

Professional Development Strand

Unit 7: Teaching Methodology

Module 7.2 General Teaching Methods



Student Support Material

Acknowledgements

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Layout and diagrams supported by Nick Lauer.

Date: October 2002



Primary and Secondary Teacher Education Project

Australian Agency for International Development (AusAID)
GRM International

Papua New Guinea-Australia Development Cooperation Program

Unit outline

Unit	#	Modules
Unit 7 Teaching Methodology	7.1	Introduction to Teacher Centred and Child Centred Approaches
	7.2	General Teaching Methods
	7.3	Multigrade Methods

Icons



Read or research



Write or summarise



Activity or discussion

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[Notes]

General Teaching Methods

Rationale

This module is one of three in a three-credit point unit. The actual break-up of topics and time allocation is flexible, and to be decided upon by the individual lecturer.

The preceding module in this unit is:

Module 7.1 Introduction to Teacher Centred and Child Centred Approaches

The following module in this unit is:

Module 7.3 Multigrade Methods

This module builds upon the information introduced in Module 7.1, and explores specific teaching approaches or strategies, both teacher and student centred. It is important that beginning teachers develop a variety of strategies to use when teaching, understand the reasons why a particular strategy may be useful in promoting learning, and choose strategies which are appropriate for the needs of the students being taught.

Beginning teachers should be aware that not only must they know **what** to teach (i.e., content) they must know **how** to teach, providing opportunities for their students to process information to assist in their learning. Teaching strategies relate to the *how* of the curriculum.

Objectives

By the end of the module, you will be able to define, describe and discuss the advantages and disadvantages of using:

- Direct instruction/ expository teaching as a teaching strategy
- Discussion as a teaching strategy
- Group work as a teaching strategy
- Co-operative learning as a teaching strategy
- Problem solving as a teaching strategy
- Role play as a teaching strategy

By the end of the module you will be able to:

- select appropriate strategies for different lesson types and different learning styles of students in your class.

How to use this material

This module is written as a series of topics, identified in the table of contents, and by their large sub headings. Each topic includes some readings and activities to complete. Your lecturer will guide you through the materials during the lecture program.

Sometimes, you may work directly from the book during the lecture. Sometimes, your lecturer may ask you to complete an activity or reading for homework. Your lecturer may include additional information and topics.

Assessment

Your lecturer will provide details of assessment requirements during the first weeks of the program. These assessment tasks will provide the opportunity for you to show your understanding and apply your knowledge of the theory to practical situations.

References

Whilst all the readings that you need are contained in these resource materials, additional references used in the writing of this module are included.

Recommended reference

Much of the material in this module has been adapted from the following text. You do not need the reference to complete the module, however it provides further information on the topics in more detail.

Killen, R. (1998) *Effective Teaching Strategies*, (2nd ed) Social Science Press, Australia.

Other useful references

Mc Burney-Fry, G. (1998) *Improving Your Practicum; A Guide to Better Teaching Practice*. Social Science Press, Australia.

Barry, K., King, L. (1998) *Beginning Teaching and Beyond* (3rd ed) Social Science Press, Australia.

Mannison, M. (1993) *Interactive Teaching Strategies*. Social Science Press, Australia.

Marsh, C. (2000) *Handbook for Beginning Teachers* (2nd ed) Longman, Pearson Education Australia.

Direct Instruction

*Adapted from Killen R, (1998) **Effective Teaching Strategies**. Social Science Press. Australia.*

In many schools, teachers colleges and universities, direct instruction (particularly lectures and demonstrations) is very common. In Papua New Guinea, it has been the main style of instruction in the past, and is still very prevalent as a main form of teaching.



What is direct instruction?

Direct instruction is a term often used to describe a variety of whole class expository teaching techniques. It is sometimes referred to as 'chalk and talk'. It is a teacher centred approach in which the teacher delivers the academic content in a highly structured format, directing the activities of students and maintaining a focus on academic achievement.

Common forms of direct instruction include lectures and demonstrations.



Some advantages of direct instruction

Even though student centred approaches to teaching have become more popular in recent years, support for direct instruction still exists. Some of the advantages are listed below.

- Direct instruction gives you maximum control over the learning environment
- You are in control of the content and sequence of the information that students receive, so you can keep the focus on the outcomes that students are to achieve
- It can be used equally effectively with large and small classes
- It can be an effective way of teaching factual information and knowledge that is highly structured
- It allows you to present a large amount of information in a relatively short time, and all students are given equal access to this information
- Lectures can be a useful way to provide information for students who are poor readers or who are not very skilled at locating, organising, and interpreting information
- Generally, direct instruction allows you to create a non-threatening (reasonably stress free) environment for the students. Those who are shy, not confident, or not knowledgeable are not forced to participate and become embarrassed.

