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ABSTRACT

This book is designed to provide individuals with practical assistance in introducing and using critical reflection strategies. It is intended for workshop facilitators whose aim is to assist committees, organizations, and various groups in solving problems. The book explains procedures for Critical Reflection Strategies using Teams (CReST), a general method for working in groups and teams. Part A outlines the need for a new paradigm in critical reflection. It presents definitions and descriptions of interpersonal communication and problem-solving skills that form the basis of learning in CReST, discusses who could benefit from CReST, and ends with a summary of expert opinions about the facilitator's role. Part B explains CReST in detail. Two levels of CReST (simple and complex) are outlined. The following important aspects of setting up these strategies are discussed: how to introduce CReST using feed forward, how to handle feedback, and how to debrief people at the end. The role of the facilitator is explained in some detail. Part C focuses on theory, defines reflection and learning, and explores the links between them. It examines the concept of learning in organizations. A case study is presented that shows how to develop reflective practitioners by using CReST. The Critical Reflection Inventory Self-Report Scale included here allows for self-assessment of one's own critical reflection attitudes and skills. Appendixes include a list of 73 references and index. (YLB)

# CReST



# CRITICAL REFLECTION STRATEGIES USING TEAMS





Practical learning strategies for individuals groups and organisations

Techniques for creative problem solving and skills development

Essential skills for workshop facilitation.



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FRANCESCO SOFO

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*Techniques for creative problem solving and skills development*

*Essential skills for workshop facilitation*



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*To my wife Mary, whose virtue, wisdom, courage and reflective gift have enhanced my life immeasurably.*

*I have little patience for scientists who take a board of wood, look for the thinnest part, and drill a great number of holes where drilling is easy.*

Albert Einstein

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### *SECTION*

# PREFACE

## *Why I wrote this book*

MOST PEOPLE can say that there has been someone significant from whom they have learned important things about work and life. While undertaking my teacher training at Monash University in 1973 I was fortunate to meet Con Duffy, a seventy six year old Monsignor who was trekking around Australia making a difference to the lives of many children and adults. Duffy was a man who was dissatisfied with the education system, so he invented his own methods of assisting children who had learning difficulties. He was a man of great wit and he did not suffer fools gladly! He maintained that if schools taught walking and speaking then there would be as many cripples and mutes as there were non-readers. Duffy's philosophy was in opposition to what was often heard in those days. *There are no problem children, there are only problem teachers and problem schools,* he would maintain. *I am not a teacher,* he would protest. His job was to remove obstacles so that people could learn.

Central to his philosophy was the importance of meaning and thinking. There was no reading or spelling lesson without critical thinking. His method included thinking about the title of a story and predicting what it might mean, examining the illustrations and formulating critical thinking questions and engaging the full child in creating meaning. Questioning skills were

his forté and allowing children to discover and build on previous knowledge was his method. Con Duffy was my teacher and mentor over a period of thirteen years. Through his actions I became convinced that all people, regardless of their ability, can learn.

Learning has been my passion throughout my career. I have been fortunate enough to have been able to take on employment where I have had the opportunity to learn by engaging with a wide range of people; young babies and toddlers with developmental delays and multiple handicaps and disabilities, school children with learning problems and special gifts and talents, young unemployed people, adolescents in private schools and in technical training and apprenticeships as well as adults with learning difficulties and intellectual disabilities, workers, supervisors and managers in both private and public sectors and of course, people in tertiary education. I have been able to meet the many challenges of attempting to engage people in the learning process from birth through the entire life span.

For twelve months I had the unique opportunity of working as master teacher with Professor Marie Neale in the Krongold Centre for Exceptional Children. Marie was a person who engaged vibrantly with young children who had disabilities and handicaps. She was able to inspire everyone around her in the ways she handled even the most difficult situations through her sharp, lively enthusiasm and creativity. From her I learned the importance of harnessing multi-disciplinary expertise for the benefit of the children and parents we assisted in the complete educational program. Creative thinking was the direction in

which she pushed us, as we conducted our multi-disciplinary team work. The team comprised physiotherapist, occupational therapist, music specialist, drama specialist, photographer, technician, psychologist, teachers, parents, doctor and paediatrician. I learned the importance of seeing the big picture and the interrelationships among the many complex factors comprising the problems faced by parents and children who had disabilities and handicaps. Decision making and designing educational programs demanded creative, critical thinking, astute weighing of priorities and appreciation of complexity within systems.

Dorothy Heathcote from the University upon Tyne was an academic and practitioner with whom I spent only one week. Yet in this short time she was able to influence my approach to designing and implementing learning opportunities. She was a skilled dramatist who brought children with handicaps and adults with emotional-social problems to make discoveries about their own potential and skills. She created a sacred burial ground, a royal Egyptian palace, a jungle or desert with her few words and her command of people's imaginations. Language, action and high expectations where others would have had no expectations, gave children and young adults opportunities to grapple with real issues and to grow.

Through these experiences I sought ways to influence people who were concerned with the education of children and adults. Therefore, when I had the opportunity to establish a 'Centre for Exceptional Students' servicing two grammar schools I sought to conduct programs for parents in creative and critical thinking. I began with Edward de Bono's CoRT Thinking

Program and my aim was to make the community more involved and responsive to the educational institutions within the area.

Another landmark in developing my critical thinking skills occurred ten years ago when I was able to work with Matthew Lipman and Ann Sharp from the Institute for the Advancement of Philosophy for Children. Together Matthew and Ann have produced a unique program which has revolutionised the education of many children. Building a community of inquirers who could collaborate genuinely is an ideal that many teachers have been able to achieve with their classrooms. I too have been able to learn from training many teachers over the past ten years in the Philosophy for Children Program and from working with them in classrooms assisting with the implementation of programs to improve children's thinking skills. I have implemented many of the ideas in my work in adult education and human resource development both in the university system and in private and public organisations.

The other significant professional to influence my practice is Malcolm Knowles, who is known as the father of adult education; in fact, he calls himself the grandfather of adult education. Indeed it has been a privilege to meet him. I have been most impressed by his interest in other people and his ability to listen with a natural keenness at a level that I had not previously experienced. Listening for Malcolm, is a way of life. He has a devotion to people around him whoever they are and he is able to share his life's learnings in a humble way. Anyone meeting Malcolm will experience in the man what his books portray.

He has a view of what it is to be a person and an adult. This view pays the highest respect to people when they engage in teaching/learning activities in institutions.

When you put all these experiences together it becomes clear that my chief purpose in bringing together this mix of ideas and practices is to share their value and application to a myriad of situations. Except in conditioned responses, learning does not occur without thinking. The best and most worthwhile learning occurs not through just thinking but through *critical* thinking and reflection. When people can reflect critically they have learned how to learn effectively. This book therefore is an opportunity for me to give something back to the work places and industries which have given me many opportunities to learn about how people learn.

### *For whom is this book written?*

This book has been written to provide individuals with practical assistance in introducing and using critical reflection strategies. It is intended for workshop facilitators whose aim is to assist committees, organisations and various groups of people to solve problems. Therefore it is aimed at consultants, human resource personnel, adult educators, school teachers, supervisors, managers, leaders, counsellors and therapists. Anyone wishing to assist others to improve their observation skills, to become aware of events from many perspectives, to be able to adopt critical thinking processes and to develop their interpersonal communication skills, such as empathy, can benefit from the approaches suggested here. I hope that this book helps to make the practice of critical reflection more a part of your work and learning.

*Thought is an end in itself, like music.*

Albert Einstein

# FOREWORD

*ACQUIRING THE AWARENESS, skill and disposition to become critically reflective of assumptions is central to transforming our reified frames of reference; it is the key to effecting significant individual and social change. It is also the way significant breakthroughs occur in practical group problem solving.*

*When a critically reflective insight cannot be validated through empirical methods, we justify it through discourse with others by presenting our reasons and the supporting evidence and argument. We seek our partners in discourse whom we believe to be as informed, critically reflective and objective as possible. The resulting best judgment is always subject to change as new evidence and arguments are encountered.*

*Frank Sofo has recognized the profoundly social dimension of critical reflection and has crafted a practical book for adult educators with instructional methods designed to facilitate critically reflective learning in groups in different instructional settings. Educators should find much that is helpful in planning learning exercises to encourage critical reflection among their adult learners.*

Jack Mezirow, Emeritus Professor of Adult Eduction, Teachers College, Columbia University, New York City.
October, 1995

*These critical reflection processes are important and need to be encouraged. The processes help decrease an 'auto-pilot' way of doing things and increase consciousness of competence and incompetence.*

Gloria Claessen, Education Officer, Staff Development, Catholic Education Office, Canberra & Goulburn.

*The participants were very impressed with the whole group critical reflection process. It was very worthwhile particularly providing a structural focus to the observations. Having a variety of teams look at different aspects was also very enlightening.*

Eric Stevenson, Lecturer, Defence Studies, Australian Defence force Academy.

## ACKNOWLEDGMENTS

I HAVE BEEN FORTUNATE to have the assistance of Ms Trudy Ainsmith, psychologist and human resource development facilitator, who has read my manuscript many times and provided invaluable feedback. I owe my gratitude to Trudy for the meticulous proof reading and useful comment.

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Additionally I wish to thank my wife Mary, whose understanding and support have enabled me to complete one of the most rewarding challenges I have undertaken. Special thanks to my five sons who have also provided assistance in their own ways.

Finally, I wish to express my appreciation to all those teachers, human resource professionals, managers, instructors, students and participants of workshops and seminars I have conducted over the years. Without their input and lively engagement this book would not have been possible.

*Occasionally, thinking is an end in itself, but usually the purpose of thinking is to choose or design a course of action. Sometimes there is a distinct thinking phase and then an action phase. At other times thinking and action are intertwined so that thinking takes place in the course of the action.*

Edward de Bono

## *WHAT THIS BOOK IS ABOUT*

> *Critical thinking is reasonable reflective thinking that is focused on deciding what to believe or do.*
> Robert H Ennis, Illinois Critical Thinking Project, University of Illinois.

The aim of this book is to assist people to improve their interpersonal communication skills, to promote learning in the work place and to help others become more critically aware and skilled.

This book outlines the CReST, a general method for working in groups and teams. It explains procedures for Critical Reflection Strategies using Teams (CReST). The method requires people to observe and comment on each other's interpersonal behaviour and to think critically about human interaction. The purpose is to learn from that interaction and to create new ways of behaving.

The thinking strategies in the CReST work on at least three levels.

First, people are encouraged to observe more accurately and to identify and label more aspects of a particular interpersonal communication situation.

Second, people give each other critical comment on the interaction, reporting on specified behaviours, frameworks, orientations, outcomes, tensions; assumptions, skills, emotions, and issues. Part of this critical comment involves a team which maintains a check

on the feedback system by identifying the assumptions, emotions, skills, perspectives, and so on of the people giving each other the feedback.

Third, a major purpose of the critical reflection strategies is to use and establish different styles of acting in context and to *continue to refine those styles* so that people can interact and solve problems using particular action styles. In other words, through these critical reflection strategies people can experiment with different action styles and try new ways of behaving.

> *The critical reflection strategy is great for learning from one's own and others' experiences. From this I was able to develop my personal skills.*
> Tania Bunk, Lecturer in Graphic Design, La Trobe University, Bendigo.

**Part A** of this book outlines the need for a new paradigm in critical reflection. It presents definitions and descriptions of interpersonal communication and problem solving skills which form the basis of learning in the CReST. It discusses who could benefit from the CReST. Part A ends with a summary of expert opinions about the facilitator's role.

**Part B** explains the CReST in detail. Two levels of the CReST (simple and complex) are outlined. Then the important aspects of setting up these strategies are discussed including how to introduce the CReST using feed forward, how to handle feedback and how to debrief people at the end. The role of the facilitator is explained in some detail.

**Part C** focuses on theory and defines reflection and learning and explores the links between them. It examines the concept of learning in organisations. A case study is presented and this shows how to develop reflective practitioners by using the CReST. The Critical Reflection Inventory (CRI) Self-Report Scale included in part C allows you to assess your own critical reflection attitudes and skills.

### *How to read this book*

Each of the three parts, A, B and C is self-contained but related to the other parts. Readers can begin with Part C if they prefer to focus on the theory first. Alternatively, readers who wish to implement the critical reflection strategies might like to begin with Part B which explains how to do this. Some readers may wish to use the book as a reference or guide to interpersonal communication and problem solving skills, in which case they would concentrate on Part A.

# PART A

## CRITICAL REFLECTION AND INTERPERSONAL COMMUNICATION SKILLS

Part A addresses topics under four sections:

| | |
|---|---|
| SECTION 1: | the need for a new paradigm in critical reflection. |
| SECTION 2: | who can benefit from the team approach to critical reflection. |
| SECTION 3: | definitions and descriptions of interpersonal communication and problem solving skills which can be learned using the CReST. |
| SECTION 4: | expert opinions on the key skills of a top-notch facilitator. |

### *SECTION 1*

#### *Critical Reflection - a new paradigm*

Continuous change is the inescapable force which permeates modern living. Change introduces increasing complexity into everyday life.

In the twenty-first century critical reflection skills will be a vital foundation for successfully coping with the changes that are already impacting on us socially, emotionally, personally and professionally.

Critical reflection is the key to learning. In fact, critical reflection is the key to transformative lifelong learning. Mezirow (1990) maintains that critical reflection is the linchpin of learning.

People generally do not adapt easily or quickly to the breadth and depth of change. They like to learn from the known to the unknown, to reduce complexity to simplicity and to rely on tradition, routine and habit. Another factor that works against change is the conservative nature of organisations. Also, large systems tend to be sluggish in responding to change. The danger overall, is that even if they become ineffective, old mental and organisational structures are still likely to be used persistently in the face of change.

When one juxtaposes the current pervasive change forces in our world with human nature, it is easy to see how confusion, fear and resistance to change can result. For example, I worked with a gaming club that (largely due to the vision, energy and expertise of a newly appointed general manager) increased its monthly revenue tenfold and its membership sixfold within eighteen months. When I interviewed the staff about their ways of working and learning on the job, many of them maintained that they still did things the old way, even though this was now inadequate. It was evident that their habits and existing attitudes were difficult to change.

This kind of situation can be rectified if people learn to adopt different attitudes and dispositions to work and learning. A paradigm shift is needed. Paradigm shift involves developing critical reflection abilities. To achieve this it is probably necessary to create in people a new expectation of continuous change, both in the environment and in themselves.

People need to learn to thrive in a state of flux rather than constancy, to embrace the unexpected and problematic and to anticipate and welcome perpetual adjustments to novel and unfamiliar complexity. There is a need for a new consciousness which encourages the following attitudes, dispositions and abilities. These include:

- having a sense of self
- empathising with others
- developing an ability to identify and challenge both implicit and explicit assumptions in self and others
- appreciating the relationships among the parts in a system and being able to separate them out (eg. separating the people from the problem in a situation involving conflict)
- adopting openness to ideas different from one's own
- appreciating complexity from different perspectives

- becoming conscious of one's own competencies in order to increase control over one's own mental processes

- searching for difference, valuing others' views and routinely welcoming complexity and ambiguity.

These points were derived from my experience in teaching critical thinking and in training teachers in the Philosophy for Children Program (Lipman et al., 1980) and from a factor analysis of eighty four items of an early version of a Critical Reflection Inventory developed by Sofo et al. (1994).

> *My stereotype of a good thinker can be characterised in terms of knowledge, abilities, attitudes and habitual ways of behaving. Becoming more critically reflective may very well make one more likely to challenge established ideas, institutions, and ways of doing things.*
> Raymond S Nickerson, BBN Laboratories Inc.

## *SECTION 2*

### *Who can benefit from the CReST?*

The CReST can be used both to solve problems and to develop interpersonal communication skills. It can be applied to sensitise, train and educate people in many contexts.

> *Our minds are made in many ways - genetic influences, patterns of early parenting, the imprint of culture, favourite toys. But what happens in classrooms helps shape minds, whether by art or accident. The aim must be for more art and less accident.*
> D N Perkins, Graduate School of Education, Harvard University.

Research (Sofo et al., 1994) has shown that the CReST tends to foster group harmony, cohesion and teamwork, the necessary ingredients to provide a supportive learning environment for interpersonal skills development and for problem solving. The approach also activates group interest, attention and involvement, three factors that promote learning in group contexts.

> *The experience of participating in this critical reflection activity was enjoyable, insightful, affirming and thorough. It increased group trust and cohesiveness and affirmed group progress.*
> Caron Egle, Community Educator, Human Resource and Training.

The CReST process is designed to develop the attitudes and skills of professionals in training, in the work place and in life. Some who have benefited from the CReST include people in:

- education, including child and adolescent schooling, adult education, vocational education, teacher education and tertiary education
- organisations, including human resource development and management development
- the helping professions, including social workers, counsellors, psychologists, nurses, doctors, teachers and parent effectiveness trainers in both in-service and other professional development activities.

The CReST has been successful with workshop facilitators, tertiary educators, tertiary students, national customs investigators, Australian federal police, managers from numerous government and private enterprises, architects, engineers, surveyors, lawyers, community and health workers, counsellors and psychologists and staff from many industries such as tourism and hospitality, housing and construction and the motor vehicle trades.

For optimum results the best way to use the CReST is with the same group of people over periods of weeks so that all members of the group can adopt the multiple roles in the various teams. This will enable them all to obtain feedback as the FOCUS team facilitator and to have interaction from different perspectives.

# *SECTION 3*

## *Interpersonal communication & problem solving skills*

> *The critical reflection strategy is an extremely effective strategy. The long term effects on me will be motivation to keep asking questions, developing my observation skills, including listening, counselling and mentoring skills.*
> Helen Witcombe, Trainer, Centre for Training and Development, Canberra Institute of Technology.

The following descriptions of interpersonal communication skills incorporate many competencies required by different people as they assist others in developing themselves and in solving problems. Egan (1982) has explained many of these skills as they are used in the art of helping and counselling.

### NON-VERBAL SKILLS

Non-verbal processes (body language) account for over half the impact of interpersonal communication exchanges. Meta-verbal aspects of an exchange (that is, the pitch of the voice, the intonation, the pace of the utterances, the volume, the silences and the pauses) account for over one third of the meaning and impact of an interpersonal communication exchange. Three basic non-verbal phenomena discussed here are proxemics, haptics and kinesics.

### *Proxemics*

Proxemics is the study and interpretation of distances or spaces among people. This perspective requires one person to observe how other people in interpersonal exchanges distance themselves from each other and what is communicated by the distance and any change in distance throughout the interchange. *Do people sit or stand? Do they lean forward?* In observing a workshop facilitator the following questions may be asked about proxemics: *Does the facilitator move closer to or further away from certain participants? Does the facilitator display an awareness of his/her own body space and distance from the participants? How might changing the distance enhance the exchange?*

### *Haptics*

Haptics is the study and interpretation of touching among people. This perspective requires people to interpret in context what any touching means if it occurs during an interchange. Questions to ask if observing a facilitator conduct a workshop include: *Were there times when the facilitator could have enhanced the communication exchange by reaching out and actually touching participants (for example a handshake)? Were there times when the facilitator should not have touched a participant?*

### *Kinesics*

Kinesics is the science and interpretation of movement of people. This perspective requires people to interpret the physical actions of others or of each other. In a workshop, questions to ask of a facilitator include: *What do the gross body movements of the facilitator achieve? Are the movements smooth, jerky or integrated? What do the fine motor movements (that is, the movements of the fingers and hands) achieve?*

## LISTENING SKILLS

These involve more than the physical hearing processes which are passive. Listening is an active, alert, focused and involved process where you attend, understand and interpret. Therefore listening involves appropriate eye contact, an alert expression, an attentive posture and an attitude of anticipation. Effective listeners do not just pretend to listen or focus on working out what they will say next. Good listeners demonstrate their listening by summarising, paraphrasing and reflecting issues, themes and emotions.

## OBSERVATION SKILLS

These skills involve noticing events and behaviour from one or more frames of reference. For example you can notice the communication skills people use, shifts in mood and emotions, you can identify the issues and themes they speak about and the assumptions (implicit or explicit) in their messages. You can notice if people are trying to change others, if they are being persuasive or accepting, or perhaps if they have a hidden agenda. What you notice may depend on your motivation and what it is you want to have happen as a result of the communication. As a first step you should ask yourself what it is that you want to have happen by the end of the communication. Then you may be able to decide what it is you want to observe.

## REFLECTIVE LISTENING SKILLS

These skills involve playing back your understanding of the whole message (verbal and non-verbal ) without commenting on it and without being judgemental. Client-centred therapy (Rogers, 1969) uses reflective listening as a key skill to its approach. Inappropriate and excessive use of this skill can, however, give the impression that the interaction is lacking in reciprocity. It can be annoying to a speaker if you act only as a reflective listener; it may seem that you are defensive or it may suggest that you are trying to conceal your ignorance. If you wish to give a message to the speaker, avoid the false use of reflective listening. The way to react is to use feedback skills.

## FEEDBACK SKILLS

These involve expressing your reactions without making judgemental comments. The key is to be self-descriptive and to speak about yourself rather than to focus on the message or criticise the speaker. Used successfully, feedback skills should enhance the speaker's understanding of your response to the message.

## PARAPHRASING

Paraphrasing requires the listener to repeat the content or meaning of the message conveyed without necessarily indicating the emotion accompanying the message. Of course sometimes the emotion is be the primary message. The listener should always be tentative in interpreting meaning back to the speaker.

## REFLECTING

Reflecting involves the listener in identifying and suggesting to the speaker the mood and underlying feelings in their message. Reflecting feelings back should always be tentative. After all, one can never really know what the other person is feeling, although by considering verbal and non-verbal cues it is possible to make an intelligent guess.

