?

- ✍ How much detail is necessary?
- ✍ Is the wording clear?
- ✍ What do any special terms mean and how do they relate to each other?
- ✍ What do you already know about the topic?
- ✍ What do you have to find out?

The answers to the previous questions will identify your *information need.*

Where might information be found?

The following sources of information may be considered: Organisations, societies, libraries, resource centres, experts, data banks, published works, case studies, field observations.

How many of these can you access?

How suitable is each of the available resource locations for your topic? Consider reliability, level of information you need, relevance.

Decide which location to use first.

STAGE 2

How do I find the information?

Information stored in a library, resource centre or data bank will be organised according to a **system** and you will need to be able to access the system. You may need to approach a person to find out how to do that.

In a library, you must **use the guides provided** to understand the classification system or you will not be able to find information effectively. It's important that you find the most useful and appropriate **subject headings** or **keywords** to use. If you're not sure, ask a librarian for help.

It is likely that guides including layout plans, catalogues, subject indexes will be available. If these are stored on computer, you must learn how to use the terminal.

To get information from an organisation it is important to find out which people have expertise and who has the authority to give you access to the person and the information you need.

If there are several people in different parts of the organisation, you may have to make a choice. If your information source is a person, **framing the questions** to ask is critical for obtaining information.

What kinds of resources could I use?

Information can be provided in a range of formats. These include:

- Non-Print, e.g., photographs, drawings, maps, overhead transparencies, films, videos
- Print, e.g., books, reference books, reports, journals, magazines, newspapers
- Examples, models, samples, specimens

People who are generally recognised experts with specialist knowledge, skill, experience are also a resource that may be useful.

STAGE 3

Deciding which resource to use.

After locating resources, evaluate them to decide which are most suitable for use. Consider the following criteria:

- ✍ Is the language and information *level* about right for your needs?
- ✍ Is the *scope* about right?
- ✍ Is the information *relevant?*
- ✍ Is it *reliable?*
- ✍ Is it *biased?*
- ✍ Is it *up-to-date?*

How can I find answers to my questions?

You will find some clues on the external packaging as well as in the contents. On a package, read labels and information brochures and skim any accompanying workbooks.

Authors and producers often indicate their target audience or the suitability of contents for a particular age level or study purpose. For print works read about the author, consider the implication of the title, check the information supplied on the dust jacket and look for additional information on the title page. Scan tables of contents, indexes, forewords, prefaces and bibliographies.

Check any information available about the author, editor, producer or publisher.

Sample the contents for indications of the language level, terminology, illustrations, tables, amount of detail and relevance to your need.

Follow up references to other sources.

STAGE 4

How do I find the information in the resources?

Be clear about your need and your time constraints.

Reading for research is a special skill, it is quite different to reading for any other purpose. Be selective, check:

- Table of contents
- Index
- Subheadings
- Glossary
- Appendices
- Chapter summaries. Only certain chapters and/or paragraphs may be relevant. Check by reading chapter summaries, and the first and last sentences of paragraphs.

With computer programs, the whole work may not be relevant - check before you start.

What do I record?

Remember your need and record only what is relevant. Be aware of the copyright legislation regarding photocopying.

What is the best way to record information?

Plan so that you have a system for arranging and storing your information under headings or topics as you collect it.

Depending on your organising and storing system, use cards, linear notes, or slips of paper to make notes, summarise and paraphrase. Take photographs, make photocopies, tabulate, diagram, sketch, model, memorise, tape record.

To avoid back-tracking, note the author and title of the source material as you record information. When preparing an assignment, you must always acknowledge your sources.

There is a skill to the use of quotations. Subtle judgement is required and quotations must be accurate.

STAGE 5

Do I have the information I need?

Review what you have. Interpret it. What do you think it says about the topic? Put together, does it amount to a sound basis for your assignment needs? Is there anything missing? If you need to, repeat the steps in the earlier stages until you have all the information you need.

How should I present the information?

The questions that will help you decide are:

- ✍ Do I have a choice for presentation?
- ✍ Who is my audience? Instructor, colleagues, professionals, students, others?
- ✍ What knowledge do they have of the subject? At what level?
- ✍ What form is best suited to the content and task? Essay? Report? With or without illustrations? Include audio or audio-visual as well as diagrams or other pictorial material?
- ✍ If an oral presentation is selected, what form shoiuld it take? Talk? Discussion? Seminar? Workshop?

Where the presentation is to be written or oral, think about whether the information should be presented as:

- a description or an account of events,
- an idea or a problem,
- the application of a principle or a procedure,
- an argument for or against,
- a debate of pros and cons,
- a case study,
- comparison and contrast, analysis or interpretation.

STAGE 6

How should I structure my presentation?

You need to decide how it should be introduced and the best way to arrange the material. Whatever the form, there are conventions to be followed.

If you decide to present it as an analysis comparing and contrasting, then complex skills are required to organise the evidence and construct an argument.

Whatever structure is being followed to give shape to the material will require a process of thinking. You need to classify the information under headings and establish a relationship between the headings. Use this information to decide on the best sequence of points.

Some possible sequences to consider are chronological, geographical, general-to-specific and according to the order of a process being described.

Are subheadings or numbered sections needed?

What system should be used to number and label illustrations, diagrams?

How should the presentation be rounded off and concluded?

How should sources be acknowledged?

Prepare a draft. Preferably have a subject matter expert, your instructor or a colleague check it and comment. Evaluate the comments, review the draft and make any required changes.

Prepare the final presentation. **Always keep a copy** of the completed assignment.

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