- Direct instruction that emphasises listening (eg lecturing) and direct instruction that emphasises observing (eg demonstration) both help students who prefer to learn in these ways

7.2 Activity 1

What types of learners are likely to prefer teachers who use direct instruction?

Some limitations of direct instruction

Direct instruction is not always appropriate, since it is not always the most effective way to help students learn. Some of its limitations are:

- Direct instruction relies heavily on students being able to take in information through listening, observing and note-taking. Since not all students are good at these skills, it makes it difficult for some.
- It is very difficult to cater for individual differences between students' abilities, prior knowledge, rate of learning, level of understanding, learning styles, or interest in the subject during direct instruction.
- Because students have limited active involvement in direct instruction, there are few opportunities in this type of lesson to develop their social and interpersonal skills.
- There is some research evidence that the high level of structure and teacher control of learning activities characteristic of direct instruction may have a negative impact on students' problem solving abilities, independence and curiosity.
- If the direct instruction does not involve much student participation, their interest will be lost after 10 – 15 minutes, and they will remember little of the content.
- If used too frequently, direct instruction can lead students to believe that it is the teachers' job to tell them all they need to know, making them less willing to take responsibility for their own learning.
- Because direct instruction involves a lot of one way communication, there are limited opportunities for you to gain feedback about student understanding. This may leave students with limited understanding or misconceptions.

7.2 Activity 2

Think about some of the lessons you have taught or seen where the teacher/lecturer has used direct instruction. Were some of them more successful than others? Why?

What are some of the problems that students might experience when they are watching a teacher demonstration?



How can you use direct instruction successfully?

Successful direct instruction depends on two main factors; whether or not the information you present makes sense to your students, and whether or not your students are interested in what you present. Both of these factors are under your control.

What can you do to help students make sense of your lesson?

There are a number of useful ways of structuring your lessons to help students see where they are going and why.

Structuring

Using **overviews** or advance organisers allows you to tell students the purpose of the lesson, and to help them see the broad picture before you start going into detail. Another way would be to tell the students what outcomes they will achieve as a result of the lesson. Once students know where the lesson will take them, show them how they will get there. Using flowcharts or a simple list of points to be discussed will help them follow the lesson to its conclusion.

Learning will be made easier for your students if you highlight main points, proceed in small steps at an appropriate pace and give students opportunities to check that they understand what you are talking about.

Helping students to master the language

Students will not be able to understand the subject you are teaching them unless they understand the language of the subject.

You must help students to master the language of your subject at the same time they are trying to learn the content. This is particularly important if you are teaching students who are moving from vernacular literacy to English. Don't expect the students to understand the words just because you might use them a lot, and do not assume that because students use words, they know what they mean.

Assessing student note taking

You will help the students by taking the time to explain the vocabulary or why particular words are being used.

Don't expect that your students will have appropriate note taking skills. Make it easy for them by emphasising main points, by making the structure of your lesson clear, and by giving students time to take notes.

Using student ideas

One of the best ways to maintain students' interest is to involve them actively in the lesson. A good way to do this during direct

instruction is to use the students' ideas as an important part of your lesson. Asking questions and inviting students' comments on the ideas that you are presenting are simple ways to involve the students.

During any instruction, it is very important that you know whether or not students are learning. You may be able to judge this informally by the looks on their faces, the questions they are asking, and from the answers that are given to your questions. It is useful to give a small quiz or test during or at the end of the lesson to give you additional feedback on student learning.

Checking student understanding

7.2 Activity 3

Plan a short direct instruction lesson to be taught to your group. Choose a topic that is interesting to you.

Present an overview, a flow chart of what you will be discussing, and use some of the methods listed above to help you teach the lesson.

Ask the group to give you feedback on your lesson and what they thought of the direct instruction method.

MORE IDEAS FOR EFFECTIVE DIRECT PRESENTATION

Always communicate clearly, and avoid unnecessary and repetitive words like 'right', 'you know' and 'OK'

Vary your speech rate, volume and pitch to match the message you are delivering and to help maintain interest.

Don't go too fast. Students need time to think

Always talk to the students. Not the blackboard or the floor.

Make eye contact with as many students as possible

Use appropriate gestures and physical movements, but do not wander aimlessly around.

Try to minimise the barriers (physical and otherwise) between you and the students.

An exposition strategy

*Adapted from Barry & King (1998) **Beginning Teaching and Beyond**.
Social Science Press, Australia.*



An exposition strategy is one in which the teacher presents material to the students through explanation, questioning and discussion.

The exposition strategy consists of four major steps:

1. Setting the scene
2. Presenting the material
3. Student activity
4. Checking understanding/transferring material to real life.