## EMPATHY SKILLS

A large part of understanding speakers involves appreciating what they feel and especially how they arrived at their frames of reference. Empathy may include adopting others' postures and matching their energy level and mood. This type of matching is called mirroring. Our desire to empathise is often expressed through our reflective listening. Empathy is shown by demonstrating that the listener understands both what is said and what is felt. Empathy is being able to perceive the problem from the other person's frame of reference while simultaneously showing the other person that this is the case. It can be argued that part of empathy is also being able to identify accurately what other people assume implicitly in their statements. In this respect the ability to empathise requires in part, the skill of critical thinking.

## INFLUENCING SKILLS

These skills require a high level of knowledge of human motivation as well as a high level of self-knowledge and mastery of personal style and sensitivity to others. Some of the sub-skills needed include the ability to:

- inquire naively
- identify and target needs
- negotiate agreement in principle
- test resistances
- present options
- summarise
- reframe perspectives and personal criticisms, and
- ask hypothetical questions.

## CONFLICT RESOLUTION SKILLS

Weeks (1992) has presented eight essential steps to conflict resolution. These are:

1. create a constructive atmosphere
2. clarify perceptions
3. focus on individual and shared needs
4. build shared positive power
5. look to the future and learn from the past
6. generate options
7. develop *do-ables*, the stepping stones to action, and
8. make mutual benefit agreements.

## QUESTIONING SKILLS

By recognising and practising a number of sub-skills, questioning can be raised to a level where it is performed effortlessly and automatically. If fluency is achieved in asking basic questions the learning is transferable to learning the more (cognitively) complex skills of asking probing, high order and divergent questions. Many of the skills on questioning and related areas have been adapted from Turney et al. (1987) and I have applied these over many years in adult learning and human resource development contexts.

## BASIC QUESTIONING SKILLS

Basic questioning refers to asking two kinds of questions: those which can be answered from memory and those which can be answered by sensory description. They are usually called factual questions and descriptive questions respectively.

### *Asking Factual Questions*

Factual questions usually ask for recall of specific, previously learned information. A fact can be thought of as a piece (or element) of knowledge. "Facts" can be classified in a number of ways – eg. by purpose or by structure. Simple facts may be "useful" by themselves or they may be used to build knowledge structures (collections of facts sensibly linked together). Examples of factual questions are: *What is your name? What time is it? What is the main ingredient of glass?* Complex knowledge structures are called concepts and these allow generalisation and understanding. Concept formation and generalisation are among the higher intellectual processes.

### *Asking Descriptive Questions*

Because of their (usually) complex form we might think that some descriptive questions should be classified as high order questions. Although more complex in form than factual questions, descriptive questions still require that a person answer simply from memory or by describing a sensory experience. The person is asked to recall or describe facts organised into some logical relationship rather than just recall or describe a set of isolated facts. Descriptive questions usually require a longer answer than do factual questions. The "form" of the answer to factual questions is usually simple, although it can involve (or be the label for) a complex (and difficult to understand) concept. Examples of descriptive questions are: *How is cheese made? How do you drive a car?*

## FLUENCY SKILLS IN FACILITATION: *P.P.S. FReD METHOD*

Effective facilitation requires one to be a sensitive questioner. In group facilitation, skills for achieving fluency in asking factual and descriptive questions include **P**hrasing-**P**ausing, **S**tructuring, **F**ocusing, **R**edirecting and **D**istribution. These skills can be easily remembered by the acronym P.P.S. FReD!

### *Phrasing-Pausing*

These are two distinct skills. Questions should be phrased in 'words and terms that are appropriate to the intellectual level of members of the group and especially the person actually being asked the question. Questions may occasionally be phrased to give clues to the answer.

Once a question has been asked the facilitator should PAUSE to allow participants time to think and reply. He/she should wait for the replies and try to avoid repeating the answers supplied. He/she should avoid frequent evaluative comments such as *Good, Yes, Okay,* and he/she should listen attentively and reflect the meaning without evaluating. Both knowing to wait (at least five seconds) and knowing when to respond are part of the phrasing-pausing skills. In fact, pausing after a reply may enhance reflection, improving the quality of the response and encouraging participants to be speculative in their thinking. Finally, pausing will encourage the more reticent participants to contribute.

### *Structuring*

State succinctly at the commencement of the session or sequence what outcomes you expect from your audience. By giving an overview you allow your

audience to know what you intend to happen. Korzibsky (1973) a Russian philosopher, once stated that all knowledge is knowledge of structure.

### *Focusing*

Use broad questions at the beginning of a discussion if you wish to maximise involvement. You can use increasingly specific questions as the store of relevant information (a knowledge structure) is built up. Ask questions which focus attention on a single or simple task by clearly specifying what is intended. Multi-focused questions may discourage participation. They can also cause confusion. Consider the following question: *What resources are needed to implement the program and how will this impact on the local and national communities?* There are actually two questions here and each should be asked separately. Focusing skills can sharpen the discussion or change it to a related or to a different topic.

### *Redirecting*

Once a well phrased, singly focused question has been asked of the group, call on individuals to reply in turn. You may redirect verbally by calling their name or redirect non-verbally by nodding, using open hand

gestures or eye contact. Encourage further participation by responding with warmth and enthusiasm. Verbal and non-verbal modes of reinforcement may be used. When it is appropriate, actively encourage participants to rethink their answers. Redirection encourages what Lipman et al. (1980) call 'student-student' interaction and it increases participation among group members. This helps to develop a genuine community of inquiry.

*Distributing*

Attempt to distribute questions as equitably as possible throughout the group. Generally, questions should be directed to the whole group so that all participants are encouraged to contribute to forging a solution, thus increasing learning in individuals and in the group. This principle must be modified when a clear need arises to nominate a particular person to respond.

# Checklist for fluency in facilitation

## P.P.S. FReD METHOD

### *Phrasing-Pausing*

- Use clear language appropriate to the level of the group (avoid jargon)
- Use easy to follow, short questions
- Clarify the purpose of questions
- Pose the question and pause
- Allow time for reflection
- Pause to encourage speculation and for the reticent to contribute

### *Structuring*

- Provide a frame of reference for the group
- State the outcomes and expectations you have of the group
- Present an overview
- Offer inducements for participation

***Focusing***

- Start with broad questions to maximise involvement
- Delineate the scope of a question
- Ask questions which centre on a single task
- Avoid asking double-barrelled questions

***Redirecting***

- Name participants in turn to answer questions (if you have a close familiarity or sense they are comfortable with this)
- Use verbal and non-verbal means to redirect

***Distributing***

- Call on participants from all parts of the room (not just those near you)
- Pose questions to the whole group first and then to individuals
- Aim to achieve equity in participation

(Adapted from Turney et al., 1987)

## PROBING QUESTIONING SKILLS

An effective strategy to encourage people to think more deeply is to require them to go beyond initial (superficial) responses by asking them supplementary questions to probe initial responses. Instead of advancing to another question, you probe the response by means of one of the techniques outlined below. The cue to asking a probing question is in the person's initial response.

Probing demands that participants improve their initial response by clarifying, qualifying, justifying or by demonstrating accuracy and/or relevance. Probing requires participants to pay attention to factors that may demand critical thinking.

More than any other technique, probing will require a person to give an unrehearsed response. Because the probe depends on the response, the questioner/facilitator will rarely be able to prepare probing questions in advance. However, by practising probing questions with a variety of responses, you can develop a repertoire of questioning formats to apply when appropriate. Before you can be successful at asking probing questions you should first be fluent in basic questioning techniques.

### *Clarifying*

Clarifying involves asking for more information in order to better understand the message.
eg. *What do you mean by.....?* or *Can you tell me more about ...?*

### *Qualifying*

Qualifying involves asking about statements which may contain exaggeration, generalisation or sweeping comments. eg. *Do you think that is always the case? Can you tell me when your statement would not apply?* This identifies the boundaries or limits.

### *Increasing critical awareness*

Lipman et al. (1980) list a number of critical thinking questions

*How do you know?*
*What are you assuming?*
*What authorities can you cite to support your views?*
*What are your reasons for saying that?*
*What is compelling you to say that?*
*What do you mean by that?*
*What are we to conclude from what you are saying?*
*Upon what set of facts does your belief rest?*

This skill requires the facilitator to ask participants to justify their answers. Examples of appropriate probing for critical awareness are: *But what about this case?* (ie. asking about apparent exceptions) and *Is that about all there is to it?*

### *Refocusing responses*

If a participant has given a satisfactory response it might seem unnecessary to probe. The facilitator could use this opportunity to refocus on a related issue. Examples of probing questions that refocus the response are:

*If this is true, what are the implications for ....?*
*How does Mary's/Fred's answer relate to ....?*
*How can we relate this to our main focus?*

### *Prompting*

The facilitator gives participants a hint to help them address the issue. A re-phrased question can be considered to be a gentle probe cued by a nil-response.

### *Redirecting questions*

This is not a probing technique as such, but it can help bring others into the discussion quickly, while still using probing techniques. The facilitator changes the interaction from him/herself and one participant to him/herself and another participant. An example:

Facilitator: *What is the function of a carburettor, Sam?*
Sam: *To mix air and petrol.*

Facilitator: *Fred, do you agree?* or *Mary, can you add to Sam's answer?*

These techniques have two main characteristics in common: they are initiated by the facilitator immediately after the participant has responded and they require participants to think beyond their initial responses.

## HIGH ORDER (CRITICAL THINKING) QUESTIONING SKILLS

High order questions cannot be answered directly from memory or by simple sensory description. This kind of question requires abstract thinking by participants. It requires them to go beyond the factual or descriptive statement and to generalise, to relate facts in meaningful patterns, to compare and contrast concepts or principles, to make inferences, or to perceive causes and effects. High order questions call for the discovery of concepts rather than for their definition. They prompt participants to use ideas rather than just to remember them. The key word related to high order questions is *"Why?"*.

*"Why"* questions require participants to go beyond the factual or descriptive answer. The question *"Why?"* requires participants to generalise, to infer, to classify and to conclude. Not all *"Why"* questions are divergent questions however. The question, *Why did the Second World War break out?* is actually a factual or descriptive question if participants are expected simply to

repeat what they have been told in a lecture or in a textbook. The same question would be a high order question if the participants were expected to identify the major cause for themselves, after considering a variety of conditions and events preceding the war. The importance of high order questioning is that it leads participants to *actively construct* answers rather than to simply remember them. High order questioning skills include asking for evaluations, asking for inferences, making comparisons, solving problems, asking for cause-effect relationships and asking for explicit statements of underlying assumptions.

In fact critical thinking involves these very skills: the ability to make inductions, deductions, evaluations and comparisons as well as the ability to identify and/or ask for assumptions and the meanings of statements. Critical thinking skills include the ability to give very close attention to meaning by probing and identifying what is often unsaid.

### *Asking for evaluations*

Questions asking for evaluations resemble divergent questions (see divergent questioning, page 53) in that there are no "right" answers. They deal with matters of judgement, value and choice. Ideas can be evaluated in two stages. The first stage is to set up appropriate standards. The second stage is to judge how closely the idea or object being evaluated meets these standards.

Even when no standards are offered or when they are only suggested, a question may be still considered evaluative. It is evaluative because respondents must themselves set standards against which to evaluate whatever is being considered. An evaluative answer is always somewhat subjective. Either the standard cannot be proved to be correct, or the idea or object cannot be judged with reference to the standard's criteria. We sometimes say the person is making a "value judgement".

*Asking for inferences*

Inferences mainly involve either deduction or induction.

***Deduction*** is reasoning from a general principle to a particular case covered by that principle/law/rule. Deduction is essentially a logical operation. An example: It is a fundamental truth that all persons are mortal. Therefore, if you are a person then it follows necessarily that you are mortal.

In essence, the purpose here is to assist participants to *apply* knowledge which they have obtained. Participants may comprehend a generalisation without being able to use it in a new situation. It is of crucial importance that participants in a workshop are given opportunities to apply knowledge in a

variety of situations. The ability of participants to apply knowledge provides the facilitator with a clear indication that the knowledge is understood.

***Induction*** is the discovery of a general principle from a collection of specific facts. An example: if the sun has been observed to rise every day since the beginning of recorded history, one may induce the generalisation that the sun rises every day.

Suppose that we have examined the qualities that many successful business people have in common, what might we conclude, in general, about the qualities needed for success in business? When a generalisation occurs to us we make an induction and we usually judge its worth by returning through deduction, to specific cases covered by the generalisation. We reason either: *If this generalisation is true, then it should follow that X is the case* or *If X proves not to be the case, then the generalisation has to be rejected.*

We can never prove the generalisation absolutely, but we can corroborate it. The more instances in which the generalisation is shown not to be false, the more confidence we can have that it holds.

### *Asking for Comparisons*

A comparative question asks a participant to determine whether ideas or objects are similar or dissimilar, related or unrelated, compatible or contradictory.

We can make several types of comparisons. The simplest asks whether or not two or more ideas or objects are identical. For example, *Is a mussel the same thing as a clam?* Another type of comparison tests the degree of similarity between ideas or objects, ie. seeks to identify common elements. For example, *What are the similarities between...? What are the differences between...?* The third type asks participants to relate sets of ideas or similar points. For example, *Compare the life cycle of the bumble bee with that of the ant.* The most challenging comparison is one where we are free to choose which aspects we will compare. For example, *Compare democracy and communism.*

### *Asking for Problem Solving*

Problem-solving questions require a participant to use previously gained knowledge to solve a new problem. Often these questions demand a great deal of creativity from the participant. One of the difficult steps in solving a problem is deciding which facts or skills are relevant.

### *Asking for the identification of cause-effect relationships*

These questions require participants to perceive causal relationships between events and persons, objects, ideas or other events. They ask participants to find a link that connects one with another. For example, *What is likely to happen if the wheat crop all over the world fails?*

### *Asking for the identification of assumptions*

All statements contain assumptions, ie. they take certain ideas for granted without explicitly mentioning them. An assumption then, is an unstated idea that is hidden in a statement. For example in the statement, *I would like a cup of tea,* the speaker may be assuming that the listener can understand English, that the listener has the skills to respond to the request and that the listener will obey the implicit command by bringing a cup of tea. These unstated ideas and meanings are very much part of the basis for one's reasoning. The skill of exposing assumptions requires a person to specify the hidden ideas as well as the overt meanings in a particular statement.

You can develop this skill by asking questions like: *What are you assuming when you say that?* and *What else are you assuming?* Another way to

develop this skill is to suggest to the speaker an assumption you think that they may be making and ask if you are correct. For example, *Are you assuming that there is only one way of doing that?*

## DIVERGENT QUESTIONING

The kind of question probably asked least often in the learning/problem solving environment is the divergent or the creative question. Such a question has no "right" answer. It is an open-ended question requiring participants to use both concrete and abstract thinking to determine for themselves an appropriate response. Participants are free to explore the problem in whatever direction they wish. They are asked to think creatively, to leave the comfortable confines of the known and reach out to the unknown.

This is often more uncomfortable for the facilitator than it is for participants, since the answers received cannot be classified as right or wrong. This is the fascination and challenge of divergent questioning. It is a process in which the facilitator and the participants free themselves to explore in a logical way hypotheses and possibilities. Examples of divergent questions are: *Should all workers share equally in the profits of their labour?* and *Are we moving towards a "Society of Leisure"?*

## REFLEXIVE QUESTIONING

This type of questioning involves meta-cognitive thinking. It means that you think about and question your own thinking or that you encourage others to think about and question their thinking. Reflexive questions provide an opportunity for people to reflect upon the implications of their present perceptions and behaviour and then to consider different ways of thinking, feeling and acting.

The following reflexive questions focus on what was **thought** and **felt**: *What do you think about yourself thinking in this way? What would your mother think about your thoughts? If you keep on thinking this way, will it affect the kind of person you are?*

The following reflexive questions focus on what was **done**: *Did this event allow you to do anything differently from before? How would this event have affected others if they saw you do it? What events would the other person have said led to this event? If you keep on behaving in the same way what effects might this have on your life?*

## EXPLANATORY SKILLS

Because a significant part of facilitators' work may be concerned with presenting ideas and information to participants we would expect that the logical clarity with which facilitators present

these ideas and the overall coherence of the presentation would significantly affect learning. Therefore in planning, the skilled facilitator should:

- have a good grasp of the material
- select a reasonable/modest amount of material to cover in the time available
- proceed at a comfortable pace
- present the ideas in a logical sequence
- use structuring statements during the session to ensure participants can see the overall framework of the explanation
- emphasise important points
- use redundancy to ensure comprehension and retention
- move from simple to more complex ideas
- use relevant examples or illustrations
- utilise the knowledge and experience of the group in the explanation
- use appropriate learning aids
- choose carefully the words to use
- summarise progressively and at the end
- seek feedback about whether explanations have been successful..

*Understanding the material*

When the facilitator has an adequate and meaningful grasp of the subject matter, concepts can be explained clearly, participants can be provided with adequate feedback and ambiguities and misconceptions can be clarified. The best way to ensure that you have an adequate grasp of the subject matter is to write a list

of all the important questions that could be asked about a particular body of knowledge or skill or process; then try to answer the questions yourself, verbally or in written form.

When working on a complex or difficult topic it is often useful to have a trial run through the explanations and to record them. You can then objectively analyse your explanations in terms of their adequacy and clarity. This is a technique well worth developing.

### *Sizing, pacing and judging difficulty of tasks*

A common facilitation fault is *overload.* This can occur especially when facilitators know their subject matter so well that they are inclined to present more material than can possibly be assimilated by their participants at the time available. When you are planning a sequence of learning tasks for your participants it is necessary that you consider carefully a number of related factors. You should ensure that the total number of facts, generalisations, ideas, steps etc. to be mastered in a given time is within the capacity of the majority of the participants to learn to a predetermined level of proficiency. Plan carefully each of the parts or steps in the process with respect to their size and also plan the way you will move

from one step to another. Determine the length of time you will allow for each of the various steps or parts of the learning task.

### *Organising Materials*

Careful thought has to be given to the overall organisation of the material to be presented. It is important that you provide structuring statements throughout the session. Structuring statements are key facts, ideas, opinions and generalisations which serve two main purposes: they provide a cognitive structure within the session to enhance memorisation and they assist understanding of the whole network of ideas being presented. Structure also helps learners relate new material to previously learned material. When we organise our materials we should take account of the knowledge and experience of our group. This is an important learning principle which we should aim to utilise consistently.

### *Sequencing the ideas*

Sequence the ideas to be presented in a logical way so that workshop participants can see how a new idea flows from and is linked to ideas previously encountered.

*Use of emphasis*

Use appropriate emphasis. This can be achieved with verbal variations and with facial expressions, gestures and movements. Emphasis can be achieved by the use of redundancy, the use of media and materials, by highlighting important points on a board or the overhead projector, and by underlining written material and breaking down instructional material by introducing appropriate questions.

*Summarising*

The main points should be summarised progressively during the session as well as at the end. Time should be allowed for clarification, if needed.

*Communicating effectively*

Effective communication in the training or problem solving environment may involve the translation of facts, concepts and ideas from the cognitive structure of the facilitator to that of participants. For this to be achieved, an effort should be made to motivate/ interest the participants. Appropriate language should be used to express ideas clearly and incisively.

You need to constantly monitor the language you use. Be aware that participants may extract different meanings from the meanings you intend in the words/ terms/phrases that you use! Try to avoid using vague or ambiguous expressions and excessive qualifiers.

For purposes of comprehension and retention and to take account of the unfamiliarity of ideas and lapses of attention, some *redundancy* is necessary. Redundancy is *not* mere repetition. It is the revision of ideas in the form of paraphrase and relevant examples. You should use sufficient examples to facilitate enduring understanding. The examples, should, of course, be appropriate to the maturity, needs and breadth of experience of participants. Try to apply the ideas presented within a suitable context.

To maintain effective communication, some type of feedback is necessary. This may take the form of facilitator questions, group discussion or questions from the group. The questions you use should be designed to assess the participants' *understanding* of the content; to determine their *interest* in the explanation; and to probe their *attitudes* regarding the explanation.

You should always be prepared to react to the feedback you receive by adjusting the pace of the explanation or by altering the focus and level of complexity of your explanation.

New subject matter that may be inherently complex should be presented simply at first, with the level of difficulty increasing progressively as the learners' level of understanding increases.

Logically, instructional material should almost always be presented by proceeding from the **familiar** to the **unfamiliar.** Previously acquired knowledge and experience can be used as a foundation for understanding, interpreting and remembering new material that is less familiar. This makes unfamiliar material less threatening and more acceptable.

*Using Instructional Aids*

Presentations can be made clearer by the careful selection of appropriate media for conveying ideas to the learner. While trainers 50 years ago were largely confined to the use of their voices, chalk and a blackboard, today's trainers can use an array of teaching aids, such as printed materials, television, films, slides and tape recordings - which all have the *potential* for clarifying ideas and enriching learning experiences.

## INTRODUCTION AND CLOSURE

How sessions begin and end is important in successful facilitation. What does a facilitator do to gain the interest of the participants? What can enlist their drive, energy and involvement? How can a facilitator encourage participants to stick at a task? How much guidance and direction are necessary? When is it appropriate to go back over main points? Why is it important for both facilitator and participants to evaluate the effectiveness of a session?

Introductory and closing procedures encompass skills involved in opening or bringing to a close learning encounters or problem solving sessions. It is unrealistic for a facilitator to expect participants to be attentive and eager as a matter of course. Even in adult environments it is the task of the facilitator to achieve and maintain attention and interest and to prepare the participants by way of introductory procedures.

Introductory procedures should induce a state of readiness appropriate for the immediate task, through gaining the participants' attention and arousing their internal motivation. The steps in your introductory and closure procedures should aim to:

- indicate realistic limits of the task and establish ways to keep within those limits where necessary
- suggest approaches the participants might take to the subject matter
- indicate links between various aspects of the topic under consideration

- establish links between what participants know or have already experienced and what is to be introduced as new or unfamiliar; and
- consolidate important facts, skills and/or concepts covered in the session.

Closure is more than a quick summary. Closure may be considered to provide a degree of logical organisation or integration. Closure can also be used at specific points within the session and especially at the end so that the people may know where they have been and where they are going. As well as bringing together the main points and acting as a cognitive link between past knowledge and new knowledge, closure can provide people with a feeling of achievement.

## INTRODUCTORY SKILLS

### *Gaining Attention*

A facilitator's variations in gesture, position, eye contact, voice and pauses achieve attention. The use, singly or in combination, of various modes of communication, broadly categorised as visual, aural and tactile, provides an initial stimulus which gains attention, arouses curiosity, and can lead to enhanced learning. Changes in the patterns of interaction or variations in activities help maintain attention and positive attitudes. There are good grounds for arguing that arousal of motivation within an individual cannot

occur until attention has been gained, that is, until the participants' senses are selectively attuned to the task ahead (Turney et al., 1987).

*Arousing Motivation*

The facilitator's role is to find ways suited to a particular group for tapping the sources of energy or interest which will facilitate learning. In an adult learning environment motives which appear to have this indirect link with learning fall into three groups:

1 **Social motivation**, for example, desire for warmth and acceptance by trainers and peers and desire to be recognised by a group.

2 **Intrinsic cognitive motivation**, the motivation inherent in information processing and action. Curiosity is a good example of intrinsic motivation because it "energises" behaviour. Various studies have indicated that curiosity is an internal motivating factor which is active to varying degrees in all learners and which is able under appropriate conditions to stimulate inquiry.

3 **Conceptual conflict** arises from a tendency in most learners to try to deal with the unfamiliar in order to resolve any perceived anomalies. To take advantage of this, facilitators can use strategies which are novel, incongruous or ambiguous. Such devices would include: surprise - phenomena violating existing belief, perplexity - a number of plausible alternatives

but no discernible means of resolution, and contradiction - the existence of two or more paradoxical inferences.

Try to relate the session objectives and content to the every day problems likely to be encountered by the participants. Check that the inducements offered are relevant to the participants.

*Structuring and Overview*

During the opening of a session the facilitator uses structuring by setting purposes and limits for the task, suggesting ways to proceed, and responding to questions immediately they are raised and before new matter is introduced. There is always a danger that procedural structuring can be overdone to the point where learner involvement is minimised and divergent responses are inhibited. Sessions can become inappropriately facilitator-centred. Structuring is important, in the sense that it gives participants clear guidelines about intended outcomes. In an adult learning environment the structuring process is ideally a joint facilitator-learner venture.

### *Linking*

Linking may be achieved in at least two ways: by interrelating relevant aspects of subject matter already familiar to participants and by the more difficult activity of relating new knowledge to what participants know or have previously experienced. Linking can occur during the introductory procedures when, for example, a review is undertaken at the beginning of a session to establish how much participants already know about a topic. Linking can also occur when explanations of ideas are sought in terms of learners' own experience.

An effective technique to achieve linking is the **ECG reflective technique.** Ask participants to form into colleague consultant pairs and to review at the end of each session the ***emotions*** they experienced, the main ***concepts*** they learned and the ***growth*** (application) possibilities of the session just completed. At the beginning of the next session one member of each of the colleague consultant pairs will then report back to the whole group about the highlights of their discussions. The ECG method is an invaluable technique to aid critical reflection.

## CLOSURE SKILLS

### *Reviewing*

Materials covered in any session require consolidation. Reiterate key points so that the main facts, skills or ideas covered are recalled and re-emphasised. It is not necessary to make all the points because it is desirable that as much as possible of the required information comes from the participants themselves. It is your responsibility to ensure adequate coverage and suitable organisation of the material.

### *Evaluating*

In the context of facilitation this skill means determining whether understanding or learning has occurred. You should try to discover if the learners have achieved the session aims. Can participants apply the new ideas, demonstrate their new skills and express opinions about what has happened?

**Checklist for introductory and closing procedures**

*Gaining attention*

Choose different beginnings
Introduce materials
Vary patterns of interaction with group

*Arousing motivation*

Enlist group curiosity
Use conceptual conflict
Draw on interests
Foster competence
Engage social motives

*Structuring*

Establish outcomes, expectations and goals
Give overview of content and processes
Give clear reactions

*Linking*

Review skills and concepts
Highlight familiar ideas
Use the ECG reflection technique

*Reviewing*

Reiterate key points
Summarise content
Ask participants to share personal highlights

*Evaluating*

Ask participants

- how they might apply new knowledge
- to demonstrate skills
- to express opinions

(Adapted from Turney et al., 1987)

## THE SKILL OF DEMONSTRATING

Demonstrating, which involves showing how a skill or process is performed, may be used to guide participants in learning a new skill or process. A demonstration should always include an introduction or revision of the facts and principles on which the skill or process is built, as well as a plan for practice and an outline of the criteria used to evaluate performance. Ideally a demonstration is followed by a practical session in which participants are given the opportunity to practise. This is because demonstration material may be easily forgotten, so in order to maximise the learning, demonstrations should be followed as soon as possible by practice and reinforcement.

Demonstrations have wide application. They can be used to show motor skills, such as how to make a dry martini or to show interpersonal skills such as mentoring and reflective listening. Before performing a demonstration you should conduct a task analysis of the skill for yourself so that you can identify both the steps and the sequence of steps. You can then choose whether to show certain steps which may be very challenging before you show the easier steps. It is essential to raise awareness of safety features first and then to stress important aspects such as the need for efficiency, quality, effectiveness and any other special features. When you demonstrate it is best to show the whol skill first and to be sure that everyone can actually see the demonstration before you start. Check that you have all the resources needed and that all equipment is functional.

In many respects demonstration is the queen of teaching strategies. Consider the game of chess. Each individual piece has its functions and movements. For example, the pawn can move forward only one step unless it is the first move or if it is taking another piece. Although limited in movement it can make the difference between winning and losing. A pawn may be compared to basic questioning skills. Basic questioning, although limited can achieve much learning in a group of participants. Lawyers use this skill carefully to influence a verdict. The pawn can be transformed into a queen if it makes it intact to the other side. The queen on the chess board is a very powerful piece because it has the movements of all other pieces apart from the knight. Similarly, in a demonstration, for optimum effect one must use basic questioning to gauge audience prior knowledge, skills of introduction and closure, skills of high order questioning such as induction, deduction and probing as well as skills of explanation.

Aspects of body language such as proxemics, haptics and kinesics are also critical in demonstrations. About two thirds of learning a skill involves the sensory system, especially the muscular and psychomotor components. Therefore body language and movement should be carefully planned and executed. Sometimes it is helpful to exaggerate movements for effect and emphasis. Because demonstration involves many of the skills discussed so far and particularly because it draws on the kinaesthetic as well as the visual and auditory systems I consider it to be the queen of teaching strategies. Prior to a demonstration, ensure participants have all the sub-skills necessary to conduct the demonstration successfully. We are all called on to show skills.

Considering that learning by doing is a most powerful form of learning it makes sense that demonstration will be an indispensable skill for every facilitator to master.

In preparing for demonstrating a new skill or process you will need to be able to:

- do a task analysis of the skill or process into its component parts (as most skills and processes which need demonstrating are complex)
- construct a performance plan for the demonstration of the skill or process based on the task analysis
- prepare a set of introduction/revision statements and a careful outline of the practice plan and evaluation strategy
- prepare the tools, equipment, materials and teaching aids necessary for an effective demonstration
- arrange a good physical setting so that all participants can hear and see the demonstration.

Some steps to follow in order to perform an effective demonstration are listed below:

1. The setting should be as comfortable as possible and the demonstration should be clearly visible and audible to all participants. Check the following:

a. Lighting: Is additional lighting required for emphasising certain aspects?

b. Size of apparatus: Can the equipment, materials, etc., be readily seen?

c. Use of projection: Can an overhead projector be used to aid visibility?

d. Simplicity: Is the apparatus being used as simple as possible?

e. Distraction: Keep clutter to a minimum to reduce sources of confusion.

2. Rehearsal: It is a good idea to rehearse the demonstration beforehand. Even experienced facilitators need to do this, especially the first time around. It brings the necessary co-ordination of mind and hand to a state of fluency and ensures that the equipment and everything else is in good working order.

3. Spares: Essential replacement pieces of equipment should be on hand. Breakdowns can really spoil an otherwise well-prepared and interesting demonstration.

4. The introduction should be aimed at creating attention and interest. The participant is prepared in advance by being given any necessary background information. The purpose or relevance of the demonstration should also be explained.

5. The steps or operation of the skill or process are then demonstrated in a logical and well defined sequence and in a manner appropriate to the needs of the group.

6. The steps or operation of the skill or process should be explained at the same time as the demonstration (part of the defining process). This should be as complete and as simple as is necessary to ensure understanding. To do this, key points, specific techniques, variations and safety practices could be stressed.

7. The use of visual aids, films, videos or accompanying printed material can be introduced at appropriate times. This should not be allowed to interfere with the smooth performance of the demonstration.

8. Check frequently during the performance of the demonstration to ensure that each step is being followed and understood (formative evaluation).

9. Summarise the key points of the demonstration. Participants can and should be involved in this process. It may be necessary to repeat part or all of a demonstration.

10. Follow up with individual or group practice immediately if possible. You should ensure that you give adequate guidance and feedback during this practice session to ensure that the practice plan is being implemented properly.

11. Flair: Make it memorable; do it expertly.

## TABLE 1: Coaching Framework

(After Kinlaw, 1989)

| **Stage 1** | ***Involving*** |
|---|---|
| **Goals** | **Skills** |
| Clear Expectations | **Clarifying:** Establishing objectives |
| Comfort | **Attending:** Using nonverbal behaviour |
| Trust | **Acknowledging:** Giving verbal and nonverbal indications of being involved in the conversion. |
| | **Probing:** Asking questions and directing. |
| | **Reflecting:** Stating in one's own words what the other person has said or is feeling. |
| | **Indicating respect:** Avoid ridiculing, generalising and judging. |

| **Stage 11** | ***Developing*** |
|---|---|
| **Goals** | **Skills** |
| Information (Mentoring) | **Self Disclosure:** Indicating that one has had a similar experience. |
| Insight (Counselling) | **Immediacy:** Drawing attention to what is happening in the conversation. |
| Learning (Tutoring) | **Summarising:** Pausing in the conversation to summarise points. |
| | **Concreteness:** Being specific and objective in communicating information and expectations. |
| | **Resourcing:** Giving information, advice, instruction; referring. |
| | **Confirming:** Closing the loop; ensuring that information has been received and learning has occured. |

| **Stage 111** | ***Resolving*** |
|---|---|
| **Goals** | **Skills** |
| Closure | **Reviewing:** Key points for understanding. |
| Next steps | **Planning:** Building strategies and agreeing on next steps. |
| Positive Relationships | |
| Commitment | **Affirming:** Commenting on employee's strengths and positive prospects. |

## COACHING SKILLS (SEE TABLE 1)

Coaching is a process that involves conversation focusing on performance and seeking to foster and maintain enhanced human relationships. Coaching usually occurs in a one on one situation, but it can be effectively used with groups. The coaching process can be initiated either by employees or employers, or by facilitators or participants. Coaching comprises many sub-skills such as counselling, mentoring, tutoring and confronting or challenging poor performance. TABLE 1 summarises Denis Kinlaw's (1989) conceptualisation of coaching. Note that he presents a three stage process with specific skills and goals for each stage. The framework can also be used for general problem solving with groups in organisations.

## CONSTRUCTIVE CRITICAL REFLECTION

TABLE 2 lists questions which can be asked from two distinct paradigms, solution centred and problem centred. Note that the solution centred model frames questions in a positive outcomes orientation. Rather than asking *What's the problem?* you ask *What do you want to achieve?* Rather than saying *Tell me all the mistakes you made!* you would ask *How have you learned from your experiences?* Solution centred type of questions are particularly useful in coaching and mentoring and they can also be used with groups to facilitate problem solving.

**TABLE 2: Solution Centred Focus vs Problem Centred Focus**

| Solution Centred (Focus on Development) | Problem Centred (Focus on Fault(s)) |
|---|---|
| What do you want to achieve? | What's the problem? |
| What do you want to do? | What's happening? |
| What steps will help you get what you want? | Who's to blame for the problem? |
| What are you changing to get what you want? | Are the causes still creating the problem? |
| How are you moving towards what you want? | What's the problem doing to you? |
| How have you learned from the past? | Tell me about the mistakes you've made. |
| What have you done to get what you want? | What went wrong? |
| How will it feel and look when you get what you want? | What bad effects does the problem have on you? |
| Who'll help you get your solution? | Who's done this to you? |
| What will turn the problem into a solution? | What will make the problem worse? |
| What's the first step you can take now? | Why have you raised the problem now? |
| How do you think you can help yourself? | How do you think I can help you? |
| How would others describe the best solution? | How would others describe the causes and the problem? |
| Tell me about your possible solutions. | Tell me about your problems. |

## SUPERVISORY SKILLS

These skills include many of the sub skills used in coaching. Supervision is a special type of mentoring. A good relationship between supervisor and supervisee forms the foundation of the working alliance. A purpose of the working alliance can be to explore problems by developing appropriate inquiry skills. Much of this collaboration is based on a relationship characterised by mutual agreements and understandings regarding the goals aimed for in the developmental process. It is the responsibility of both parties to develop procedures to be set in place to monitor and evaluate the process. Failure to establish effective supervisory relationships may result in inadequate problem exploration, in poor development of inquiry skills and in resource wastage.

Supervisory skills may include the ability of the supervisor to be directive and to control the process in the initial meeting and then to talk about the past and the supervisee's prior experience with inquiry. These skills also include the ability of both parties to clarify responsibilities, mutual goals and expectations, to make a list of issues to be discussed at the next meeting and to discuss hopes and fears. Additionally, in the initial meeting both parties may wish to make a list of mutually agreed upon strategies for achieving their established goals and to put in place a procedure for addressing difficulties if supervision were to proceed.

## WORKSHOP FACILITATION SKILLS

Critical reflection strategies using teams can be very effective both in conducting workshops and in developing workshop facilitation skills. I have taught workshop facilitation skills with a range of professionals including engineers, architects, lawyers, surveyors, real estate agents, investigators, administrative and management personnel, human resource practitioners and others (see case study, p. 176). These skills have included the ability to conduct a workshop to solve complex problems and forge creative solutions with professionals and stakeholders from a wide range of disciplines and levels of experience. Refer to the discussion on *Fluency skills in facilitation* (p. 38) and to the *Checklist for fluency in facilitation* (p. 42).

Chunking is recategorising - moving up or down the ladder of abstraction. For example, a lateral chunk may be *car, boat, train, bicycle* and we could chunk up to *means of transport* or chunk down, say from *car*, to (*engine, wheels, axle*). Chunking skills are useful in facilitating a workshop. Chunking helps participants to clarify ideas and helps the facilitator to move things forward if they need clarification and/or negotiation. Chunking skills help you reconceptualise problems. Chunking up involves moving from a specific term to a more general category; it combines parts of an experience or behaviour into more pervasive categories e.g. moving into a new job ask *What will that do for you?* This is chunking up from the actual daily routines.

Chunking down involves moving from the specific to the more specific; it breaks experience in behaviour down to its component parts. Chunking laterally involves creating alternatives, eg. giving other examples at the same level of abstraction *Measles, mumps and chickenpox* are at the same level of abstraction with respect to *diseases* which is a chunk upwards.

When facilitating a workshop if you come to a standstill you can use chunking skills to shift the problem forward. The method is a follows:

- To chunk up – ask: *What is this an example of?*
- To chunk down – ask: *What is a component (an example) of this?*
- To chunk laterally – ask: *What is another example of this?*

When conducting workshops facilitators should:

- identify the objectives and scope of the workshop considering all stakeholders
- structure sessions relevant to a solution focused approach
- motivate and engage the energy of participants to the tasks at hand
- develop a variety of strategies relevant to the aims of the workshop
- manage groups of people in concurrent and diverse activities
- assist workshop members to thread together ideas and to produce an action plan where appropriate.

## *SECTION 4*

### *Qualities of a top-notch facilitator*

> *A friend of mine and I were having a discussion over dinner, and we got on to one of our mutually favourite topics: training and facilitating. Two questions arose: What's the difference between training and facilitating; and what are the qualities of a top-notch facilitator? I'm throwing these questions out for your responses, especially the latter question. Here it is: What are the five qualities you would say are absolutely essential in a top-notch facilitator?*
>
> Ron Lavoie from the Training and Development Network

Here is a summary of the responses.

1. To avoid the temptation of providing all answers to the participants
2. To stay attentive so as to capture the comments that show that participants aren't "walking the talk"
3. To point (out) those moments, with tact and without offending
4. To bring humour in when climate gets tense
5. To resume findings

Isabel Rimanoczy

1. Self knowledge (strengths and weaknesses)
2. Knowledge of audience (what they expect)
3. Concern for quality (and being able to describe it)
4. Ability to inspire (create a learning environment)
5. Flexibility, versatility, (ability to switch gears at the last moment)

Barbara Batson, (bbatson@neptune.uark.edu)

1. Organisation Skills
2. Listening for understanding
3. Observing nonverbal messages
4. Questioning (as opposed to telling) skills
5. Conceptual and Systemic Thinking (to put it all together)

Karen_Kelley_at_Tellabs_TX@pcmail.tellabs.com

1. Knowledge of content that fits desired outcomes.
2. Understanding of and skill with process of learning of their audience.
3. Ability to maximise gaining of knowledge and skill in the time available
4. Observation and listening for opportunities and actualities of learning.
5. Set up learning environment via posing problems, questions, tools and other means to stir the mind and body to learn.

From: Glen Shull <shull@hou.moc.com>

1. Self-awareness ...knowing how the self impacts others
2. Empathy ...the ability to see the situation as the other sees it
3. Acceptance of others, able to hold a fellow human being with unconditional positive regard
4. Authentic and congruent... eg. walks his/her talk and is honest
5. Open to self-growth and flexible about her/his learning and how to do things.

Robert (Robin) A. Reid, Reid Moomaugh & Associates, rreid@cts.com or rreid@ix.netcom.com

1. Ability to really listen and summarise what you have heard from a non-judgmental place
2. Ability to use outgoing participants to get the discussion rolling and then shut them down and make room for the quiet ones
3. Ability to sense when a quiet person or an important person has something to contribute
4. Ability to pace the discussion and change the level of the discussion at the appropriate time (from brainstorming to evaluation to decision to action planning) (or from thinking to feeling)
5. Ability to steer the group in a positive direction and to help it pull out of a problem or salvage whatever degree of agreement there may be so that the meeting can end on a positive note with a sense of direction.

From: Frances Deverell <fdeverel@langara.bc.ca>

1. Remaining neutral on issues.
2. Being an active listener.
3. Knowing how to ask questions.
4. Encouraging open communication.
5. Maintaining focus on the issues.

From: CHANGE_THIS <Ruby_Calvin@csg.mot.com>

1. Effective listener
2. Asks provocative questions
3. Great insight into interpersonal dynamics
4. Egoless
5. Compassionate

Tim Dixon: e-mail:tdixon@arnie.pec.brocku.ca

1. Good questioning skills
2. Knowing how to stay out of the way or keep their mouth shut
3. Keeping the discussion on track
4. Creating constructive conflict
5. Feedback skills

From: KPAir@aol.com

1. Ability to explain and demonstrate processes
2. Ability to keep a focus and drive a process sensitively
3. Ability to question, challenge, encourage, summarise and debrief
4. Ability to achieve equity in participation
5. Appreciation of learning, reflection and group dynamic processes

Francesco Sofo: e-mail:
franks@education.canberra.edu.au

A vital skill top-notch facilitators need is *reframing*. Reframing refers to interpreting situations from differing perspectives. It is a special technique of empathy and critical reflection. The best possible description of a situation depends on the information available at the time as well as on the perspective(s) adopted. Facilitators need to be able to perceive situations from different behavioural, emotional and conceptual vantage points as well as be able to encourage participants to reconsider the meanings they have attributed to situations even though the situations or experiences have not changed and remain unchangeable. Reframing highlights difference and as such is a creative technique because it opens up options for thinking and acting.

# PART B

# FACILITATING CRITICAL REFLECTION STRATEGIES USING TEAMS (CReST)

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*When I explain things they get in the wrong places, said Pooh*
The Tao of Pooh

## DEFINITION OF CReST

**The CReST is a structured group experience which focuses on critical reflection using teams. *An important underlying assumption of this strategy is that any particular experience can be understood in many different ways.* There is no single correct understanding, although some understandings take more components of a situation into account than others. The use of a whole group rather than individuals or dyads, offers scope for innovative practice in reflection. The CReST encourages reflective practices in groups.**

**Through its feedback mechanisms the strategy assists in building knowledge, refining skills and maintaining equilibrium. It enhances group cohesion and achieves insights by encouraging openness and appreciation of difference. It engages people in creative thinking.**

In order to explain the CReST in detail Part B is organised into six sections.