The major purpose of this strategy is to transmit information as quickly and meaningfully as possible. It emphasises building on prior knowledge and having students assimilate information by listening. The teacher transmits information and the students are passive receivers. It is suited to all year levels and abilities, but is most commonly used with older students in information oriented lessons.

The major limitation of an exposition strategy is that it can be boring, long, and poorly presented. Students can have little opportunity for involvement, so social skills and learning outcomes can be minimal. It is also difficult to cater for individual differences with an exposition strategy.

Using Discussion as a Teaching Strategy

Adapted from Killen, R. (1998) Effective Teaching Strategies Social Science Press. Australia.



What is a classroom discussion?

Discussion is an orderly process of face-to-face interaction in which people exchange ideas about an issue for the purpose of solving a problem, answering a question, enhancing their learning, or making a decision.

Bridges (in Killen 1998) suggests that in order for an exchange of ideas to be called a discussion, it should meet five conditions:

- People must talk to one another
- People must listen to one another
- People must respond to one another
- They must be putting forward more than one point of view
- They must have the intention of developing their knowledge, understanding or judgement of the issue under discussion

Discussion can be considered as co-operative thinking aloud. Because students are expected to share their thoughts as they discuss academic issues, discussion is both active and student-centred learning.

Discussion can be used in many different ways, either as part of a lesson, as a whole lesson, or integrated with one or more other teaching strategies.

When might you use discussion as a teaching strategy?

A discussion can either focus on solving a problem or focus on exploring an open-ended issue. Some of the most appropriate times for whole class discussions may be:

- When you want students to develop a sense of ownership over their new knowledge and responsibility for their own learning
When you want students to think critically about the subject and develop their skills of analysis, synthesis and evaluation, rather than just memorise facts
- When you want students to develop their understanding by drawing on their prior knowledge and experience
- When your aim is to develop students' communication skills such as stating their ideas clearly, listening to others, or responding appropriately to others.
- When there is a need to develop a sense of group identity so that the students can support each other in their learning.

Some advantages of using discussion

- Discussions actively involve students in learning and because of this, students can feel that they are making a real contribution to their own learning. A discussion is more likely to maintain a student's interest than a passive, teacher directed learning experience.
- Active involvement in learning motivates students, especially when they see that others value their contributions and respect their point of view.
- When used with young children, discussion can be an effective way to help them develop socially acceptable means of interaction, such as listening, speaking politely, and respecting the views of others.
- Discussion can result in more student learning than some other strategies. This occurs because, as students verbalise their thinking, they are able to construct or reconstruct knowledge in a way that makes sense to them.
- Discussion can be an effective way of allowing students to share their knowledge and experience.

7.2 Activity 4

Think back to a previous lecture where you were involved in a discussion. Did you experience any of the points above? Which ones and how did it help your learning?

What makes some discussions better than others? Write about a successful discussion you have had, and one that was not enjoyable. What was it that made the two examples so different?

Some limitations of using discussion

It is not always easy to conduct a discussion, and like other teaching strategies, discussion is not suited to all teaching situations. Both the teacher and student have to learn how to engage in learning through discussion.

- Discussions are unlikely to be productive unless students are well prepared, and that usually requires them to do some prior reading or research.
- It is easy for talkative students to dominate the discussion
- In most discussions, there will be opportunities for students to get 'off the track' and you may need to remind them of the focus of their discussion
- Some students may be reluctant to participate in discussions.
- Some students may not have sufficient command of the language of the subject, or understanding of the key concepts of the subject, or critical thinking skills to join in the discussion.

What should you expect of students during a discussion?

The students should listen attentively

It is important for students to understand that discussion is a collective learning experience that depends on co-operation and objective thinking. Listening carefully is an important part of discussion work and students should be taught and expected to listen to their peers. If they do not, they will not know if their thinking about the topic is similar to the thinking of others, and time may be wasted through unnecessary repetition of ideas

The students should be objective

Encourage students to make rational, logical, objective contributions, and help them to see why emotive contributions are less desirable. Encourage students to raise questions, offer objective opinions and listen carefully to others.

Students need to talk enough, but not too much

Encourage students to contribute, and the best way to do that is to make them feel their contributions are worthwhile. On the other hand, no student should dominate the discussion.

The students should be interactive

During a discussion, students will spend time thinking, but the important part of the strategy is that each student needs to interact with the other students, with the teacher and with the subject being discussed. You want students to be participants in the discussion, and also be observers who are aware of what is happening around them, so they can contribute in a positive way.

Interactive strategies for discussion

*From Mannison, M. (1998) **Interactive Teaching Strategies** NB Publications, Aust.*

Taking turns to talk

This strategy helps focus the group's attention on the speaker during the group discussion. It discourages people from talking too much, and it makes it easier for quiet people to enter the discussion. It is useful in a whole class discussion circle, or discussion within groups.