SECTION 1: CReST Level 1 is explained beginning with a definition of CReST. This section outlines a procedure for the CReST and describes the various skills required to conduct the CReST. This section also describes how to debrief the CReST.

SECTION 2: CReST Level 2, which introduces increased challenges for participants, is explained in detail.

SECTION 3: The FREEZE variation which adds dynamic complexity and is applicable to both Levels 1 and 2 is introduced.

SECTION 4: Details are given on how to introduce the CReST and how to use feed forward.

SECTION 5: The effective use of feedback is explained.

SECTION 6: Guidelines are introduced on how best to exchange both feed forward and feedback during the CReST process.

## *SECTION 1*

### *Explanation of the CReST Level 1*

> *The critical reflection strategy was an interesting and unique experience. The different perspectives that each group gave helped me learn. I was more aware of how to use different skills.*
> Robyn Gurney, Project Officer, Australian Taxation Office

The procedure, Critical Reflection Strategies using Teams (CReST) can be used for learning many interpersonal skills, in various combinations. CReST is a structured group experience involving cooperation among a number of teams who engage in a communication exchange so that they can reflect critically on it. The reflection leads to sharing of observations in order to gain insights and improve interpersonal skills. The CReST process can be used in workshop facilitation as a professional development strategy. It increases appreciation of problems and challenges. In particular the method helps to improve observation skills and it enhances appreciation of complexity in human interaction and in problem solving.

> *The effects that the critical reflection strategies had on the group were a tolerance and understanding of each other; the ability to see and appreciate others' strengths and to identify some weaknesses; an increased supportiveness and group cohesion.*
> Ann Petersons, Teacher, Office Traineeships Department, CIT.

## FIGURE 1: CReST Level One


### Functions of the CReST Facilitator

- Explains CReST procedure and team functions (20 minutes).
- Allocates people to five teams (asks for volunteers; 5 minutes).
- Asks parallel and META teams to discuss how they will perform their obsevations/feedback team functions (5 minutes).
- Sets up physical environment after discussion with FOCUS Team facilitator (5 minutes).
- Asks FOCUS team to begin. Calls time (5-10 minutes).
- Debriefs FOCUS team while parallel teams consolidate their observations and feedback method (5 minutes).
- Directs feedback from the three parallel teams (25 minutes).
- Asks META team to consolidate observations and method of feedback while other teams review feedback given or recieved (5 minutes).
- Debriefs the whole CReST procedure (15-20 minutes).

Total Time required: about 90 minutes

## SIZE OF THE GROUP

FIGURE 1 shows that the CReST uses five teams. While the ideal number of people for the CReST is 16 or more, *CReST Level One* can be conducted with as few as 6 people. A facilitator is required to conduct the CReST process.

## THE FACILITATOR'S ROLE

The CReST requires a skilled facilitator who must remain impartial. The facilitator should not take part in any of the teams. His or her responsibilities include setting up the CReST and ensuring a smooth process and an adequate debrief. The CReST facilitator has nine functions to perform as outlined in FIGURE 1.

## PHYSICAL ENVIRONMENT

The CReST facilitator should discuss the setup of the room with the FOCUS team facilitator. Then the CReST facilitator should arrange the furniture in a way to best help achieve the intended outcomes of the communication exchange. The FOCUS team facilitator may use a whiteboard and seat the FOCUS team facing it, or he or she may arrange chairs in a semicircle if a less formal style of discussion is considered appropriate.

All teams position themselves to observe carefully as the FOCUS team starts their conversation. In particular, teams should ensure that they can observe body language. Body language and meta verbal aspects of communication (eg. voice inflection, pauses, pitch, pace of speech, volume) account for over ninety percent of the impact of a message.

> *The key highlights of engaging in critical reflection strategies for me were the exchange of perceptions, confirmation of my own views (on some issues), the use of feedback and opportunity to practise skills in context.*
> Ron Ostrowski, HRM Consultant, Airservices Australia, (AA).

## USE OF UP TO FIVE TEAMS

Use of teams in the critical reflection strategy enables analysis of behaviour from multiple perspectives and provides opportunities for participants to practise different approaches to problem solving. Teams are allocated specific functions and they engage in structured action, observation and feedback processes. Each team should ideally have 3 people but there can be more or less, and teams can function with even one person. The five teams and their functions are outlined on pages 90 to 93.

### *TEAM 1: FOCUS TEAM*

The FOCUS team may consist of any group of people who decide to address an issue or problem. For example, this team may comprise a presenter and an audience or a facilitator and a discussion group or an interviewer and a client. For example, the FOCUS team might be a medical research team investigating possible approaches to treating a disease. A FOCUS team facilitator is appointed from among the participants. The facilitator will assist the group to achieve its purpose. The person controlling the group's process, such as the presenter or interviewer, shall be referred to as the FOCUS team facilitator.

The functions of the FOCUS team are to:

- engage in a simulated group process and problem solving exercise
- practise problem solving/facilitation skills
- provide communication exchange which other teams can observe and on which they can comment.

The FOCUS team participates in all CReST team combinations. The FOCUS team facilitator uses his/her skills to determine the nature of the problem, to assist the FOCUS team to arrive at a mutually

acceptable problem statement and to work towards a solution. This is a role play and suggestions for problems to address include: professional development (eg. identification of needs), difficulty with work (eg. completing any assigned task), coaching or mentoring or demonstrating a process and relevant skills to a group. Allow the focus team ten or fifteen minutes to address the issue.

FOCUS team variation: instead of a group that focuses on a problem or issue the team may consist of an interviewer and an interviewee or a counsellor and a client.

*The critical reflection strategy identified areas for improvement which may otherwise have passed unnoticed. I will be able to think more laterally as I begin to accept the wider source of opinions about myself and others in the group. I should seek it more often as a tool to self improvement and growth.*
Charles Galea, Instructor, Royal Australian Air Force.

### *TEAM 2: COMMUNICATION TEAM*

It is preferable to have a minimum of three people in this team. The functions of the COMMUNICATION team are to:

- identify communication skills used by the facilitator and members of the FOCUS team
- share and consolidate observations within the COMMUNICATION team itself
- provide structured feedback to all teams on the observations made of the communication skills used by the FOCUS team.

### *TEAM 3: IDEAS TEAM*

**Induction, Deduction, Evaluation, Assumptions, Skills**

It is preferable to have a minimum of three people in this team. The functions of the IDEAS team are to:

- identify inductions, deductions, evaluations, comparisons and cause-effect statements made in the FOCUS team.
- identify explicit and implicit assumptions contained in the statements made by members of the FOCUS team.

### *TEAM 4: EMOTION, CONCEPTS, GROWTH (ECG) TEAM*

It is preferable to have a minimum of three people in this team. The functions of the ECG team are to:

- identify stages and shifts in the emotional reactions of participants in the FOCUS team
- identify concepts and themes discussed by the FOCUS team
- identify any growth or insights reached in the FOCUS team and suggest how these may have occurred.

### *TEAM 5: META TEAM*

It is preferable to have a minimum of three people in this team. The functions of the META team are to:

- comment on the observations made by the COMMUNICATION, IDEAS and ECG teams
- report on each team's observation skills and on how feedback was given
- assess the stage of development and learning of the group as a whole.

*The meta team kept the criticism in check. I think it brought the group together quickly. This has renewed and shown me new welfare practice methods that I will incorporate in my training.*
Colin Beaton, Training Development Officer, CIT

A simple way to proceed is to use only some of the teams. To achieve different outcomes various combinations of two teams can be used, but the combination must always include the FOCUS Team 1. Following is an explanation of what the various team combinations can achieve.

### *FOCUS TEAM 1 with COMMUNICATION TEAM 2*

The use of only Teams 1 and 2 focuses the critical reflection strategy on communication skills. The observations are focused on interpersonal communication skills. While Team 1 addresses an issue, Team 2, the COMMUNICATION team, observes both verbal and non-verbal skills of the facilitator. These skills will include a plethora of strategies, interpersonal communication and problem solving skills as discussed in Part A, pp. 47-53.

### *FOCUS TEAM 1 with IDEAS TEAM 3*

The use of only Teams 1 and 3 focuses the critical reflection strategy on language and critical thinking skills. These thinking skills are described under the heading of High Order (Critical Thinking) Questioning Skills in Part A.

Identifying implicit and explicit assumptions in interpersonal exchanges is one of the major steps in critical thinking. Critical thinking covers areas such

as inferences (induction and deduction), evaluations, identification of assumptions, use of comparisons, identification of possible cause-effect relationships, and other techniques which help to clarify meaning. Attitudes underlying these abilities include empathy, openness, tolerance for ambiguity, meta-cognitive awareness, self-awareness, valuing multiple perspectives and valuing difference. (Refer to the CRI Self-Report Scale in Part C, pp. 189-193.)

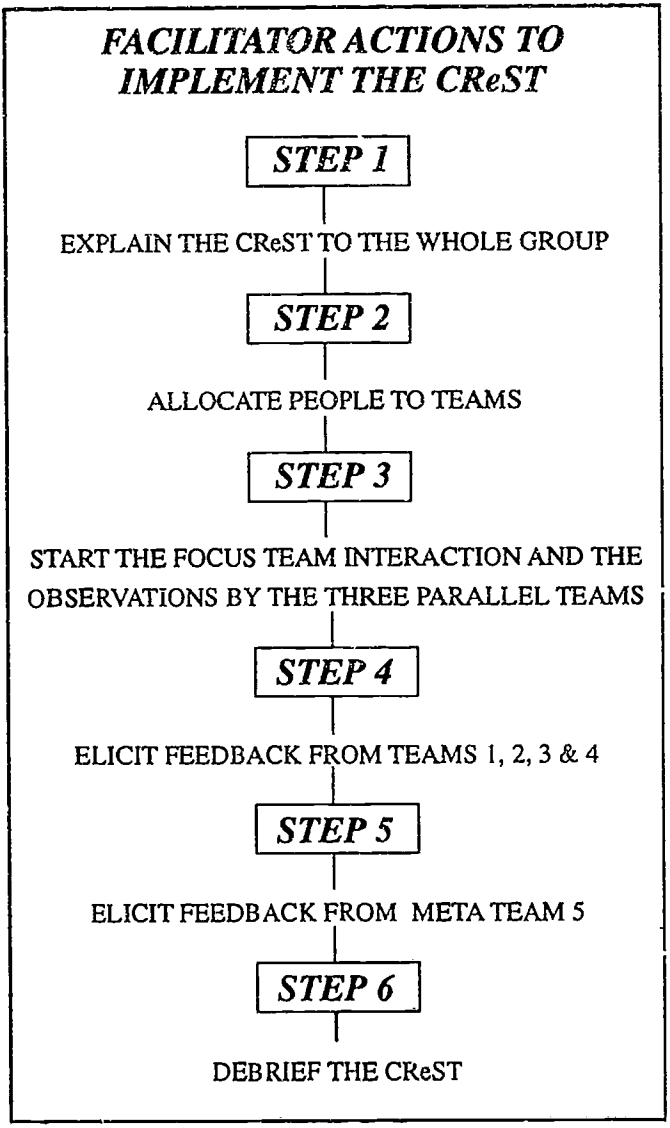
### *FOCUS TEAM 1 with ECG TEAM 4*

The use of only Teams 1 and 4 focuses the critical reflection strategy on meta-verbal skills. Meta-verbal skills include the use of voice characteristics such as intonation, intensity, volume, pitch, use of silences and pauses and stresses on words and phrases. Often the meta-verbal aspects point to the emotional content of the meaning conveyed. Additionally, the ECG Team 4 identifies the key concepts covered in Team 1 exchanges as well as any growth in FOCUS team members as a result of the exchanges. Each one of the three parallel teams (COMMUNICATION, IDEAS, ECG) engages in objective reframing (see p. 164). These teams ask about assumptions outside themselves, that is, the assumptions of the FOCUS team while simultaneously encouraging the FOCUS team facilitator and members to engage in subjective

reframing (see p. 164). {Refer to Part C, Learning as Change, which discusses Mezirow's notion of subjective and objective reframing (pp. 161-165).}

### *FOCUS TEAM 1, META TEAM 5 with ONE OTHER TEAM*

The use of Teams 1, 5 and one other team focuses the critical reflection strategy on a meta level. In this case the META team monitors how feedback is given by the other teams. The META team comments on the commentary of the other teams. It asks questions about the assumptions of these teams (objective reframing) while simultaneously encouraging the other teams to question their own observations/assumptions (subjective reframing). {Refer to Part C, Learning as Change, for a discussion of reframing (pp. 161-165).} The META team acting like a Greek chorus, also engages people in subjective reframing by asking the parallel teams to think about their own frames of reference. A Greek chorus is an artistic device consisting of a group of players on stage who periodically comment on the characters and actions of a play.


FACILITATOR ACTIONS TO IMPLEMENT THE CReST
STEP 1
EXPLAIN THE CReST TO THE WHOLE GROUP
STEP 2
ALLOCATE PEOPLE TO TEAMS
STEP 3
START THE FOCUS TEAM INTERACTION AND THE OBSERVATIONS BY THE THREE PARALLEL TEAMS
STEP 4
ELICIT FEEDBACK FROM TEAMS 1, 2, 3 & 4
STEP 5
ELICIT FEEDBACK FROM META TEAM 5
STEP 6
DEBRIEF THE CReST

STEP 1: EXPLAIN THE CReST TO THE WHOLE GROUP

What is the CReST? The CReST facilitator says:

> *We are going to engage in a structured group experience that will take about one and a half hours. During this time we will work in teams practising interpersonal, observation, feedback and critical thinking skills.*

What is the purpose of the CReST?

> *We will be using the energies and talents of the whole group either to solve a problem, to forge solutions, address an issue or to practise our skills.*

Why use teams?

> *The exercise CReST, uses five teams who all have specific functions. The functions are suggested by the names of the teams. The FOCUS team 1, comprises a facilitator and one or more people who address an issue raised by either party. The facilitator has a prime opportunity to seek detailed feedback and insights from the rest of the teams on his/her performance. All other teams focus their attention on the FOCUS team. The COMMUNICATION team 2 observes the FOCUS team facilitator and identifies communication skills used and comments on their effectiveness. The IDEAS team 3 observes the*

*FOCUS team facilitator and identifies uses of critical thinking skills such as induction, deduction, evaluations and identification of underlying assumptions. This team comments on the ideas of the FOCUS team. The ECG team 4 observes all of the FOCUS team members and identifies changes in emotions and acquisition of key concepts and growth insights. The META team 4 observes the FOCUS team and then notes the communication skills, any examples of induction, deduction, evaluations and underlying assumptions as well as the emotions, concepts and growth insights of teams 2, 3 and 4.* (Using a whiteboard or overhead transparency the facilitator builds a summary of key points regarding team roles while the explanation of all team functions is given.)

STEP 2: ALLOCATE PEOPLE TO TEAMS

How to choose the FOCUS team and its facilitator.

*Who has a problem or issue they would like to address or a skill they would like to practise?* (Pause for 10 seconds.) *For example, would someone like to demonstrate a process?* (Brainstorm if necessary and encourage someone to volunteer to be a facilitator of the FOCUS team. Decide if the focus will be a one on one situation such as mentoring or if it will be a facilitator and a small group that will explore a problem. If there is no response say: *Is there anyone who has a problem they would like to explore with a*

*facilitator?* If there is a volunteer then ask: *Is there someone who will be the facilitator to explore a problem situation and arrive at a problem definition?*

Write names on whiteboard as people volunteer for all the teams.

*I would like you all to think about which one of the 5 teams I have described that you wish to allocate yourself to.* (Pause for one minute while you draw five columns and write the labels of each of the five teams in the five columns.) *Now, who would like to go into the COMMUNICATION team? Who would like to comprise the IDEAS team? Who would like to go in the ECG team? Now, who would like to go into the META team?* (Remind people of the function of each team. Write names in the relevant column as people volunteer for a team. Try to allocate about the same number of people to each of the teams. Allow choice and help people not to feel shy or threatened by having to make a choice.)

STEP 3: START THE INTERACTION AND OBSERVATIONS

Explain the process

*While I speak to the FOCUS team for a few minutes I want all other people to sit in their teams and briefly discuss how you will observe and report as a team. Position yourself so that you will have a full view of*

*the FOCUS team. The FOCUS team will position themselves here at the front of the room. So, can you all position yourselves now.* (While this occurs, tell the FOCUS team that they should focus on their task and ignore as far as possible the presence of other teams. Tell them that they will have an opportunity to say how they feel about their interaction and to respond to the feedback other teams give them. Tell the FOCUS team facilitator that he/she will be able to ask teams for their comments on use of skills or any other aspect desired.)

Begin the process.

When all teams are ready say: *I will allow about ten minutes for the FOCUS team to address the issue and to try to achieve the nominated objectives of the session. All teams should listen and observe carefully as prescribed by your function. FOCUS team, are you ready? Okay, begin now.*

The focus team starts to address an issue or problem. An objective suitable to skills development is to require the FOCUS team facilitator to ask basic questions of the focus group members to find out what they know about a certain topic or to help identify their experiences of an issue. Some skills to develop include the five listed below (page 104) which can be used to facilitate a discussion. These can be substituted for any set of facilitation or interpersonal

communication skills such as paraphrasing, asking reflective questions, using probing techniques and summarising.

STEP 4: ELICIT FEEDBACK FROM TEAMS 1, 2, 3 & 4

Call "time" after ten minutes.

> *Time! We will stop the interaction of the FOCUS team now. You all have five minutes to consolidate your team feedback. Begin now.*

Debrief point of progress with FOCUS team;

> (Approach the FOCUS team and debrief the point of progress only. Ask: *Has the team arrived at a statement about what the problem actually is? If so, what is the problem statement? Has every member of this team agreed that this is in fact the problem?*

Seek orderly and structured feedback from teams 1, 2, 3 & 4.

> *I would like the FOCUS team facilitator and then any members of the FOCUS team to comment on how they thought about their interaction. Please comment now.*
>
> *Now I would like each team, in order, beginning with the COMMUNICATION team 2 to report on its structured observations. I shall ask the FOCUS team*

*if they would like to comment on your feedback in any way. I would remind people that we should try and adhere to the guidelines for giving feedback (see pp. 131-134) especially the need to describe actual behaviours rather than make evaluations about them.* After five minutes say: *Thank you, COMMUNICATION team 2. Now let's hear from IDEAS team 3.* (After five minutes say:) *Thank you IDEAS team. Now let's hear from the ECG team 4.*

STEP 5: ELICIT FEEDBACK FROM THE META TEAM

META team prepares its feedback while other teams discuss any insights.

*Now the META team has five minutes to consolidate its feedback before reporting. While this happens all the other teams should discuss any insights they have from all the feedback exchanged to this point in time.* After five minutes say: *Okay, META team are you ready to report your observations? Begin now.*

STEP 6: DEBRIEF THE CReST

Refer to the section on debrief (pp. 106-109) and follow the plan to debrief the CReST experience. Allow 15-30 minutes for the debrief.

## FIVE SKILLS TO TRY

1. Pitch your language at the level of the audience present; avoid use of jargon and ensure that messages have clarity and simplicity.

2. Introduce your topic, stating what you wish to achieve with the audience in the time given; state what is in it for them and give an overview, including an idea of the process you will use to achieve your intended outcomes.

3. Begin asking general questions about the topic and then increasingly narrow your questions to the details.

4. If a participant offers an inappropriate or narrow response, redirect questions to other participants in order to elicit a range of ideas.

5. Distribute your questions in order to achieve equitable participation among all members of the group.

## FEEDBACK TO THE FOCUS TEAM

"Time!" is called at the appointed time (say after five or ten minutes) unless the presenter/facilitator has achieved the set objectives and therefore has stopped beforehand. Follow the next four steps when giving feedback to the FOCUS team.

*Step 1*

There is a five minute consolidation period. Each team discusses what they observed of the FOCUS team facilitator's behaviours and language. While this is occurring the CReST facilitator conducts a mini debrief among the members of the FOCUS team beginning with the FOCUS team facilitator. Use feed forward (see Section 4 on *How to introduce the CReST and use feed forward*) and emphasise that discussion will be limited to a specified time (say five minutes) in order to obtain only initial reactions while other teams are consolidating their observations.

*Step 2*

The COMMUNICATION, IDEAS and ECG teams take turns to give feedback regarding their observations to the whole group. The FOCUS team members have the right to interject and respond to any comment. The CReST facilitator directs the process.

*Step 3*

There is a five minute pause while two things happen. First, the META team members consolidate among themselves their observations of all the other teams' feedback and discussion; second, the COMMUNICATION, IDEAS and ECG teams have

informal discussions in their respective teams, consolidating the feedback given or seeking further clarification from their own team members.

*Step 4*

The META team gives structured feedback on the commentary of all the other teams.

## DEBRIEFING THE CReST

The CReST facilitator debriefs the whole group, summarising any key learnings from the critical reflection strategy and asking members if they have suggestions for work place application of any of the skills. The facilitator should ensure to attend to peoples' feelings, understandings and the opportunities they sense for implementing what they have learned. The ECG method we developed while conducting national summer schools in human resource development is depicted in the diagram (p. 108). The technique, ECG was first suggested to me by John McMillan in 1989 as a method of formative evaluation and debriefing and used in national summer schools.

The ECG method of debriefing attends to all aspects of the activity by allowing participants to vent any feelings about the workshop as well as to express their understandings and to address what to do in the future. The facilitator has acted as change agent and leader of the group and now needs to be especially

attentive to suggestions for new ways of acting. At this point he/she needs to use accurate paraphrasing, reflecting and summarising skills.