Materials

A ball or some other soft object which is easy and safe to throw and catch. (A 'paper' ball would do). If a number of groups are working at the same time, each group will need one ball.

Procedure

1. Put the class in a discussion circle OR in group circles for discussion
2. Tell the students the following rules:
 - a. *You can only speak if you're holding the ball.*
 - b. *When you have finished speaking, you may pass the ball to anyone who has signalled (non-verbally) for it, or you can pass the ball to someone whose opinion you would like to hear.*
3. You may ask teams to summarise the points made and report back, or ask individuals to write a summary of their views.

If you have a large whole class discussion circle, you can use a ball of wool. The teacher starts with the ball of wool, and rolls it to the person who is going to speak next. The teacher holds on to the end of the ball of wool. When the second person is finished talking, they hold the string and roll the ball to the next talker. Rolling the ball of wool and holding on to a strand at the same time makes a spider web effect and identifies those who have/have not had a turn.

 **7.2 Activity 5**

In groups of six, form discussion circles. Use a ball or one made from paper, or a ball of wool to indicate who is talking. Discuss the following question:

Multigrade teachers should be paid more than teachers of one class.

Summarise your group discussion and present to the whole class.

Group discussion strategy

*Adapted from Mannison, M (1998). **Interactive Teaching Strategies.** Social Science Press*

Small group discussion amongst peers gives maximum opportunities for students to learn by putting things in their own words and seeing how others interpret what they've said.

Materials

A discussion sheet, one for each group. This can be presented in a variety of forms – a picture, cartoon, short news item, an object, accompanied by a set of questions. You can give each group the same task sheet, or select a theme or topic and give each group one sub-topic.

OR

Focus the whole class discussion by introducing one question at a time, rather than putting them all down on one sheet of paper. You can read out the questions, write them on the board or hand them out, one at a time, written on some card.

Procedure

1. Divide the class into small groups. If you want to assign roles, ask students to number off and give the roles, eg number 1's are recorders, number 2s are recorders etc,
2. Hand out the discussion sheet. Ask the first question.
3. You may wish to adopt a turn taking strategy.
4. Groups report back and class discussion follows.
5. To help evaluate the effectiveness of the discussion, ask each student to reflect on a few questions eg, did you view change during the discussion? Did someone say something that made you think, or that surprised you?

7.2 Activity 6

Try out this activity with your group.

Each group should have about five or six people. Firstly, write some discussion questions about multigrade for use by another group. (Use Blooms taxonomy to provide different levels of thinking skills for your questions)

Give your questions to another group. They will give you a set of questions.

Discuss each question, using a taking turns to talk strategy

Groups report back to the class.



Using discussion in conjunction with other teaching strategies

Structured classroom discussions can be used in conjunction with almost all other teaching strategies. You can use discussion as part of:

Direct instruction

As a part of a direct teaching session, a discussion could be used to explore an issue for a short time (maybe 15 minutes).

Group work

Interactions between students are an integral part of small group learning and can be assisted by a set of discussion rules or strategies

Co-operative learning

Some forms of co-operative learning can include structured discussions within the learning groups.

Problem solving

When you are using problem solving as a teaching strategy, discussions can be used to help generate possible solutions and comparing ideas.

Student research

Discussion can be used to help students clarify their project, to work out how they might go about completing their project and to share results.

Was the discussion effective?

To use discussion as an effective teaching method, you need to evaluate your discussion lesson as soon as it is complete. Some questions to ask:

- Were the students enthusiastic about the discussion?
- Did the students achieve the goal that I set for the discussion?
- Did the students ask relevant and logical questions?
- Did all students have the opportunity to contribute?
- How could I make better use of this teaching strategy in future lessons?

Using Group Work as a Teaching Strategy

Adapted from Killen, R. (1998) Effective Teaching Strategies (2nd ed) Social Science Press, Australia.



Organising your students to work in small groups is a teaching strategy that is strongly recommended by many educators. Like discussion, group work relies on input from students. Sometimes, group work does not produce the learning outcomes that the teacher hoped for, but this could be because of inadequate preparation by the teacher.

When using small group work, you must pass control for some parts of the lesson to the students. You have to create the learning situation and then let the students complete the tasks. Your role becomes one of monitoring, rather than directing the learning.

All group work involves students working together without direct intervention from the teacher (for at least some of the time). This does not mean that students are left to their own devices, but it does mean that the teacher must structure the learning environment. This allows the students to work productively, guided indirectly by you.

Why use groups?

The main reason for using this strategy is that it can offer greater opportunities for students to learn than would be possible in whole-class teaching. This doesn't mean that it is always preferable to whole class teaching, but many teachers use a combination of both during a lesson.