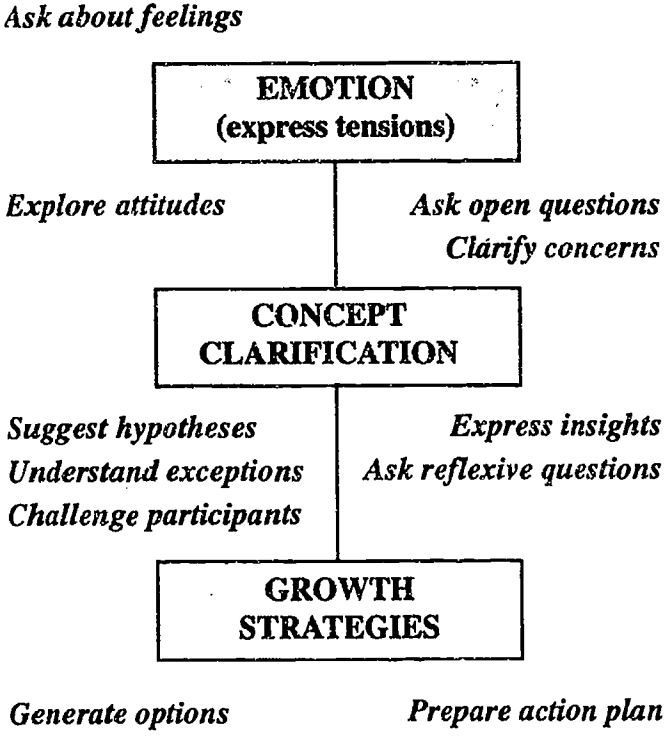
### *Emotion*

The debrief begins with the *emotion* stage by asking open ended questions in order to allow any type of response to the activity. The objective is to defuse any unhappiness and to celebrate any joy by attending to feelings. Ask: *How do you feel about the interactions?* Try to tease out the emotional reactions and to explore individual and group attitudes, values and beliefs. As facilitator you should encourage participants to be aware of and better understand their own and the group's reactions to the experience. To use distribution skills (pp. 38-41) ensure that all participants are encouraged to contribute to the debriefing discussion at this initial level.

### *Concept clarification*

During the *concept clarification* stage clarify understandings for the entire group at two levels, in terms of the content and in terms of participant growth and development. This stage of the debrief encourages learning to be shared and awareness of group members' learning to be heightened. Ask for people to identify the key issues and themes examined and to explain relationships by suggesting hypotheses to explain their observations. Also, ask them to reflect on their past experience to see if they can identify exceptions in their past activities (eg. *Have there been times when you would have expected the same behaviours and results as you experienced today, but things did not go that way?*).

**FIGURE 2: Debrief using ECG (Emotion, Concepts, Growth Method)**



Suggesting hypotheses should increase everyone's understanding of exceptions. It is useful to use reflexive questioning (eg. *Have you always felt this way?* or *How do you feel about your reactions today?*) in order to maximise generalisation and enable people to learn from each others' experiences.

Encourage participants to exchange interpretations and to answer peer questions while searching for their own conclusions about the meaning of the activity and the results. Challenge participants by quoting observations you made or observations made by others during the activity that you think demand further explanation. Ask participants to resolve issues discussed among themselves in the group.

*Growth strategies*

In the final stage of the debrief, *growth strategies*, ask participants to say how they might use what they have learned in their lives or in their work situations. Generate as many options as possible on the whiteboard and try to draw from them the broadest possible range of applications. Finally, ask them to suggest what steps they will take to ensure that they do implement new actions which are likely to be worthwhile. Allow participants a minute or two to note these down individually or in pairs.

## *SECTION 2*

### *Explanation of the CReST Level 2*

*CReST Level 2,* the more challenging version, works best with sixteen or more participants in the group. Both versions of the CReST, Level 1 and Level 2 require 90 minutes. It is suggested that CReST Level 1 is tried before attempting Level 2.

> *We should design tasks that permit multiple interpretations, require explanations of reasoning strategies, and have analogies in academic, practical and novel settings.*
> Edyss S Quellmalz, School of Education, Stanford University.

Most of the features of CReST Level 1 are identical to CReST Level 2. The same procedure should be followed for setting up and implementing the CReST with the five teams. The feed forward and feedback processes are identical and the debrief stages outlined for Level 1 should also be followed.

The chief difference between the two levels is in the greater demands made on the three parallel teams and the META team for observing and for giving feedback. The three parallel teams are required to make more observations in relation to skills of non-personalisation (separating the issue from the people), meta-cognitive control (being aware of and guiding your own thinking process), openness, empathy, tolerance for complexity and valuing of difference. The META team observes the CReST

facilitator and uses systems thinking concepts as the framework for reporting the observations. (See Senge, 1992 for an overview of systems thinking.) These differences are explained in more detail below. The difference between CReST levels 1 & 2 are summarised in TABLE 3, p. 121.

## THE META TEAM

The function of the meta team (three people) is to engage in holistic observation of all teams and to report on the three parallel teams' commentary as well as on the health of the whole group. Functions of the META team are to:

- Note the observation and feedback skills of all reflecting teams.
- Report on each team's observation skills and the way feedback was given. For example, did they miss anything and were the teams sensitive, thorough and descriptive rather than evaluative?
- Give a summary of insights which may have been gained.
- If the group has been meeting for a number of times, comment on the stage of development of the group as a whole. Tuckman (1965) identified four stages of group development:

1. *forming* which involves initial uncertainty while group members work out their place in the group and establish the rules

2. *storming* where familiarity sets in and group members engage in some conflict as part of rebelling against completing the group tasks

3. *norming* where group members establish cohesiveness and commitment, forging new ways to cooperate establishing norms for group behaviour

4. *performing* where the group as a whole has developed harmony and proficiency in achieving the group objectives.

Two additional stages may be added:

5. *mourning,* an additional stage (added later) occurs when the group is breaking up and members engage in reminiscing and other sharing behaviours.

6. *spawning*: I have noticed in new groups a sixth stage, which I have named *spawning*. If people have had useful, exhilarating and productive group experiences they have a tendency to want to inject into new groups they join those characteristics which they identified as the success factors of that previous group experience. They also wish to avoid past mistakes. In this sense people wish to spawn or regenerate past successful group experiences. Hence people can build on experience and interact differently as they progress through the stages in a new group.

- Note any productive interdependencies among the participants and any creation of total group synergy which points to members of all teams acting as a whole group or system.

## THE THREE PARALLEL TEAMS

The three parallel teams include the COMMUNICATION team, the IDEAS team and the ECG team. In CReST Level 2 the three parallel team members adopt the perspective that they will be observing the dynamic complexity of a communicative exchange. Therefore their observations will be of the FOCUS team facilitator as well as of the FOCUS team participants. The whole interactive exchange is to be observed by all three parallel teams.

> The teams should try to observe examples of congruence between verbal and non-verbal behaviour. They should report actual behaviours observed and actual words spoken as the basis for addressing the questions required of them. Look for behaviours that you think describe the required set of attitudes, dispositions and abilities. Note that the questions listed under each team require making judgements. (See pp. 114-117 for a list of these questions.) If team observers are uncomfortable in making these judgements they should report the data (behaviours and words) observed and ask particular members about what those behaviours may have meant. For example, a member from the COMMUNICATION team makes an unexpressed, tentative judgement which leads to asking the question:
> *Tim, when Meg said she didn't believe you I noticed you raised your voice in volume and pitch in your response of 'nonsense'. How should we interpret that behaviour?*

## THE COMMUNICATION TEAM

Team members should identify the use of two or three main skill areas which can be selected from Part A.

First they may identify the type of questions asked, that is, basic questions, divergent or high order questions. The latter are questions of opinion, requiring inferences that may include deductive and inductive thinking processes, making comparisons and evaluations, indicating cause and effect and using problem solving processes.

Second, they may include the skills of non-personalisation and meta-cognitive control (ie. control of one's own thinking and feeling processes).

***Non-personalisation and meta-cognitive control***

1 *Do people in this team separate the person from the issue? (For example, do people in the team feel panic, defensiveness or anxiety? This may be evident when people support and promote each others' ideas).*
2 *Do people keep a check on (and control) their own thinking and feelings?*
3 *Do people show awareness of and monitor their own thinking processes?*
4 *Do people declare that they do not know when they do not know?*

## The IDEAS TEAM

Team members should identify the types of inferences used (induction or deduction), any evaluations and comparisons made, any cause and effect relationships specified and the major implicit and explicit assumptions of FOCUS team members. Two other important skills, openness and empathy relate to identifying underlying assumptions.

### *Openness*

1 *Do people monitor inferences and assumptions?*
2 *Do people question their own or others' assumptions?*
3 *Do people display openness of mind (eg. do they accept suggestions and criticism?)*
4 *Do people distinguish fact from opinion?*

### *Empathy*

1 *Do people identify differences in thinking?*
2 *Do people identify (strong) feelings in others?*
3 *Do people put aside their own ideas/feelings to consider others?*
4 *Do people display appreciation for dynamic complexity?*

In this context empathy requires you to put yourself in someone else's shoes both emotionally and intellectually. Viewed in this way empathy is strongly linked to critical reflection.

*The learnings the critical reflection strategies encouraged included openness to difference and empathy.*
Warren Weiss (Human Resources Manager, Attorney General's, Australian Public Service)

## THE ECG TEAM (EMOTION, CONCEPTS & GROWTH)

Team members should identify stages of emotional and conceptual development in the FOCUS team participants. This can be done by addressing a number of questions on tolerance of ambiguity and complexity and on valuing of difference. Adopting these attitudes of tolerance and valuing difference encourages learning and growth. The team should look for evidence of growth in the FOCUS team members.

### *Tolerance*

1. *Do people tolerate (welcome) amb iguity and dynamic complexity?*
2. *Do people reveal their uncertainties?*
3. *Do people change their opinions/beliefs/perspectives?*
4. *Are people aware of their own biases?*

### *Difference*

1. *Do people welcome (value) disagreement, different ideas and opinions?*
2. *Do people show readiness to revise their judgements?*

3 *Do people display concern about changing their thinking? (eg Will they consider different ideas?)*
4 *Do people seek new ways of looking at things?*

*I'm always less tolerant of ambiguity in a situation - until I feel secure in myself. But the critical reflection strategies increased my tolerance for ambiguity.*
Kären Baskett, Teacher, ESL Department, Canberra Institute of Technology

## THE FOCUS TEAM

The FOCUS team consists of a facilitator/coach/mentor/counsellor and one or more participants. This team provides the key communicative exchange which is the focus for the three parallel teams as well as for the meta team. Apart from implementing the skills in Level 1 CReST, the facilitator is challenged to perform with fluency and to use high order and divergent questions in the discussion. Divergent and creative questions have no single right answer as they are open-ended, requiring people to think in both concrete and abstract ways. High order questions attempt to provoke people to think in abstract, creative, divergent and imaginative ways. High order questions often require thinking about thinking itself. They may call for the discovery of concepts rather than for their definition and they prompt the need to use ideas rather than just to remember them.

The FOCUS team facilitator should develop a set of questions which require participants to:

- evaluate
- infer (deductive/inductive reasoning)
- compare and/or contrast
- solve problems
- find cause-effect relationships
- identify and ask about assumptions.

## THE CReST FACILITATOR

The CReST facilitator is responsible for the overall conduct of the procedure. This includes explaining the process, allocating functions to people by establishing teams, ensuring a risk free environment and adequately debriefing to elicit the learnings and encourage application of any insights to real life situations. Refer to FIGURE 1 (p. 87) for a full list of functions of the CReST facilitator.

> *Most thinking skills are involved in intelligence, although there is more to intelligence than just thinking skills.*
> Robert J. Sternberg, Department of Psychology, Yale University.

## THE DEBRIEF

A simple formula for debriefing is ECG. Ask people how they felt about the event (Emotions); second, ask them about the content and ideas raised (Concepts); third, ask them about insights and key learnings (Growth) and how these might be applied. In any debrief it is important to encourage people to be assertive and to express their feelings and thoughts directly. The facilitator must remain impartial and encourage all participants equitably. Refer to FIGURE 2 and the paragraphs that follow for a full explanation of the debrief process (pp. 106-109). Note that the debrief presents another opportunity in the CReST to achieve a genuine and cooperative community of inquiry.

> *There are many levels of achieving a community of inquiry. For example, one may listen carefully, ask for assumptions and good reasons but when confronted with good reasons contrary to their opinion be quite unopen to them. A community of inquiry exists when a level of mutual respect has developed between the participants whereby ideas have become shared. Becoming open to ways of thinking other than one's own may demonstrate that such sharing has occurred out of a context of mutual respect. The breakdown of one's unwillingness to change one's point of view is a positive sign that one has come to respect the point of view of others. Therefore receptivity to new ideas subsumes most of the other criteria listed earlier for a community of inquiry. In this sense having an openness to new ideas is the most advanced stage of a community and a stage which can safely be regarded as one of philosophising* (Sofo & Imbrosciano, 1991, p. 294).

## FIGURE 3: CReST Level Two

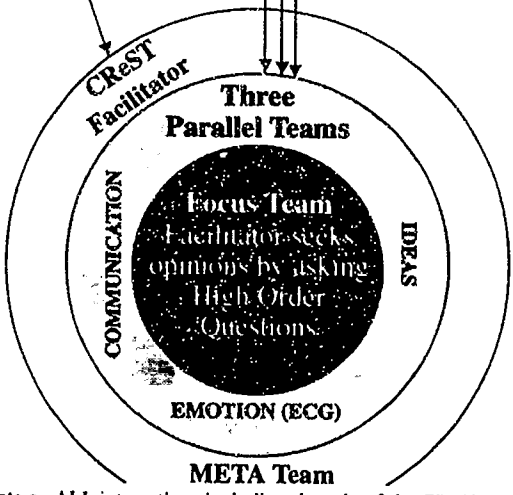
**Functions**

- Explains CReST procedure and team functions (20 mins)
- Allocates people to five teams (asks for volunteers; 5 mins)
- Asks parallel and META teams to prepare for observing (5 mins)
- Asks FOCUS team to begin. Calls time. (10 mins)
- Debriefs FOCUS Team while parallel teams prepare to report (5 mins)
- Directs feedback from the three parallel teams (25 mins)
- Asks META team to prepare to report (5 mins)
- Debriefs the whole CReST procedure (15-20 mins).

**COMMUNICATION Team**
Classifies questions asked and identifies personalisation and meta-cognitive skills of FOCUS Team

**IDEAS Team**
Identifies assumptions, openness and empathy of all FOCUS Team members

**ECG Team**
Identifies tolerance for complexity and valuing of differences in Emotions, Concepts and Growth factors.




Comments on ALL interactions including the role of the CReST Facilitator.

**TABLE 3: Differences* Between CReST Levels One and Two**

| CReST Level One | CReST Level Two |
|---|---|
| **FOCUS TEAM** | |
| FOCUS team facilitator asks only basic questions and basic probes. Communication exchange is limited to 5 mins. | **FOCUS Team facilitator asks basic, divergent and high order questions. Communication exchange is extended to 10 mins.** |
| **PARALLEL TEAMS** | |
| The parallel teams observe and give feedback on the FOCUS team facilitator only. | **The 3 parallel teams observe and give feedback on all FOCUS team members.** |
| **COMMUNICATION team:** Observe basic skills of FOCUS team facilitator including language, introduction, overview, general to specific sequence of questioning, redirection and distribution skills. | **COMMUNICATION team: Observe as for Level One plus Divergent and High Order questions and additional skills of personalisation and meta-cognitive control.** |
| **IDEAS team:** Identify explicit and implicit assumptions as well as metaphors used by FOCUS Team facilitator. | **IDEAS team: Observe as for Level 1 but include all FOCUS Team members. Also observe skills of openness and empathy.** |
| **ECG team:** Identify stages in Emotions, Concept development and Growth in FOCUS team. | **ECG team: As for Level 1. Identify tolerance for complexity and valuing of difference in FOCUS team.** |
| **META TEAM** | |
| Comment on observations made by the three parallel teams and on the group's development. | **As for Level 1 CReST. Include CReST facilitator in observations. Interpret interactions within a holistic framework such as systems theory.** |

* The major difference (between Levels One and Two) is that Level Two requires observation of all members of the FOCUS Team, not just the FOCUS Team facilitator. In addition the three parallel teams are required to make more observations in relation to skills of non-personalisation, meta-cognitive control, openness, empathy, tolerance for complexity and valuing of difference. The META team observes the CReST facilitator and uses systems thinking concepts as the framework for reporting the observations (See Senge, 1992 for overview of systems thinking.)

## *SECTION 3*

### *Freeze! Introducing extra dynamic complexity to the CReST*

> *The real leverage in most (management) situations lies in understanding dynamic complexity, not detail complexity.*
> Peter Senge, Systems Thinking and Organisational Learning Program, Sloan School of Management, Massachusetts Institute of Technology.

The FREEZE procedure introduces increased dynamic complexity to the CReST and builds on both Level 1 and Level 2 CReST. This additional feature encourages dynamic interactive exchanges between the FOCUS team and all other teams. These are initiated by calling "Freeze!"

Once the FOCUS team begins its interchange any team member may call "Freeze!" When "Freeze!" is called the FOCUS team *freezes* its interaction in order to allow analysis of some aspect observed by the person calling "Freeze!" The team member who called "Freeze!" gives feedback based on their team's prescribed functions, asks clarifying questions and makes suggestions on how the conversation might continue. The FOCUS team facilitator and members are not bound to adopt any of the suggestions. The CReST facilitator should facilitate the feedback and call on other members for further comment if appropriate.

If there are particular points which could be instructive the CReST facilitator can call "Freeze!" and ask any team members outside the FOCUS team to give spontaneous feedback and suggestions for modification of the approach used by the FOCUS team facilitator. Proceed sensitively as this may be threatening.

The FREEZE feature is facilitated by the CReST facilitator and should last no more than about ten minutes. The facilitator should use his/her professional judgement to ensure that FREEZE opportunities are used for exploration of difference. The guideline for setting the standard with respect to FREEZE is that teams should comment in terms of their specified functions. From my experience of conducting the CReST procedure I suggest that a maximum of two FREEZE opportunities be used during the whole CReST process. This would then extend the FOCUS team process time from ten minutes up to thirty minutes. Feedback and debrief should then be completed as described in either Level 1 or Level 2 of the CReST.

## *SECTION 4*

### *How to introduce the CReST and use feed forward*

> *To be in the presence of a group of people that value discovery increases one's motivation to explore and create... Taking initiative results in the development of an inner strength.*
> Max Clayton, Director, Australian College of Psychodrama.

Beginnings are important. The way information is given to an audience is important because it creates the right mood for participation and for reception of ideas. This section addresses those factors you must consider when you begin the CReST process. As facilitator, what will you say? How much and what sort of information will be given? In what order is information best disclosed?

All information is either feedback or feed forward. Feed forward (the introduction) is information that establishes the structure and rules for delivery of the primary message and interchange. In this respect feed forward comprises the messages given about the messages to come (ie. meta messages). Feed forward is meta communication that has a number of functions in critical reflection strategies using teams (CReST). Feed forward:

- begins the communication process. The phatic communication concept can take the form of a greeting or a personal expression; phatic communication such as a

nod of the head or an acknowledgment of another is a basic, almost automatic behaviour which helps maintain social relationships (Malinowski, 1923).

- gains the attention of the audience ( eg. use a relevant icebreaker)
- states the purpose and desired outcomes of the intended communication
- creates inducement for participation in the interchange
- gives an overview of the content and process desired in the imminent interpersonal interchange
- sets the control parameters for the imminent interchange (may impose role requirements on the audience)
- makes disclaimers or statements to ensure that the messages given will be understood in a way to show the speaker in a positive framework (Hewitt & Stokes, 1975)
- introduces the participants of the intended communication event.

Some guidelines for giving feed forward may be helpful when using critical reflection strategies in teams (CReST).

A general first principle for feed forward is to demonstrate an unconditional positive regard (Rogers, 1969) to all potential participants of the intended communication exchange. This unconditional regard is demonstrated by being genuine. Above all, be yourself.

Other guidelines for feed forward include:

- notice (and be sensitive to) people's body language especially their facial expressions towards your meta communication
- keep your introduction (feed forward) brief so that it occupies only a small percentage of time allowed for the entire exchange
- check that any inducement offered is relevant and accepted by your audience (eg. ask what benefits the session will have for them)
- check that the control mechanisms suggested are willingly accepted by your audience
- make as few disclaimers as are required
- do not overstate feed forward messages (eg. do not make promises or claims that are not achievable or realistic).

## *SECTION 5*

### *How to give feedback*

> *Attitudes and dispositions are an individual's responses to the quality of the social interaction prevalent in the group situation. One either internalises the quality or develops negative attitudes towards it.*
> Matthew Lipman, Institute for the Advancement of Philosophy for Children, Montclair State College.

As well as verbal messages, feedback consists of non-verbal messages, including silences. Feedback is information that is given to the speaker concerning the listener's reactions to the message. Once people's attention is obtained, all responses and reactions are regarded as feedback. Feedback begins from the moment feed forward (the introduction) is initiated. Feedback has a number of functions in critical reflection strategies using teams (CReST). Feedback:

- provides information about different people's reactions
- acts as a group memory by recalling events
- maintains equilibrium within the relationship(s)
- encourages people to appreciate complexity and difference
- stimulates people to gain insights

- achieves self knowledge and identity for individuals and groups
- assists in knowledge, skills and attitudes acquisition
- creates possibility for improvement at individual, group and system levels.

Some general principles for giving feedback are useful when applied to CReST.

A general first principle for giving feedback is to demonstrate genuine respect to all members of the group. In the CReST, respect is communicated by keeping focused on the specific observations and functions of each respective team. Respect is also demonstrated by:

- giving recognition to strengths
- being open and impartial to outcomes
- offering different explanations for problems
- asking the person being observed what went well for them and what they would do differently next time.

This type of feedback is designed to encourage inquiry and curiosity through observation and description. Feedback is most useful when it involves formulating and testing hypotheses.

It requires adoption of an open minded attitude and maintenance of a stance of neutrality. The following items describe the characteristics of giving effective feedback.

- Feedback describes behaviour rather than evaluates behaviour. By describing one's own reactions to another's behaviour it leaves the other free to use feedback as they see fit. By avoiding evaluative language, the need for the individual to react defensively is reduced. (Learning is difficult when one is defensive.) Say:

  *Your head was nodding and I noticed you yawning six or seven times during the discussion* (behaviour) not, *You looked bored and disinterested* (motive).

- Feedback describes specific behaviours. It does not make general or categorical statements about behaviour. Telling a person they were "domineering" gives a categorical interpretation of their behaviour and may not be very useful to that person. A more useful statement would be:

  *Just now when we were deciding the issue, I thought that you did not listen to what others said because you seemed to be looking away from the person. I'm wondering what your expectations were.*

- Feedback should be framed to express consideration towards the receiver. Feedback can be destructive when it serves only your own needs as giver and fails to consider the needs of the person on the receiving end.

- Feedback should focus on behaviour which the receiver may modify. It should be tentative. For example, begin your feedback with expressions like: *It appears to me that...* Frustration is only increased when people are reminded of shortcomings over which they have no control.

- Once expressed, utterances belong to the listener as well as to the speaker. Everyone needs to assume responsibility for telling others the impact of behaviours on them. Example:

  *I felt frustrated when I heard the conversation return to the same issue three times.*

Giving information or feedback can be a way of giving help. It can be a learning mechanism for the person who wants insights into how well their behaviour matches their intentions as perceived by the participants or an audience.

Feedback can be a means of establishing one's identity by answering, *Who am I?* The famous sociologist Charles Cooley said that we come to know who we are by the reflection others give us of ourselves.

> *Engaging in critical reflection strategies gave a structure to feedback both for giving and receiving comments and gave a focus. It can be applied to the work place in that feedback is learning oriented.*
> Sue Weekes, Community Adult Educator, Work Resources Centre, Canberra Institute of Technology.

## *SECTION 6*

### *Guidelines for receiving feed forward and feedback*

> *Meta-cognitive acts are important to cultivate because they provide an impulse to self-correction that is essential to a community of inquiry.*
> Matthew Lipman, Institute for the Advancement of Philosophy for Children, Montclair State College.

In feed forward it is legitimate to question the aims, overview of content and process, any control mechanisms being established and any statements presented by the speaker. If you are not comfortable being cast into a role then this should be expressed to the speaker during the feed forward. Ensure you are clear about the intended aims of the imminent communicative exchange and ask questions to clarify any doubts before the primary message or main communicative exchange begins. As a listener you have as much responsibility in the communication as a speaker. Remember that communication is a transactional process, so give feedback from the start and express any uncertainties that may exist for you. Respond to feed forward messages with your own feed forward messages.

Obtaining information about yourself from others can help you know yourself better and can enable you to interact more effectively in groups. Your reactions to feedback should encourage others to provide it freely. You can encourage feedback by asking questions that indicate you want feedback.

Ask:

- *Are there other benefits people think may result from this communication exchange?* (Feedback to feed forward)
- *What did you notice about my performance/behaviour?*
- *How did my explanation affect you?*

If they answer "Okay" or "Good" or in other evaluative terms such as "Awful" or "Enjoyable" you will need to ask participants about specific behaviours or words that elicited that reaction. Ask:

- *What sort of things did I do and say that made you feel it was okay?*

Make sure you understand comments others make about your behaviour. You can do this by asking them probing questions such as questions of clarification and qualification. Ask:

- *Can you give me an example of that?*
- *What assumptions did you identify in what I said?*
- *Were there times I did not engage in that behaviour?*

You should withhold your own judgements, reasons or explanations when feedback is provided by accepting others' responses to you without justifying your actions or words. If you

try to justify your actions others may think that you are defensive and they may then be reluctant to give you further feedback or to clarify points they made.

When receiving information or feedback remember to:

- listen carefully and with an open mind
- seek clarification if messages are not clear
- avoid justifying your actions or words
- keep calm and avoid becoming defensive
- say 'Thank You' to the person giving the feedback
- take ownership of the feedback and reflect on it
- decide if and how you can grow from the feedback.

*Γνωθι Σεατον (Know Yourself):*
Greek proverb.

# PART C

# REFLECTION AND LEARNING IN THE WORK PLACE

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Part C is divided into four sections.

SECTION 1: This section examines the relationship between reflection and learning. It defines reflection, outlines the stages of reflection and lists strategies that facilitators can use to promote critical reflection. Then the learning process is defined, levels of learning are described and learning is discussed as a change process. Mezirow's theory of transformative learning is also discussed in the context of learning as change.

SECTION 2: This section discusses the concept of learning and the conditions for learning within organisations.

SECTION 3: This section presents a case study showing how to develop reflective organisational practitioners by using the CReST.

SECTION 4: This section introduces the CRI (Critical Reflection Inventory) Self-Report Scale, a way of assessing one's own critical reflection skills, attitudes and dispositions.

## *SECTION 1*

### *The relationship between reflection and learning*

The interrelationship between reflection and learning is complex and dialectical. First this section gives a brief review of reflection in the context of learning (reflection-learning) and this is followed by a brief summary of learning supported by reflection (learning-reflection), showing the links. Then there is an overview of the concept of the learning organisation, examining reflection and learning in organisations. One conclusion might be that for organisations to be learning organisations, people at every level in the organisation must reflect critically on their actions and as a consequence and part of that reflection, they need to be in a process of constantly refining their behaviours.

WHAT IS REFLECTION?

> *The outcome of critical thinking is a change in assumptions about oneself and the world requiring a corresponding change in one's behaviour and relationships.*
> (Schlossberg, 1981).

I have noticed that when people happily engage in routine activities, as long as there are no upsets or surprises, there is no need to think too carefully about what is happening. However, if something surprising does occur and this disrupts the routine, people may become either challenged or become discouraged.

Whatever the response, one thing is certain; people are caused to stop and think. Jarvis (1992) called this point of disruption *disjuncture*. At the point of disjuncture often the notion of critical appraisal of assumptions underlying belief systems becomes important; that is, people begin to reflect. Arlin (1975) cited decision making and problem solving as the two most significant characteristics of adult development and both of these require challenging of underlying assumptions. Critical reflection requires higher order mental processes. Decision making involves higher order mental processes including describing, defining, analysing, synthesising and evaluating information; that is, solving problems. Problem solving and decision making are major contexts for reflection and learning. Dewey (1933), one of the most renowned educational thinkers of this century, defined reflection as the process of assessing the grounds of one's beliefs; that is, the process of rationally examining assumptions which underlie one's beliefs.

Some of the major contributors to understanding reflection include Freire (1972); Mezirow, (1981, 1990, 1995); Argyris, (1982); Schon, (1990); Kolb, (1984); Boud, Keogh and Walker, (1985); Bruner, (1990); Lonnergan, (1983); Brookfield, (1988) and Jarvis, (1987, 1992).

Terms used by these authors as synonyms for reflection include: critical reflection, critical reflectivity, critical thinking, critical analysis, critical awareness, critical consciousness, authentic reflection, conscientisation, praxis, paradigm shift, reflective judgement, reasoning, assumption hunting, analytical and argumentative capacities (recognising ambiguity in reasoning,

identifying contradictions in arguments, ascertaining the empirical soundness of generalised conclusions), distinguishing bias from reason and fact from opinion, dialectical thinking, innovative thinking, emancipatory learning, reflective learning, transformative learning, practical reflection, reflective action, reflective understanding and reflection-in-action.

*"I want to learn to read so I can stop being the shadow of others"* (Brazilian peasant). Paolo Freire maintained that authentic reflection occurs in the challenges of living and thinking about life. Reflection is similar to the process of conscientisation where people achieve a deepening awareness both of the social-cultural reality which shapes their lives and of their capacity to transform reality. For Freire, reflection empowers, transforms reality and involves problem solving and creative thinking that must lead to action. *Praxis* is the term Freire used to refer to the relationship between reflection and action. True reflection leads to action, otherwise action is pure activism.

Jack Mezirow (1981, 1990) has written extensively on the concept of reflection and he outlines seven levels of reflectivity.

1. Reflectivity: an awareness of a specific perception, meaning, behaviour or habit.

2. Affective reflectivity: awareness of how the individual feels about what is being perceived, thought or acted upon.

3. Discriminant reflectivity: the assessment of the efficacy of perception, thought, action or habit.

4. Judgmental reflectivity: making and becoming aware of value judgments about perception, thought, action or habit.

5. Conceptual reflectivity: self-reflection which might lead to a questioning of whether good, bad or adequate concepts are being employed for making judgments.

6. Psychic reflectivity: recognition of the habit of making percipient judgments on the basis of limited information.

7. Theoretical reflectivity: awareness that the habit for percipient judgment or for conceptual inadequacy lies in a set of taken-for-granted cultural or psychological assumptions which explain personal experience less satisfactorily than another perspective with more functional criteria for seeing, thinking or acting.

The last three of these are claimed by Mezirow to refer to critical reflectivity. It is interesting that Mezirow has combined the affective with the cognitive in the seven levels.

Mezirow (1990) has written extensively on thinking, reflection and learning. I have reproduced with some modification his diagram (FIGURE 4, p. 140) which depicts the relationships among these concepts.

Mezirow made clear two distinct aspects of reflection by discussing a dichotomy of reflective action and non-reflective action. The latter category includes two sub-categories, habitual action and thoughtful action without reflection. Habitual action occurs when people perform actions simply because they are

accustomed to acting in certain ways. This sort of action is based on experiences and comfort and it is fairly automatic, a little like eating, having a conversation or riding a bicycle.

Thoughtful action without reflection is exemplified by games and other activities which engage one's wits while acting. This is similar to Schon's (1990) notion of knowing-in-action which involves active interpretation.

Habermas (1984) referred to this type of reflection as non-reflective learning; that is, learning that takes place in action contexts in which implicit theoretical and practical validity are naively taken for granted and accepted or rejected without discursive consideration (p.16). This may be a creative process but it is one involving our prejudices, distortions and provincialisms. Mezirow suggested that all human action other than that which is thoughtless or habitual is thoughtful action drawing on *what is known* to guide actions. He also asserted that simply reflexively drawing on what one already knows in order to act is not the same thing as reflective action.

FIGURE 4 distinguishes between reflective and non-reflective processes. Mezirow suggested that reflection in thoughtful action involves a pause to reassess by asking, *"What am I doing wrong?"* A more positive outcomes question could be asked such as, *"What can I do differently?"* This does not assume right or wrong, only that there are **alternatives** and many ways to act without necessarily judging. If judgment is an essential part of critical reflection then a more productive question to ask is, *"What can I do better?"* (See Table 2, p. 76). Ex post facto reflection refers to asking oneself critical thinking questions after the event.

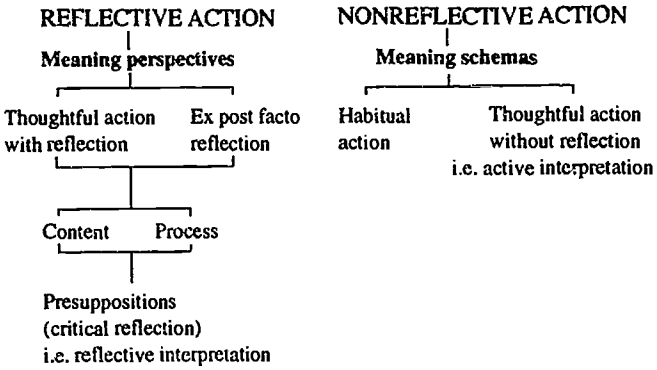



**FIGURE 4: Reflection (critical reflection)**
(After Mezirow, 1990: p. 7)

Boud et al. (1985) described a sequential process embedded in the dialectical process. They broadly defined reflection as ...*a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation* (p 13). According to this definition, reflection includes the activities of making inferences (induction/deduction), generalisations, analogies, discriminations and evaluations and noting the feelings associated with certain events, memories and problem solving activities.

> *The test of a developmentally progressive position is not only that it is more inclusive, discriminating, and integrative of experience but also that it is permeable (open) to alternative perspectives so that inclusivity, discrimination, and integration continually increase.* (Mezirow 1990, p. 156).

## STAGES OF CRITICAL REFLECTION

Boud et al. (1985) suggested that reflective learning occurs in three stages. First is return to the experience to recapture all the detail possible. The facilitator's role is to assist the learner to offer descriptions of what happened without interpreting or analysing.

The second stage is to attend to the feelings of the experience and to review them. The facilitator's role is to help the learner to express and to share his/her feelings.

The third stage is to re-evaluate the experience. This involves facilitator interventions in four distinct stages which parallel the first two stages. Facilitators help learners to connect ideas and feelings about the original experience (associations) and then examine the meaning and utility of the associations by grouping them and drawing simple maps of linkages and relating these to the ideas of others (integration of ideas and feelings). Facilitators then assist learners to examine ideas and feelings that are in a state of transition between new appreciations, already existing knowledge and beliefs (process of validation), and finally they help to make the new knowledge part of how learners act and feel (appropriation).

Reflections upon reflections in a problem solving process may lead either to inaction or to greater creativity brought about by the depth of insight and appreciation. Lonnergan's (1983) work has shed some light on this subject.

1. *Practical reflection* consists of acts of rational self-consciousness. One can be conscious in a number of ways as follows: empirically when one is experiencing, intellectually when one is inquiring or formulating intelligently, rationally in as much as one is trying to grasp the virtually unconditioned, and rationally self-conscious when one is concerned with reasons for one's own acts. This involves investigating the motives of a possible course of actions.

   The empirical and intellectual aspects of practical reflection can be equated with Mezirow's notion of habitual and thoughtful action without reflection. The rational and rational self-conscious aspects of practical reflection appear to equate to Mezirow's category of thoughtful action with reflection and to his levels 5, 6 and 7 of critical reflectivity.

2. *Lonnergan's second corollary refers to practical reflection as knowing* though the reflection goes beyond knowing to doing. It is one thing to know exactly what could be done and all the reasons for doing something, and quite another for such knowledge to result in doing.

3. *Practical reflection has no internal term*, no capacity of its own to come to an end; it has an external term, a term that is an ulterior deciding and doing. The knowing may lead to doing.

4. *Because practical reflection has no internal term it can expand indefinitely.* Therefore a proposed action can be examined in detail and indefinitely.

5. *Reflection on a course of action can be replaced by reflection upon reflection.* Practical reflection can expand indefinitely to the unreasonableness of the

expansion. As the former goes beyond itself to a decision, so the latter goes beyond itself to a decision to decide.

6. *Reflection occurs because rational self-consciousness demands knowledge* of what one proposes to do and of the reasons one has for doing it. Reflection has no capacity to end itself. What ends reflection is a decision. Once a decision is made and is not changed, the reflection is over and the proposed course of action has ceased to be a possibility and has begun to be an actuality.

Lonnergan seems to have ruled out in this set of corollaries the idea of reflection in action (Schon, 1990). He presented an account of reflective understanding which he said is an insight leading to judgements and grasping the sufficiency of the evidence for a prospective judgement. Reflective understanding, he maintained, relies on prolonged efforts of introspective analysis. As such his position seems to accord with Mezirow's.

Brookfield (1988) outlined a number of factors which help us to recognise when critical reflection, which he called *critical thinking*, is happening.

1. Critical thinking is a productive and positive activity.

2. Critical thinking is a process not an outcome.

3. Manifestations of critical thinking vary according to the contexts in which critical thinking occurs.

4. Critical thinking is triggered by positive as well as by negative events.

5. Critical thinking is emotive as well as rational.

Additionally Brookfield outlined four key components of critical thinking.

1. Identifying and challenging assumptions are both activities which are central to critical thinking.

2. Challenging the importance of context is crucial to critical thinking.

3. Trying to imagine and explore alternatives is crucial to critical thinking.

4. Imagining and exploring alternatives leads to reflective scepticism.

A number of authors have identified various phases in the critical reflection process and these can be organised into five generally agreed upon stages.

### *Stage 1: Trigger event*

Some unexpected happening prompts a sense of inner discomfort and perplexity. A disjuncture (Jarvis, 1990) occurs in one's life. Many disruptive triggers are negative but they can also be positive and affirming, for example, successfully completing a task previously thought impossible (Boud et al., 1985). Other examples of trigger events include moments of sudden insight or self-awareness, such as 'peak' experiences or achieving a sense of rightness, a sense that things fit.

### *Stage 2: Appraisal*

This refers to self scrutiny which may involve two sets of different activities: (1) minimisation and denial, identifying and clarifying concerns and engaging in self-examination (Mezirow, 1977); and (2) searching for others who are confronting a similar disjuncture.

### *Stage 3: Exploration*

Exploration can be described as a consideration phase (D'Andrea, 1986) during which learners test for options and search for meaning, exploring new ways of acting, new answers, new concepts, new ways of organising their world views (Apps, 1985).

*Stage 4: Developing alternative perspectives*

This is a transition stage (Apps, 1985) during which the old is left behind and new ways of thinking and acting are developed. The new insight or changed perspective is analysed in terms of its operational possibilities. This stage is characterised by being more informed, by being more liberated from the influence of internal and external forms of constraint or coercion, by being more critically informed by a clearer understanding of the historical, cultural and biographical reasons, by being more permeable and open to ideas and communication and by having more inclusive discrimination and integration of experience.

*Stage 5: Integration*

This stage may involve transforming attitudes and assumptions, achieving some sort of integration of conflicting feelings and ideas or even confirming existing stances with renewed conviction. Actions may be either overt or hidden, ie. internal, where one affirms to oneself. One becomes comfortable with acting on the new ideas, new assumptions, new ways of thinking that have emerged from the transition stage (Apps, 1985). Learning has occurred and a point of closure has been achieved. Creative synthesis of various bits of information has been achieved.

## FACILITATOR STRATEGIES TO PROMOTE CRITICAL REFLECTION

To assist learning, facilitators should be aware of the impact of their intervention strategies ie. their responses to the participants. Some responses will inhibit critical thinking and therefore prevent learning, while others will actively promote creative and free cognitive functioning. Facilitator responses that tend to bring closure and inhibit cognitive processing by creating fear include:

1. agreeing or disagreeing
2. cutting off others in discussion
3. taking a position and making it known
4. putting down others' ideas or using sarcasm.

Other facilitator responses may limit reflection and learning. These responses are often of the type that require the learner to simply recall information or to elicit a singular response. Examples of these facilitator responses include:

1. an attitude of requiring one single correct response
2. an attitude of leading others to the 'right' answer
3. a tendency to tell others what to do.

Some facilitator responses tend to encourage reflection and learning. These facilitator responses usually require people to reflect, analyse, evaluate, synthesise, originate ideas, create new frameworks and to think more deeply about issues by giving personal opinions.

The following promote reflection:

1. reflective listening and paraphrasing

2. responses that encourage clarification such as asking for reasons, for qualification, for examples; asking others to identify their own implicit assumptions; asking for evaluations, comparisons, contrasts, and identification of cause-effect relationships

3. responses that encourage giving opinions, divergent and lateral responses (ask for contrasts, different interpretations, predictions, new ideas, principles to be applied to new situations,) and asking for people to share their feelings.

Jarvis (1987) highlighted the importance of social elements in the reflection process identified by Freire (1972). Freire claimed that people perceive the world differently and that they learn differently when they become conscious of their social situations. For example, the socialising process may inhibit innovative thinking. Freire stated that authentic reflection occurs when people respond to the challenge of their social situation and when they have a perspective transformation. Like Mezirow, Jarvis defined reflection as a very complex process involving both cognitive and affective dimensions. Argyris (1982) and Schon (1990) referred to this process of freeing people from socialisation as double loop learning. Jarvis (1987) pointed out that while reflection is significant in any theory of learning, theories of reflection are not in themselves theories of learning.

## WHAT IS LEARNING?

The literature presents many theories and conceptions of learning. Hilgard and Bower (1966) claim that most theories of learning have high agreement on what learning is.

> *While it is extremely difficult to formulate a satisfactory definition of learning so as to include all the activities and processes which we wish to include and eliminate all those which we wish to exclude the difficulty does not prove to be embarrassing because it is not a source of controversy as between theories. The controversy is over fact and interpretation, not over definition.*
> Hilgard and Bower, 1966, p. 6.

Critical reflection is the key to learning. Merely to take on board information from others without thinking about it for yourself does not constitute learning. Learning is not simply receiving information or absorbing information from another nor is it evidenced by simply recalling ideas, although these processes are important. Learning is what you remember, what others tell you - but only if you have thought about it for yourself, only if you have reflected upon it and taken some ownership of it. It is what happens after information is given or received that determines if learning has taken place. Information and experiences need to be assimilated, accommodated and integrated into the person to become learning which can enable continual growth and development to occur.

> *Educatic .s is a process in which we learn to open our mind, correct and refine it, and enable it to learn rationally, thereby empowering it to analyse, digest, master and rule its own knowledge, gain command over its own faculties and achieve flexibility, fairmindedness and critical exactness.*
> Richard W Paul, Centre for Critical Thinking and Moral Critique, Sonoma State University.