When might you use group work as a teaching strategy?

You must think about what outcomes you want your students to achieve, the students themselves, the available resources and the content of your lesson before deciding what teaching strategy is likely to be most effective.

Group work might be appropriate when you want to:

- Have students exchange ideas and learn from one another
- Improve students' communication skills as they learn the curriculum content
- Enhance students' motivation and increase their active participation in learning
- Improve students' problem solving skills and have them discover there are multiple solutions to problems
- Concentrate your teaching efforts on a small group of students with the other students engage actively in learning.
- Share limited equipment or facilities (rotation of groups allows all students to use the available equipment)



- Encourage and develop co-operation among students
- Teach your students to be self-reliant rather than teacher-reliant

7.2 Activity 7

Discuss with your group some examples of group activities that you have seen whilst on school experience. When did the teacher use groups? Do you think the choice of this strategy was a good one? Was group work used for particular subjects, or across the curriculum?

What are some advantages of group work?

- Group work allows you to vary the learning tasks for different groups of students
- Group work encourages students to verbalise their ideas and feelings and this can help them to understand the subject matter
- Group work engages students actively in learning and this can enhance their achievement and retention
- Group work allows students to experience roles as leaders, peers and subordinates and to experience a range of social contacts
- Group work can be fun

What are some limitations of group work?

- Students have to learn how to work in groups. This may not be easy for students who are used to teacher directed methods of instruction.
- Some students may find it hard at first to be accepted as group members
- Some students prefer direct instruction and are not happy when the teacher asks them to work independently.
- If it is to be used effectively, group work requires a lot of preparation, probably more than the equivalent direct instruction lesson.
- The physical arrangements of many classrooms are not suitable for small-group work. To be effective, the groups must be able to work without interfering with one another.

7.2 Activity 7

Which limitations do you think may apply to your teaching situation? Discuss what you could do as a teacher to overcome these problems.

Teaching skills you will need when using group work

*Adapted from Killen, R. (1998) **Effective Teaching Strategies** Social Science Press*

Controlling the group dynamics

You cannot expect students to work effectively in groups if you sit back and leave the students to the activity. You must control a number of factors that influence group dynamics so your students can work efficiently. Some of the important things you will have to do as part of this control are:

Five is fine

Form groups of an appropriate size

If the groups are too large it will be difficult for the leader to keep them on track, and each student will have limited opportunities to contribute.

Mix and match

Four or five seems to be the best number of students for a small group discussion.

Determine an effective group composition

If you form **homogeneous** groups, (students of similar abilities, knowledge, opinions, etc) this may help the groups be cohesive and co-operative.

However, **heterogenous groups** (mixed groups) may be more productive.



Make suitable spatial arrangements

Group members should be able to see and hear one another without difficulty.

Since group work is a communication activity, the students should be able to make easy eye contact. You should try to locate the groups so that you can circulate from group to group without interrupting the students who are working, and so that groups do not disturb one another.

Keeping the groups on task

There are a number of specific things that you can do to help student groups achieve their outcomes.

Prompt students to think in a different way

If a group is stuck for ideas, or some students seem to be losing interest, you can present them with some new ideas, suggestions or materials.

What would happen if?

Give students information directly

If a group seems to be making no progress because they don't have some important information, provide it for them. If you explain to students why you are giving them the information and how they could get it for themselves in future, you will be helping them to learn to be independent.

Help the students to focus and refocus on the task

You can help the group complete their tasks by directing their attention to some crucial point. It may be that once you give them some clues, they are then able to complete the task. Ask questions such as ‘what if’ and ‘perhaps you could try’

Some physical arrangements for small group work

The way that students are grouped and the use of classroom space are important to consider when planning group work. The arrangement will depend on:

- What you are trying to achieve?
- The age and maturity of the students
- The available physical facilities
- What is to be discussed?

Try these arrangements.

Buzz groups

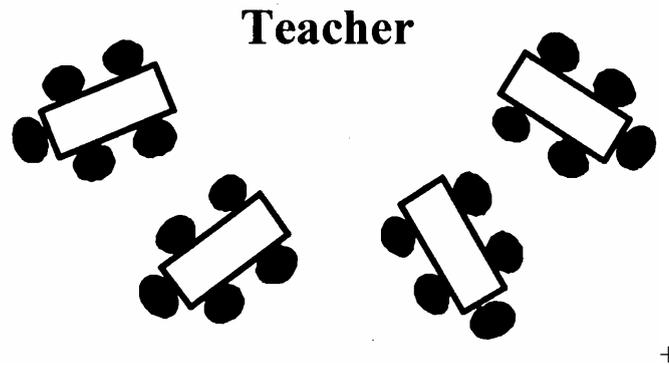
These are small groups of two to six students, who are asked to get together at an appropriate time in a lesson to discuss an issue or problem for a short time. They may then be asked to report back to the rest of the class. Sometimes it is easier to ask students who are sitting together to form groups, rather than moving to another place in the classroom. The groups would discuss their topic and the teacher would move around the room and listen to some of the group discussions.