This is not to say that people do not learn through kinaesthetic, haptic, (refer pp. 30-31) intuitive or other methods as well. Gardner (1983) and Vialle (1995) presented a theory of seven intelligences where they explored logical/mathematical, verbal/linguistic, visual/spatial, body/kinaesthetic, musical/rhythmic, interpersonal and intrapersonal methods of learning.

Rogers (1969) maintained that in learning there is a continuum, ranging from meaningless memorisation to significant meaningful experiential learning. He listed five aspects relevant to learning from experience that are necessary for developing fully functioning individuals.

1. Personal involvement - the affective and cognitive aspects of a person should be involved in a learning event.

2. Self-initiated - a sense of discovery needs to come from within.

3. Pervasive - the learning makes impact on the behaviour, attitudes or personality of the learner.

4. Evaluated by the learner - the learner can best evaluate if the experience is meeting the need.

5. Essence is meaning. When learning takes place its meaning to the learner becomes incorporated into their total experience.

Rogers (1969) gives attention to the role of the individual learner who connects inner and outer experiences in order to create new understandings. It is widely assumed that the process of reflection allows learners to make these connections.

People can use experience to bring about learning by engaging in critical reflection. This means that they can ask questions that challenge implicit and explicit assumptions which people are using to make sense of their experience. They can both request and offer immediate feedback on the results of their own and others' actions so that anyone can evaluate the effects of their behaviour. They can both take risks and support risk taking so that people can experiment with solutions.

Interestingly, authors like Mezirow and Brookfield who have written extensively on critical thinking / reflection have also written on learning and have described the relationship between these two processes. Reflection is inextricably tied to learning and reflection can lead to learning. Mezirow's definition of learning implies this sequence. Learning is the *...process of making a new or revised interpretation of the meaning of an experience which guides subsequent understanding, appreciation and action* (Mezirow, p. 1).

Recently Mezirow (1995) has reiterated that there are two kinds of adult learning involved in social action and that they are related, but very different. One is instrumental learning, learning how to manipulate and control the environment and how to control other people. It also involves task-oriented problem solving and in adult learning, it focuses on performance improvement. A second kind of learning that is very distinct but related to instrumental learning is learning what another person means when they are communicating with you. Mezirow called this communicative learning and this involves values, feelings and moral issues. In instrumental learning there is little concern for values and greater concern for empirical measurement to determine reality.

Communicative learning, however, is not given so easily to this kind of empirical testing. Here the concern between people communicating is the accurate exchange of meaning. Discourse is the way of validating beliefs in communicative learning. As educators, the goal of communicative learning should be to assist learners to think for themselves and to negotiate their own meanings, values and purposes. What is important in adult learning is to create a sense of empathic solidarity so that people can collaborate, cooperate and develop a genuine community of inquiry based upon shared experience. Discourse involves learning through critical reflection and this skill is what Mezirow maintains should be on every list of competencies for learning.

Brookfield (1988) maintained that critical reflection or premise reflection challenges the validity of presuppositions in prior learning. It reassesses the way that we have posed problems

and reassesses our own orientation to perceiving, knowing, believing, feeling and acting. It requires a hiatus in which to assess one's meaning perspectives and if necessary, transform them. It is not concerned with the 'how' but rather the 'why', the reasons for, and consequences of, what we do. As such, critical reflection is the perspective transformation process of becoming critically aware about how our presuppositions constrain us. As it often involves the negation of values that have been close to the very centre of our self concept, it is not difficult to see that the transformation of perspectives has both cognitive and affective dimensions. Critical reflection implies an element of critique and it can be equated with the notion of a *paradigm shift.*

Any analysis of reflection then must take into account the accompanying notion of learning. However, learning defies precise definition because it is often put to multiple uses (Knowles, 1968, p. 10). It is seen as the acquisition of what is already known by others, as the extension and clarification of the meaning of one's experience and as an organised intentional process of testing ideas relevant to problems.

There is agreement that learning involves change in behaviour, knowledge and/or attitudes and that this change is not due to innate response tendencies or maturation or temporary states of the organism such as fatigue or drugs, for example. Skinner (1971, p. 10). saw learning as a process by which behaviour is changed, shaped or controlled. Others define learning more broadly in terms of fulfilment of potential. This latter growth orientation is characterised by Bruner (1990, pp. 4-6) as the increasing independence of response from the immediate nature

of the stimulus and the increasing capacity to deal with several alternatives simultaneously, to attend to several sequences during the same period of time and to allocate time and attention in a manner appropriate to these many demands.

Argyris (1982) divided learning into two categories: single loop and double loop. The former is learning within the confines of one's theory-in-use, that is, behaving according to one's reasoning and beliefs. Double loop learning gives recognition to what happens when there is incompatibility between one's espoused theory and one's theory-in-use. This means that people do not necessarily behave on the basis of their values and beliefs and that people challenge values and beliefs on the basis of their experiences. Argyris maintained that all forms of reflective learning are in essence double loop learning. If reflection leads to affirming the prevalent values, beliefs and culture, then it would be single loop learning.

Argyris (1982) recognised the importance of reasoning and reflection in the learning process. He maintained, however, that learning theories that espouse a congruence between reasoning and action should be questioned. According to Argyris, learning occurs when a person discovers a problem and when he or she experiences what (Jarvis, 1990) later referred to as disjuncture. This disjuncture leads a person to invent a solution to the problem, to implement the solution and to evaluate the outcome.

Kolb (1984) stressed the importance of reflection in his four stage model of the experiential learning cycle. The cycle is a continuous spiral that begins at any of the four stages: (1) concrete experiences (2) observations and reflections (3) formulation of abstract concepts and generalisations and (4) testing implications of concepts in new situations. He stressed that individuals have different learning styles and that some people are more comfortable with reflection than others when they engage in learning.

Encouraging critical reflection is an effective means of encouraging deep level learning. With respect to change and growth, learning is higher on the ladder of abstraction than reflection. Reflection may be viewed as an essential vehicle for deep level learning to occur.

## LEVELS OF LEARNING

Learning itself has been viewed on many different levels. Bateson (1979) outlined three levels of learning. The first he called Learning 1, stochastic learning by trial and error. This type of learning involves feedback processes and deals with change in a specific response within a single context. Teaching an animal a trick is an example of this. Learning 1 is what Watzlawick et al. (1978) called 'first order change,' where behaviour varies without any appreciation of the context in which it is created and changed. Experimental psychology has mainly focused on

this type of learning. We seem to know more about how animals learn than we do about how children learn and more about how children learn than about how adults learn.

Bateson's Learning 11 ('second order change', Watzlawick et al., 1984) is broader than Learning type 1 and it refers to learning about a particular context of learning. It involves learning how to identify and organise actions as part of a specific context, rather than as in Learning 1 which involves identifying and organising behaviour as part of the same particular context. In Learning 11 the learning arises not from comparing different behaviours but from comparing across different learning opportunities. For an animal to learn something different it would have to recognise the context as being different. In Learning 11 what is learned is a way of *punctuating events rather than specific behavioural change.*

Experiments with dolphins (Bateson, 1990) showed that they could engage in Learning 11 and be 'creative'. Bateson's work with dolphins showed that once they learned more than one trick it became easier for them to learn more tricks. He discovered that if he held back from rewarding a dolphin who already knew many tricks, the dolphin would try different types of behaviour until it received reinforcement. If its behaviour were not systematically reinforced the dolphin would suddenly begin to exhibit behaviour never before seen in dolphins. The way Learning 11 was created in the dolphins was to put them in confusing or out-of-the-routine situations thereby causing them to respond differently.

Bateson's Learning 111 also involves change, but not change in a specific behavioural response (Learning 1) and not change in relation to the situation or punctuated event (Learning 11) but rather change in the *system of sets of alternatives* from which the choice is made. Bateson maintained that this level of learning is rare and difficult to achieve, but that it sometimes occurs in religious conversion and moments of very significant self-actualisation.

Learning at any of the three different levels can indicate a fixation. A person can become fixated in their learning patterns and trapped in one of the three learning levels. For example, typical habitual responses to learning in Level 1 can result in being caught up in one perspective. As a consequence, the learner may have filtered perceptions and may tend to implement the same type of behavioural solution regardless of the context.

People who are caught up in Level 2 learning move from one set of perspectives to another. They display confusion, continually moving from one blind spot to another. People predominantly in Level 2 mode may develop a strength if they use their eclecticism wisely and selectively. This may be achieved if they consciously develop a sensitivity to context.

The person who is caught up in third order change, that is, in a system of perspectives (Learning 111) has discerned difference at a deep level. Freire calls this *praxis*, going beyond explanation and becoming aware of a difference that may make the most profound change in one's orientation to understanding and

action. Praxis is the perfect fusion of reflection and action. It seems from Bateson's analysis of three levels of learning, that the order of learning in which one is caught up will determine the types of strategies used in action.

## LEARNING AS CHANGE

Learning involves change and includes the acquisition of skills, knowledge and attitudes. According to Crow and Crow (1963) learning enables the individual to make both personal and social adjustments.

> *Since the concept of change is inherent in the concept of learning, any change in behaviour implies that learning is taking place or has taken place. Learning that occurs during the process of change can be referred to as the learning process.*
> Crow and Crow, 1963, p. 1.

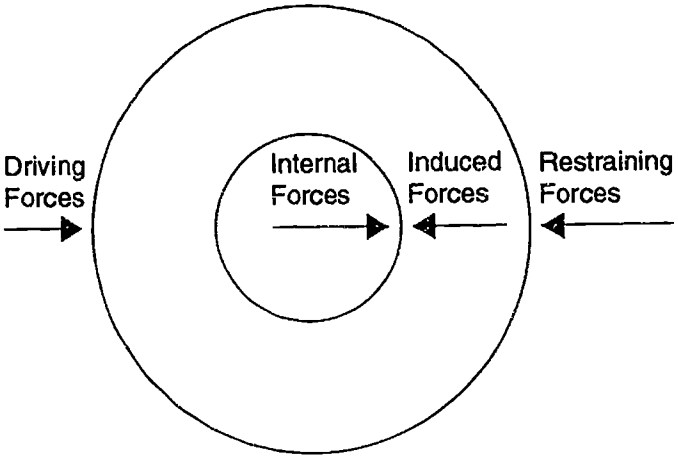
Here, learning is equated with change as an adjustment to the personal and social environment as the result of experience. Experiential learning, the term popularised by Kolb (1984) refers to the process whereby knowledge, skills and attitudes are *created through the transformation of experience.* Kolb claims that learning is both an experiential and a reflective process. According to Boud et al. (1985) experience can be turned into learning through reflection.

Of course learning is not just a psychological reflective process that occurs in isolation from the world of experience. Learning is intimately tied to the living world and the experiences of the learner and it is a social phenomenon. This is most evident in children who are socialised early in life by parents and significant others and who subsequently internalise skills, knowledge, attitudes and patterns of behaviour. Jarvis (1987) maintained that learning is a rich social process involving experience which by its very nature involves interaction with others.

Educators today are advocates of the notion of helping learners to take more responsibility for their own learning and change environment (Knowles, 1990; Brookfield, 1987; Jarvis, 1987). This means promoting self-directed learning (Grow, 1990).

Kurt Lewin (1951) believed that behaviour in any organisational context is determined by an interplay between two main forces, individual needs and the environment. He called the study of these factors *field theory.* He identified four forces affecting change and learning in the work place (see FIGURE 5). These forces include *induced forces* which act upon individuals and groups from the external environment, *internal forces* which act from inside individuals and groups, *driving forces* which push the actual environment towards change and *restraining forces* which pull the environment towards the status quo and stability. This is a useful model of change, growth and learning which pivotally involves critical reflection, since individuals and groups must analyse, interpret, explain relationships, hypothesise, explore, keep open minds and have tolerance for ambiguities.

**FIGURE 5: Four forces in Lewin's (1951) model of change.**




Keeney (1983) asserted that the deepest order of change that human beings are capable of demonstrating involves them in transforming their way of experiencing the world. According to authors like Bateson (1990) and Erickson (1964) the way of inducing change is to encourage problem behaviour, amplify deviation, suggest relapse, emphasise the positive aspects of a symptom and then introduce confusion.

> *The first act of a teacher is to introduce the idea that the world we think we see is only a view, a description of the world. Every effort of a teacher is geared to prove this point to his apprentice... sorcerers call it stopping the internal dialogue and they are convinced that it is the single most important technique that an apprentice can learn.*
> Castaneda, 1974, p.231.

Mezirow offers a very powerful description of learning as change; he calls it *transformative learning.* Recently on an Australian visit Jack Mezirow spoke about his understandings and insights regarding how adults learn. He described an emerging theory of adult learning which explains in useful ways what is necessary in adult learning as a process and in preparation for people for change. He spoke about transformative learning and his transformation theory of adult learning (Mezirow, 1995). Here I shall report my interpretation of his presentation.

What this theoretical dimension holds is that a crucial aspect of adult learning is our frame of reference. All kinds of learning occur without transforming one's frame of reference, but the most significant learning in adulthood occurs when there is transformation of one's frame of reference.

A frame of reference is a set of assumptions that we construct from our perceptions, our cognitions and our feelings about the world, about other people and about ourselves. So much of what we read in adult education deals with learning that occurs within the person's existing frame of reference. But true transformations, both individually and socially, begin with a change in our frame of reference.

Frame of reference comprises two dimensions. The first is habits of the mind, that is, habits of expectations that come from three different sources. One of them is socio-linguistic; things like ideologies, social norms and, language codes. The way in which the English language focuses on polarities often creates problems. For example, people are either big or small, fat or

thin, rich or poor, beautiful or ugly. In English, the lack of intermediate words gives rise to a severe limitation. This causes us to think, see and feel in certain ways. A number of languages have similar limitations. Socio-linguistic factors influence these habits of mind and provide blinkers. These habits of mind are capable of shaping, limiting and distorting the ways we think and feel about the world. Another habit of mind is influenced by psychological factors. Neuroses, psychoses and personality traits tend to limit us. The third source of these habits of mind is connected with learning and has to do with learning styles, for example, whether we look at things holistically or in parts and whether we are field dependent or field independent. Our preferred styles of learning also influence habits of the mind.

The second dimension of a frame of reference is point of view. Point of view is also influenced by habit of the mind. Ethnocentricity is an example of a point of view. Ethnocentricity, a habit of the mind, occurs when we look with suspicion at others who are different from us and perhaps interpret that they are inferior in some way. When we encounter someone who is different from us, that particular person elicits in us feelings, thoughts and judgements that are very specific. In other words, we express our feelings that come from the habit of the mind and this becomes a frame of reference.

A frame of reference includes concepts, judgements and feelings that we have when we make an interpretation. These are the structures within which we make meaning. Frames of reference are structures of the mind (knowledge structures) which

we use to construct meaning. Frames of reference can either improve us or limit us. When frames of reference limit us we live our lives without ever questioning our meaning structures and we are so much the poorer for that.

How do you change a frame of reference? The way you change a frame of reference is by becoming critically reflective of your own assumptions. This is a very special aspect of adult learning. Critically reflective can mean many different things. Reflective thinking means even more things. Becoming critically reflective of assumptions is a very powerful mechanism for making change happen in adult learning environments. You can become critically reflective of the content of a problem, of the process, of how you solve it, of the premise, or of the way a problem is framed in the first place. Becoming critically reflective of the content and the process of problem solving is the way we change our points of view. The way we change our habit of mind is to become critically reflective of the premises of the problem.

For example, I may ask myself, *Who is the best student in this classroom?* If I am going to be critically reflective of the content of that problem I am going to be asking myself what kind of indicators I should look for, for example: evidence of creativity or measures of group participation. If I ask myself, *Do I know enough about this student to make a generalisation?* that involves the process of problem solving. If I ask, *Is my judgement faulty on the basis of the evidence?* that is looking at the problem solving process itself. Those two ways of reacting and of being critically reflective can really change a point of view. If I

ask myself, *Why do I pose the problem in a competitive way in the first place? Why don't I just think about each person and the degree to which they have learned something and can demonstrate how they have learned something from the time they came into this classroom?* that would be looking at the premises of the problem critically, examining the way the problem was framed in the first place.

If I then begin to be introspective and ask, *Why do I always do this? Why do I always pose things in a competitive frame of reference in the first place?* that can change a habit of mind. There is a dynamic in which habits of mind become transformed. When that happens it is very colourful; it is consciousness raising and it leads to change. People come to realise that old established ways should be looked at critically and that there are other possibilities. It can happen in the context of a social movement or it can happen in our individual lives. We can learn how to be critically reflective of assumptions and this can be a powerful learning mechanism.

Two ways of becoming critically reflective can be differentiated; objective reframing and subjective reframing. If you are reading something and you ask about the assumptions of the author, you are asking about assumptions outside yourself. This is termed by Mezirow as *objective reframing*.

*Subjective reframing* happens when you become critically reflective of your own assumptions, of your own frame of reference, your own thinking, where it came from and how you acquired your habit of thinking that way. This is potentially the

most powerful learning experience of adulthood. Freire referred to this as *conscientisation*. Essentially people are encouraged to become critically reflective of taken for granted assumptions. This is very empowering.

The CReST is a procedure which operationalises the theory of transformative learning espoused by Mezirow. It is a process which in part engages individuals and teams in becoming critically reflective of assumptions. In the CReST people are critically reflective of content and process as well of the basic premises of problems. The CReST encourages people to identify frames of reference within context, to question them, to suggest alternatives and to empower individuals to decide what, if anything, they may do about the suggestions offered to them. The CReST raises awareness of difference which is the basis for recognising that change can be transformative. The CReST, in using parallel teams and the META team, encourages the processes of becoming critically reflective as suggested by Mezirow.

The parallel teams ask about many dimensions of the problem under discussion. In particular, parallel teams engage in objective reframing when they offer suggestions on alternative ways to behave. They ask about assumptions outside themselves, that is the assumptions of the FOCUS team, while the META team, acting like a Greek chorus, engages people in subjective reframing by asking the parallel teams to think about their own frames of reference. In fact, the CReST encourages people to become critically reflective about their own assumptions and their own frames of reference.

## *SECTION 2*

### *The learning organisation and conditions for learning*

> *Learning organisations ... where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together.*
> Senge, 1990, p. 3.

When people learn they improve their knowledge, skills and understandings or, they change their attitudes. If people can constantly adapt their responses to achieve their own objectives they will be learning. Put in another way, when people act in improved ways to achieve what they want, then they can be said to be learning.

> *The juxtaposition of vision (what we want) and a clear picture of current reality (where we are relative to what we want) generates what we call creative tension: a force to bring them together, caused by the natural tendency of tension to seek resolution. The essence of personal mastery is learning how to generate and sustain creative tension in our lives. "Learning" in this context does not mean acquiring more information, but expanding the ability to produce the results we truly want in life. It is lifelong generative learning. And learning organisations are not possible unless they have people at every level who practise it.*
> Senge, 1992, p. 142.

Knowles (1990) stated that there are six basic principles which, if followed, will improve adult learning. According to Knowles these principles are also applicable to children's learning.

1. Adults *need to know* why they need to learn something before beginning their learning. When they do know why, they are likely to invest considerable energy into investigating the benefits of learning and the negative consequences of not learning.

2. The second assumption for adult learning relates to the *learner's self-concept of being responsible* for their own lives and self-direction. This must be encouraged in relation to learning; adults should be encouraged to be independent, autonomous and self-directing learners.

3. Adults have a *wealth of experience* which should form the basis for their learning. Often it is the reflections and skills acquired from such experiences that will be used as a basis for further exploration. As a famous philosopher said, *Life without reflection is not worth living*.

4. Adults *become ready to learn* those things they feel they need to know. Just-in-time learning is an example of the application of this principle. Readiness can be induced through exposure to work of a particular kind, simulation exercises, counselling and other techniques.

5. The fifth principle relates to readiness; it is an *orientation to learning* which will be helpful to deal with real life problems and tasks.

6. The sixth principle relates to *motivation.* Intrinsic motivation, the drive to keep growing, developing and blossoming is most powerful when other conditions for learning exist; ie. when adults have a positive self concept and can be self-directing.

What then does it mean for an organisation to learn? Certainly it is a necessary condition for individuals to be learning, but individuals learning is not a sufficient condition for an organisation to be learning. The learning organisation is one where the total group of people who work together strive to achieve their common goals. Learning in this case means that individuals share an increasing ability to achieve the aims for which they jointly strive.

People as a group in the organisation need to know why they need to learn. They should feel autonomous and have a sense of being self-directed with the ability to build on their shared experiences and skills. As a group or empowered team they should recognise a readiness to learn in relation to real work issues. One interpretation of Knowles' sixth principle is that people acting as an entity will be driven to achieve the best results because they will contribute to a better organisation, able to build on their common experiences and shared development.

Organisational learning then is a process that results in understandings and other outcomes which are greater than the sum of the individual learnings. For example, the success of a performing organisation, such as an orchestra or a sports team, must be attributed to more than the sum of each individual's contributions.

Nowlen (1988) reinforced this idea with his concept of the double helix of human performance in which there are two complex interactive strands, each bearing only part of the performance code. One is the cultural features (history, values, mission, structures, symbols, etc.) and the second is the individual characteristics (skills, limitations, attributes). Both Schon (1990) and Daft & Weick (1984) support the view that the skill in the performing organisation (eg. an orchestra) can be credited only to that organisation performing as a group or team.

> *Individuals come and go but organisations preserve knowledge, behaviours, mental maps, norms and values over time. The distinctive feature of organisational level information activity is sharing.*
> Daft and Weick, 1984, p. 294.