Some ideas for when to use buzz groups:

- If you have a number of different tok ples languages in your classrooms, buzz groups would allow similar speakers to talk together.
- If you have vernacular speakers and English speakers, buzz groups could also be used to focus the language discussion
- In the multigrade classroom, buzz groups would allow a range of ages and abilities to be included in the conversation

Horseshoe groups

The students may be sitting on the floor in groups , or at tables in a ‘horseshoe’ formation and the teacher is at the front of the groups. The teacher can change from talking or instructing to the whole class, to group activity without any need to move.



Topic or problem groups

Students can be divided into small groups to work on specific problems, to discuss particular topics, or to work at a particular level of difficulty.

Evaluating group work

It is important to reflect upon the way the groups worked and how effective they were in achieving their objectives. Some questions to ask:

- Did all students participate actively in the group?
- Were the group activities manageable? If not, why not?
- Were the activities challenging to the students?
- Was there enough time?
- Did the students co-operate with one another, and involve all members of the group in discussions and decisions?

7.2 Activity 8

Plan a lesson for Grade 5 around the following objective:

Children should be able to practice recycling of waste in their homes and at school.

Show how you could use groups, and what arrangements of groups you could use in this lesson.

Module 7.3 further explores the value of grouping as a strategy in the multigrade classroom.

Using Role Play as a Teaching Strategy

*Adapted from Barry K, and King, L. (1998) **Beginning Teaching and Beyond.** (3rd ed) Social Science Press.*



A role-play is a lesson in which students have the chance use action and discussion to explore a problem situation. When they are exploring the problem, they have the chance to take another perspective by acting, thinking, and feeling like another person without the real life consequences.

Role-plays can vary from highly structured, mainly scripted, through to semi-structured with role cards, to very spontaneous performances.

Barry and King (1998) defines the role play as having four major steps:

1. Setting the scene
2. organising the setting / selecting the participants
3. enacting
4. debriefing, discussing and summarising.

Role-plays are also effective for developing communication skills, as well as practicing decision making and problem solving in social situations. Role-plays can be used at all levels of schooling, from elementary to high school and university.

For a role play to be effective, it is important that:

- The classroom environment be warm, supportive and secure
- Students need a considerable amount of practice in developing speaking and listening skills, decision making and reflection
- A role play be chosen that is suited to the age, gender, ability level and interests of the students
- Progress should be from simple, highly structured role plays to more complex, open ended ones
- The requirements of the role play should be clearly understood by the students
- Before being presented to the class, the role play should be rehearsed and worked through in groups

Some suggestions for using role playing

- Role-play can provide interesting and challenging ways to for students to work in other languages; i.e. tok ples, pidgin, or English, depending on the grade level and context of the lesson. Language learning can be successfully integrated with learning about other cultures or groups.

- Role-play can be used to develop skills and explore feelings, attitudes, values and problem solving strategies.
- Role-playing can be used as a means of developing communication skills, especially with young children.

7.2 Activity 9

Select an objective from the syllabus documents that you think could be achieved by the use of role-playing. Develop the necessary materials you would need to perform this role-play. Decide how you would get the audience involved and points you would want the observing students to note.

Role-play is an activity which may have gender considerations. You need to be sensitive to the roles you ask males and females to play.



Co-operative Learning as a Teaching Strategy

Adapted from Barry, K., King, L. (1998) *Beginning Teaching and Beyond* (3rd ed) Social Science Press. Australia



Co-operative learning encourages students to work together to maximise their own learning and that of their peers.

There are two essential components of co-operative learning methods:

A co-operative task and *a co-operative incentive structure* (which is unique to co-operative learning). This means that students are encouraged and motivated to help one another to learn (rather than being in competition with one another) and that they are dependent on the efforts of one another to achieve success. They are also responsible for the learning of both themselves and the group.

- A small group working together to solve a maths problem, to work on a project for World Environment Day, or to create a group chart are examples of *co-operative task structures*. The students are working co-operatively on a group task or work together to produce a group product.
A small group taking part in group competitions such as debates, spelling championships, tables races, etc are working together for the team. Students are competing together to complete the group task. This is an example of a *competitive task structure*.
- If a group is working together to produce a group product, they are pursuing *group goals*.
- A group co-operating together to help each group member complete their tasks from the chalkboard, learn some vocabulary in tok ples or English, or write a report on a visit is an example of a group working together to reach *individual goals*.

7.2 Activity 9

Think of one example from your experience of an activity which has

- a co-operative task structure
 - a competitive task structure
 - a group goal
 - an individual goal
-

When should co-operative learning activities be used?

Not all lessons are best taught in a co-operative learning situation. When topics require searching out of answers and exploring other solutions, co-operative grouping allows individuals to help each other and contribute ideas.

The teacher also has to make some organisational decisions eg. organising materials and re-arranging the furniture in the classroom.

Sometimes students need help to learn to work co-operatively with others. It can be helpful for teachers to assign roles to members of the group.

One student can be the organiser for the group, one can be recorder to write down the group's answers, one could be the encourager to keep participants interested and excited and one could be reporter to the class.

Co-operative learning approaches: Jigsaw Method

There are a number of approaches used to develop co-operative learning. One popular way is called the jigsaw method.

- The teacher divides the class into teams of 5 or 6, making sure there is a mix of abilities in each team
- The team has various tasks to complete, so there is one task for each team member, eg. one member will have task A, one member task B, etc
- The students given task A to complete come together to form a new team. New teams are also formed for task B, etc
- The newly formed teams work on completing their task by discussing issues and then working individually or collectively
- When the tasks have been completed, the students reassemble in their original teams. Each team member (eg A, B, etc) shares their information which is compiled together into the overall assignment or task, and presented to the teacher.

7.2 Activity 10

Plan a jigsaw activity using the theme of recycling at home for Grade 4. What are the task for A, B, C and D members, and how will they put their work together to present it to the class?

Further information on co-operative learning can be found in the Multigrade Teaching Module, MG.2, Managing the Multigrade Class.

Using Problem Solving as a Teaching Strategy

*Adapted from Killen, R. (1998) **Effective Teaching Strategies** Social Science Press.*



What is problem solving?

The essential features of problem solving are:

- Students work individually or in small groups
- The task is one that requires some realistic problem to be solved, preferably a problem that has many possible solutions
- Students use multiple approaches to learning
- The results of the problem solving are shared among all the students

Problem solving can be seen as the process of applying existing knowledge to a new or unfamiliar situation in order to gain new knowledge. A problem can be defined as any situation in which some information is known and other information is needed, so problem solving is a form of enquiry learning. When used as a deliberate teaching strategy, problem solving can help students to realise that the knowledge they have already gained can be applied to new situations, and that this process can lead them to gain new knowledge.

What is the difference between teaching problem solving and using problem solving as a teaching strategy?

Teaching problem solving is teaching students how to solve problems, something that teachers do regularly in Mathematics and Science.

Problem solving as a teaching strategy is a technique in which problems are used deliberately as a means of helping students to understand or gain an insight into the subject they are studying.

When problem solving is used as a teaching strategy, the emphasis should be on student learning about the subject, rather than simply learning to solve problems.

Some advantages of using problem solving as a teaching strategy

- Developing meaningful solutions to problems leads to greater student understanding of the subject matter.
- Problem solving provides a challenge for students, and they can gain a great deal of satisfaction from discovering new knowledge for themselves.

- Problem solving engages students actively in learning.
- Problem solving helps students to learn how to transfer their knowledge to real-world problems.
- Problem solving helps to make students responsible for shaping and directing their own learning.

Some limitations of using problem solving as a teaching strategy

- Unless students are interested and believe they can solve the problem, they may not want to try.
- Unless your students understand why they are attempting to solve a particular problem, they may not learn what you want them to learn.
- When students are working in groups, it is easy for less able or less confident students to be dominated by the confident or capable students.

Has your problem solving strategy been successful?

These questions might help to evaluate the learning from the session.

- Did your students understand they were solving problems in order to learn something important, or did they think they were just finding an answer?
- Were your students willing to take risks in exploring their ideas? Were they prepared to be wrong and were they tolerant of each other's errors?
- Did you encourage students to persist and figure out problems for themselves?
- Did you give the students primary responsibility for their learning and conduct during the problem solving sessions?

A problem solving strategy

Figuring out what other people need: a problem solving strategy for you to try.

In this strategy, the task cannot be completed without co-operation and exchange between members of the team. It emphasises co-operation, but stimulates thought about the subject matter at the same time.

Learning environment

Tables, or a collection of desks, or floor space for groups to sit around. Students need to reach each other's materials, so the tables cannot be too large. Teams should not be able to see other groups' work.

Materials

Sets of envelopes with words on individual cards (The words when unscrambled will form sentences.) Each person in the team should have one envelope, and there should be the same number of sentences to be formed as people in the group. For example, a group of four would need four sentences. Long sentences can be confusing, so keep them short.

For example:

Laws in PNG are made by the government.
A proposal for a new law is called a bill.
Customary laws are applied in village courts.
The Constitution is the most important law.

Scramble the sentences, putting each word on a separate card. Keep the punctuation to offer a few clues eg the words with capital letters are usually the first in the sentence.

Envelope 1: PNG, proposal, made, village, for, by, law, a
Envelope 2: new, called, applied, most, Laws, the, is, a
Envelope 3: in, government. Customary, bill. law , A, is, are
Envelope 4: courts. Laws, in, important, are, The, constitution

Colour code or number the envelopes and their contents so materials can be easily returned to their correct place at the end of the session.

Procedure:

1. Arrange students in teams
2. Distribute the materials and give the following instructions:
 - Each of you has received an envelope containing words written on separate cards
 - The task for your group is that each of you must make a complete sentence on the table directly in front of yourself. Other people will have some of the words that you need, but
 - You may not ask for a word from anyone else. This means no talking, no gesturing, or signalling that you want a word from another member of your group. The only way you can get a word is for someone to see that it might fit into a sentence you could make, and therefore give it to you. You may pass any of your words to any other group member at any time.
3. You may wish to allow talking about half way through the exercise.
4. After the groups have finished the task, (about 10 – 15 minutes) check the sentences. You may ask the groups to tell you about the meaning of each sentence, or use them all in a story.

From Mannison, M. (1998) Interactive Teaching Strategies pp 135

 **7.2 Activity 11**

In groups of four, write four short sentences each to be cut up, jumbled and given to another group. Your lecturer will tell you the topic of your sentences.

Swap with another group and using the strategy described above, reassemble the sentences and record on butcher's paper.

Summing up

Teachers and students can benefit from using and experiencing a range of teaching methods, or strategies in the classroom. The important choice is how best to get the information across or the task completed, and this should guide your choice of strategy. How a particular method or strategy is used in a classroom is dependent on a number of factors, and there will be many variations of these strategies according to the preferences and experience of the teacher and students.

At first, trying some of these methods may be difficult and uncomfortable for both teachers and students alike. Choosing the right method will only come in time after trying a few and selecting the most successful. Students should be given the opportunity to experience different teaching methods which may suit their preferred ways of learning.

 **7.2 Activity 12**

Teaching cannot simply consist of telling. It must enlist the pupil's own active participation since what gets processed gets learned" (in Marsh, 2000, p.161)

What methods or strategies can a teacher use to encourage student centred learning? Examine the chart below and identify those with a student centred focus. Discuss the student role and teacher role in each of the strategies.

Teacher directed/student centred emphasis in lessons

from Marsh, (2000) *Handbook for Beginning Teachers* p. 150.

Modes of instruction	Intro	Major activity	Conclusion	Teacher role	Students role	Organisation mode
Lecturing/ Teacher talks	T	T	T	presents information	listen and respond	total class
Practice drills	T	T/P	T	repeats examples until skill mastered	respond and practise	total class/ small groups
Directed questioning	T	T/P	T	presents questions	respond with answer, occasional questions	total class/ small groups/ individual
Discussion	T	T/P	T/P	questions, listens, reponds	listen, respond, question	total class/ small groups/ individual
Demonstration	T	P	T/P	presents information materials	observe, listen, practise	total class/ small groups
Problem solving/inquiry	T	P	T/P	directs activities	engage in activities	small groups/ individual
Role playing, simulation games	T	P	T/P	introduces, monitors	participate/ act out	small groups
Small group activity	T	P	T/P	introduces, supervisors	participate, interact, report	small groups
Independent study	P	P	P	facilitates, monitors	initiates, engages in activities	individual
T = Teacher directed P = Pupil centred						

Key Terms and Glossary

Direct Instruction A teacher centred approach in which the teacher delivers the content in a highly structured format, directing the activities of the student.

Exposition strategy A teacher centred approach where material is presented to the students through explanation, questioning and discussion.

Discussion strategy An orderly process of face-to-face interaction in which people exchange ideas about an issue for the purposes of solving a problem, answering a question, enhancing their learning, or making a decision.

Interactive strategy A student centred activity which involves interacting (communicating) in a variety of ways between students in a group and with the teacher.

Group dynamics The factors which affect the way group members interact and communicate with each other.

Role Play strategy Using action and discussion to explore a problem situation or recreate a situation.

Co-operative learning strategy Group members have individual tasks, but each is dependent on the efforts of one another to achieve the outcome. Responsibility for learning is both with the individual and with the group.

Co-operative task structures Small groups working together to produce a group product, where each member contributes to the group's outcomes.

Competitive task structures Small groups working together to complete a group task in competition with other groups, eg. spelling championships, tables races.

Problem solving strategy A technique in which problems are used deliberately as a means of helping students to understand or gain an insight into the subject they are studying.