The implication of this view is that organisations can suffer the same inadequacies as individuals. They therefore can lack certain competencies to achieve various tasks and they may also be learning disabled. Just as organisational learning is greater than the sum of the individual learnings, so too are its failures.

In mature organisations, however, failure to learn can be seen as part of the process of learning. In this case failure is not failure, but part of the *continuous process* of self transformation.

> *A learning company is an organisation that facilitates the learning of all its members and continuously transforms itself.*
> Pedler, Burgoyne & Boydell, 1991, p. 1.

The metaphor of the learning organisation is a powerful one referring to organisations as personified organisms with the ability to continually adapt to changing environments. Some assumptions in these statements include first, the idea that individuals sharing understandings create a single mega-entity having abilities of more than the sum of the total individual parts, and second, the idea that it is then possible for the organisation's new collective shared knowledge to improve performance. Questions to ponder include:

- *Does this mean that the entity has a single collective memory?*
- *How is knowledge retrieved?*
- *How does the new entity perform efficiently; eg. can it have knee-jerk reactions without informing the parts of the organism?*
- *How does the organisation experience success and failure?*
- *How can it improve its level of competency?*

Dixon (1992) spoke of two types of learning essential for excellent organisations; innovative learning and adaptive learning. Like people, organisations can initiate as well as adapt by being either proactive or reactive towards their environments. When organisations learn, they can adapt their behaviour on the basis of past experiences and collective skills and they can invent new behaviours and try new skills to anticipate potential obstacles to achievement of their goals.

Zuboff (1988) equated learning to work. She maintained that learning is the new form of work. She challenged the old dichotomy between work and learning, claiming that people no longer learn and then go to work. With the advent of information technology she asserted that learning is at the heart of work. Merriam and Clark (1991) estimated that over fifty per cent of all learning is work related.

Some essential elements of the learning organisation are first, that group goals are attained and second, that shared responsiveness occurs; this is critical to becoming a learning organisation.

## NINE STRATEGIES FOR DEVELOPING ORGANISATIONAL LEARNING

Nine strategies for developing organisational learning include Kinlaw's (1989) coaching method and Dixon's (1992) eight areas of focus in which systematic and reflective processes for learning can be developed. These are listed and some examples are given, beginning with Dixon's work. It is not suggested that they are mandatory, rather, that organisations select the ones that they believe will best suit their culture and their context.

Most of these learnings can be achieved through the use of team critical reflection strategies.

1. *Generate a holistic view of the organisation.* This can be achieved in ways congruent with organisational culture. An example would be to exploit the

layout of the office; by placing furniture in a pie shape with managers in the middle people may interact and share information more freely. Another is having in place arrangements for employees to exchange jobs with counterparts in a different functional area.

2. *Obtain and use information about the external environment.* For example, the organisation may pay employees to visit similar organisations while they are on holidays. A reflective aspect of this task is to identify the set of assumptions which characterise the home organisation. In addition, computer programs can be used to scan news items and automatically send these to the relevant people.

3. *Develop new knowledge.* This can be achieved by purposefully placing on research or design teams individuals who know very little or nothing about the technology or discipline so that important questions can be asked and so that new perspectives can be introduced. Another suggestion is to allocate say 5% to 15% of employee time to working on their own ideas.

4. *Learn from alliances with other organisations.* Examples here include joint ventures and consortia which may be a rich source of growth as long as the processes put in place facilitate rather than hinder learning. There needs to be prior agreement on objectives, roles, responsibilities, development of skills, effective communication processes and identifying what can be learned by collaborating in the alliance.

5. *Retrieve and retain organisational memory.* One process to help this is the installation of an organisation wide, consistent formatting and documentation system to help retrieve individual and group projects related by some salient feature.

Disseminating information and lessons learned by organisations through newsletters and other publications may be another way to effectively achieve this goal.

6. *Clarify and communicate success and failure* in order to help implement ideas more quickly. Dixon suggests a way to achieve this by the use of the pink room method. In this room colleagues can be open and honest in their opinions and they can seek assistance with the assurance that what is said stays in the pink room. The five W questions may be used to solve problems: *Who? What? When? Where? and Why?*

7. *Provide direct performance feedback.* This is an important process for continuous improvement. Direct measures are needed at a number of levels: individual, team, departmental and organisational. Monthly meetings to update on quality, schedules and products may achieve this, as may starting the day or week with a review of the team's/group's achievements of the previous day or week.

8. *Questioning assumptions* is another critical process which ensures that the organisation maintains a productive and innovative self-awareness. Methods can be used to ensure that undiscussable issues are discussed. On way is to ask each person to declare themselves on a scale of 1 to 10 on an issue and then challenge them to identify what would shift their support to the level of 10. Action projects and other learning approaches may be used to achieve positive outcomes by involving managers and employees in a collaborative way over a period of months to disentangle

themselves from a mess or problem by building trust and reliable relationships where assumptions are challenged and new ideas are explored.

9. *Coaching is the ninth creative method* that can encourage the development of learning organisations by focusing on improving one-to-one and group conversations among colleagues and between managers and staff. Coaching, as a creative problem solving approach, can be used between two people to assist performance to become outstanding. It is a shared problem solution approach which communicates respect. It is change oriented and disciplined in the sense that it follows an identifiable sequence of steps. It can be initiated by either management or staff.

Coaching can be used as a critical reflection process. It can be a key strategy for developing people within organisations and for solving problems jointly and thereby contributing to the development of a learning organisation. Coaching to gain people's maximum commitment to tasks, organisational values and goals is a key strategy for expanding an organisation's capacity to create its own future. Commitment has four major aspects to it:

1. There should be clarity about the goals and values held by the organisation.
2. Staff should be competent in areas relevant to corporate success.
3. Every member of the organisation should be empowered to contribute effectively to strategic planning and decision making. The use of empowered teams may be one effective way of ensuring influence at every level.

4. Appreciation for each others' contributions should be expressed by managers in particular, and by people at every level.

Coaching has a number of essential elements such as counselling, tutoring, mentoring, confronting, leading, motivating, communicating and practising effective principles of adult learning.

To create a learning organisation people must reflect both individually and in groups. The path to becoming a learning organisation is first to be a critically reflecting organisation. Critical reflection is the key to lifelong transformative learning, not only for individuals but also for groups, teams and for entire organisations.

## *SECTION 3*

### *Case study: developing reflective value management practitioners*

I found the CReST to be very successful in educating facilitators about diverse ways of thinking and problem solving. In particular I used ideas contained in the CReST process to train facilitators in how to conduct value management studies. The CReST process involves a number of teams, the FOCUS team, several parallel teams who have specific observational, discussion and reflecting functions and also a meta team which reports on all other teams' reflections. At critical points, the experience is stopped and reflections are encouraged. The process promotes skilled observation and sharing of descriptions among individual teams. The CReST promotes critical thinking about individual practice.

> *A great learning experience, overcoming my initial fears and coming to terms with value management from a facilitation point of view.*
> Chris Osborne, Project Management, Roads and Traffic Authority, NSW.

Since 1992, the Centre for Human Resource Development Studies at the University of Canberra, in collaboration with the National Centre for Value Management, has been conducting a Graduate Certificate in Human Resource Development for Value Management facilitators. The program has involved about seventy professionals including project managers, engineers,

quantity surveyors, business managers, private management consultants, lawyers, various public servants and human resource development specialists from around Australia, New Zealand, Hong Kong and Malaysia.

The course aimed to ensure the development of knowledge and expertise in group problem solving processes and in technical understanding of Value Management. Our role was to assist participants to achieve the outcomes of the course by conducting two five-day intensives, comprising lectures and workshop activities. Pre and post assignment work was expected in addition to other assignments between the formal course work activities.

> *The critical reflection team activity helps in sensitising you to the underlying problem solving processes, that is, you can see the processes more clearly. The teams were better able to learn from constructive feedback.*
> Denis Sullivan, Project Manager, Roads and Traffic Authority, NSW.

## WHAT IS VALUE MANAGEMENT?

Value Management is a structured, systematic and analytical process which seeks to achieve value for money by providing for all of the necessary functions at the lowest total cost consistent with required levels of quality and performance. We trained professionals to conduct Value Management studies in

accordance with the Australian/New Zealand Standard: 4813: 1994. This requires the development of a brief and a core methodology (5 phases: information, analysis, creativity, option evaluation and planning/reporting) and it requires management of the process. The aim is to achieve maximum efficiency without compromising effectiveness.

Value Management is about clarifying and satisfying customer needs (which may include the needs of the client, end users, stakeholders or the wider community) including latent needs. It is about creating ideas as to how a system, product or service can best "do its job" at appropriate levels of quality performance. It is about testing and challenging assumptions. It is about participation by clients, end-users, and stakeholders. It is about seeing the purposes of systems, products or services and developing alternative strategies to achieve these. It is about seeking the lowest total cost of satisfying the customers' needs; it is definitely not about seeking "cheap" solutions.

The Value Management process is based on a structured workshop involving a carefully chosen multi-disciplinary project team, together with appropriate representation from clients, stakeholders and in some cases, members of the community. Value Management techniques have universal application although in the course we conducted, particular emphasis was placed upon major capital works schemes.

We trained many professionals in the use of the Value Management five phase job plan (see TABLE 4, Value Management Job Plan). The first three phases, information, analysis and crea-

tivity, serve to explore all aspects of the problem situation to arrive at a detailed and shared appreciation of the complexity of the problem. The analysis phase deals with function analysis and deciding on what the system must achieve, while the creativity phase explores options. The final two phases, judgment and development involve deciding which options are realistic and actionable in terms of achieving efficiency without compromising quality. These decisions lead to developing an action plan.

The central processes of reflection used to encourage participants in their role as reflective value management practitioners are outlined on pages 181-185.

## TABLE 4: VALUE MANAGEMENT JOB PLAN

(Source: Australian & New Zealand Standards on Value Management)

Typical Objectives, Questions, Activities and Techniques

| PHASE | TYPICAL OBJECTIVES | TYPICAL QUESTIONS | ACTIVITIES or TECHNIQUES |
|---|---|---|---|
| Information | Confirm VM objectives<br>Clarify assumptions<br>Provide information; Set scope of study | What is VM purpose?<br>What is rationale?<br>What is timetable? | Presentation graphics<br>Cost, energy, area models<br>Pre-reading; Life cycle costs |
| Analysis | Rationalise data; Clarify functions<br>Understand system links<br>Test parameters<br>Select high result functions | What does it do? What does it cost?<br>What must it do?<br>What are the performance criteria?<br>What are the quality criteria? | Function analysis<br>F.A.S.T. diagram<br>Function hierarchy<br>Priority matrix |
| Creativity | Generate ideas/multi-disciplinary input<br>Maintain non-judgemental environment<br>Encourage the unconventional | What are the alternatives?<br>What else satisfies function? | Lateral thinking; Creative thinking<br>Sub-topic focus<br>Sub-group facilitation |
| Judgement | Assess, cull ideas; Promote options<br>Focus on solutions<br>Target value improvements<br>Promote communication; seek consensus | What do the alternatives cost?<br>What alternatives are fundatmental?<br>What ideas link together?<br>Acceptability of options? | Rating/weighting; Life cycle costing<br>Multi-disciplinary input<br>Group interaction<br>Common/Corporate sense |
| Development | Refine improvement options<br>Document rationale<br>Present outcomes & recommendations<br>Engender ownership | What are the value improvements?<br>Why change from status quo?<br>What further actions needed?<br>What decisions are required? | Cogent report and executive summary<br>Clear action resolution<br>Co-ordinate actions<br>Action plan and follow-up |

## REFLECTION IN PRACTICE

There are many ways to encourage individual and group reflection. One technique used daily in our program was the **ECG method.** ECG signifies **emotions, concepts and growth.** This involved critically thinking about what was done, said and experienced that day. At the end of each day participants were asked to form *colleague consultant pairs* and to exchange their feelings and thoughts about the day. Each colleague consultant pair discussed their emotions or feelings about the day, the key learnings (concepts) for them, as well as how they might apply their new knowledge and skills in order to grow professionally. The use of pairs meant that everyone could express with a trusted colleague how they reacted to the day. The following morning each colleague consultant pair reported the outcomes of their discussion to the rest of the group. The facilitators responded where appropriate and made any changes necessary to improve the delivery of the program. Also, wherever possible, participants were invited to discuss their own contributions to the program.

A variant of the ECG is the PMI process. This involves participants discussing and recording the pluses of the day, the minuses and anything of interest. I have borrowed this procedure from de Bono CoRT Thinking Program called PMI, Plus, Minus and Interest. As with ECG, I have used colleague consultant pairs.

Responses categorised as *Plus* have often included good team work and increasing awareness of the participants' own thought processes, whereas those responses categorised as *Minus* have often suggested the need for further time on a particular aspect of the program. The *Interest* dimension of the PMI has evoked comments on the development of group dynamics and the effective use of co-facilitation (the use of two facilitators who work in tandem in order to achieve the goals of the workshop).

The PMI format can be varied to include an arrangement where two *colleague consultant pairs* combine to form a *learning group* of four people who then address different learning questions. The learning groups identify and record the key learnings of the day, what they would like to do that is different and what questions or issues they would like to explore further. The following morning each group shares their reflections with the whole group and major learnings of the previous day are consolidated with the facilitator's help.

## USE OF CReST

I would like to report briefly on a team based reflective activity, CReST, which I used in the training course to explore problems and to arrive at mutually acceptable problem definitions. A facilitator was asked to listen and use interpersonal communication skills to assist another person (the problem presenter) with a work-related problem, to explore that problem and to arrive at an accurate statement of the problem.

Three observers were used in this activity. The first observer was to notice the communication skills used. Questions asked by the observer regarding the communication skills included:

- *What type of questions were asked? Were they open or closed?*
- *What sort of probes were used to clarify statements, eg. questions of justification or qualification?*
- *Did the facilitator use techniques of paraphrasing and reflecting? How did the problem presenter react to these questions?*
- *Was the body language congruent with the message conveyed?*

The second observer was asked to note the explicit and implicit assumptions and the metaphors used by both the problem presenter and the facilitator in the problem exploration process.

- *What assumptions were inherent in the facilitator's statements?*
- *Were these assumptions particularly apparent in statements containing metaphors?*
- *What type of metaphors were used by each person?*
- *Did the imagery have any impact?*

The process of identifying underlying assumptions can be achieved by asking critical thinking questions of people making statements. Examples of critical thinking questions are:

- *What were you assuming when you said that?*
- *Is that always the case?*
- *Can you give an example of when your statement will not apply?*

The third observer was asked to notice the ideas and issues covered and to identify the stages there might be to the process of arriving at a mutually acceptable definition of the problem. Suitable questions include:

- *What were the key issues discussed? Which of these emerged as themes?*
- *Were distinct stages evident in the problem solving process? (Consider emotions and content.)*

The facilitator used techniques such as paraphrasing, reflecting, basic questioning and high order questioning as well as active listening skills to explore the problem situation with the problem presenter and to arrive at a problem statement which reflected with clarity and accuracy the problem itself. The observers then gave structured feedback while the facilitator reflected on his/her performance and the success of the session. The bonus of this method was that it was rich in feedback and gave insights regarding the complexity of the problem solving process and that it showed how interpersonal communication skills can achieve desired outcomes.

> *This experience encouraged in me a much higher level of questioning; better information from colleagues; regard as being someone who cared and sought information of significance (professional esteem).*
> John Rattigan, Community Educator, Darwin.

The CReST has also been used to successfully identify problems and explore solutions in areas other than Value Management. Facilitators we have trained have used the Value Management five phase job plan and variants of it to conduct workshops on partnering, risk management, strategic planning, action learning, leadership and management training, and team work and learning.

***Partnering***

The focus of partnering is on commitment, inducting participants, fostering team work through workshop activities, developing projects, constructing a charter with an implementation plan and ensuring continuous evaluation, decision making and stakeholder involvement. The aim is to exceed quality targets and minimise disputes and non-value adding activities.

***Risk management***

This includes new projects, repeat projects, acquisitions and disposals. The aim is to create confidence in future action plans and to enhance various quality aspects of the organisation.

***Strategic Planning***

This process involves the adoption of key steps in thinking and acting strategically. It includes initiating and agreeing on a strategic planning process, conducting SWOT analyses (strengths, weaknesses, opportunity, threats), clarifying organisational missions,

analysing strategic issues to manage organisational progress, and formulating the organisation's future vision and a strategy to achieve that vision.

*Action Learning*

Action learning usually includes implementation and review of work-based projects that incorporate action learning strategies. The five phase job plan helps to unpack the action learning project and its learning outcomes as well as to construct future actions to enhance learning at every level in the organisation.

*Leadership and Management Training*

This type of training includes visioning and skills training, incorporating financial skills for non-financial executives, critical thinking processes, action learning and interpersonal skills development such as coaching, counselling, mentoring and confronting, in order to manage performance and organisational productivity.

*Team work and learning*

The job plan can be used to construct strategies for establishing self-managed work teams and for monitoring progress and development of the organisation. Strategies for learning on the job as the new form of work/productivity can be explored. Plans can also be constructed to implement individual and team strategies to build a learning organisation.

The use of the whole group offers scope for innovative practice in reflection by encouraging group reflective practices. The key underlying assumption of the CReST is that any particular experience can be understood in many different ways. There is no one correct understanding, although some understandings take into account more components of a situation than others.

> *It was useful to 'perform' different roles. I was on a very rapid learning curve - not a bad thing - forced me to focus on key issues. It heightened awareness in several different ways. There were a number of 'revelations' - some profound.*
> Alan Schwartz, Management Consultant, TW Crow Associates

The strategy helps to create group cohesion, to build knowledge and to maintain equilibrium through its constant feedback mechanisms. It also helps to empower people to produce insights by encouraging participants to be open to creative thinking. The following are samples of comments made about the Value Management course which is the subject of this case study.

> *The critical reflection activity provides a rich variety of roles which enhance and help to improve at a faster rate the facilitation skills.*
> SWL, Architect, Singapore

> *This was a very intense experience. Perhaps in my practice I have become complacent in my concern how I perform and this has been brought home. I believe this is a very useful method of training.*
> MP, Civil Engineer, Project Management, Hong Kong

> *The critical reflection strategies provided me with confidence in presenting, facilitating and taking risks as well as providing a perspective on my performance from others.*
> Rod Funnell, Engineer, Demand Side Planning, Sydney Electricity.

Other critical reflection strategies I have used with Value Management facilitators and other professionals have included writing reflection journals, completing structured reflection logs and using ECGs. People reflected either individually or in pairs. I usually establish colleague consultant pairs who review the learning of the session using the ECG method and a more formally structured reflection log. The colleague consultant pairs spend some time answering critical thinking questions (refer to Part A) related to their levels of awareness of many aspects of the learning session. Members of each pair report their discussions to the whole group in the following session.

> *The critical reflection activity gave a broader/more comprehensive way of learning about the skills than simply practising being a facilitator.*
> Kelly Weekley, General Manager, Planning, Queensland Corrective Services Commission.

> *The challenge for evaluators is to move from an intellectual understanding of the breadth of good thinking to an evaluation design that reflects that same breadth through its choice of instruments and tasks.*
> Joan Boykoff Baron, Office of Research and Evaluation, Connecticut State Department of Education.

## *SECTION 4*

### *Assessing critical reflection skills, attitudes and dispositions*

The CRI (Critical Reflection Inventory) Self-Report Scale on pages 191-193 can be administered to all participants of the CReST before the first CReST is conducted.

Improvement in critical reflection cannot be expected after a single exposure to the CReST. It is recommended that participants are given an opportunity over time to participate as members of each of the teams.

Reality can be defined as the best possible description of a situation or event that can be made at any point in time and the context and framework of observation as well as the position of observation will influence perception of reality. Participation in different teams allows people to adopt different positions, different frameworks of observation and to practise different skills of observations.

Best results with the CReST occur when there is ample opportunity for every member of the group to experience being the FOCUS team facilitator. Additionally, participants should be encouraged to take an opportunity to facilitate the whole CReST procedure, Level One first before the more difficult Level Two is attempted. Usually improvement in critical reflection can be noticed after five or six exposures to the CReST.

It is appropriate to administer the CRI (Critical Reflection Inventory) Self-Report Scale as a post test and compare the result with the pre test scores in order to obtain a measure of change in self perception on the various dimensions of critical reflection.

## *The CRI (Critical Reflection Inventory) Self-Report Scale*

Francesco Sofo & Lawrence Kendall, 1995

**INSTRUCTIONS:**

*Following is a list of statements about critical reflection. Think about each statement as it relates to your behaviour. Then circle the alternative that best describes the extent to which the statement matches your current behaviour.*

| | 1 Very Undescriptive | 2 Undescriptive | 3 Somewhat Undescriptive | 4 Somewhat Descriptive | 5 Descriptive | 6 Very Descriptive |
|---|---|---|---|---|---|---|
| 1. I question my own assumptions. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. I become anxious if someone opposes my views. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. I willingly accept suggestions from others. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. Now I can choose more ways to make observations than in the past. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. I am accurate in my observations. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. I do not mind if the other person has different values to me in solving problems. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. I monitor my feelings when addressing an issue. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. I make decisions on impulse. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. I feel attacked when presented with opinions different from my own. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. I am sensetive to others' feelings. | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. I refuse to change my beliefs even if I find they are not worthwhile. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. I notice my own way of thinking in order to make my thinking more accurate. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. When solving problems I evaluate the pros and cons of different options. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. I can hold off making a decision if I feel I do not have enough information. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. I have different ways of observing the same situation. | 1 | 2 | 3 | 4 | 5 | 6 |

| | 1 Very Undescriptive | 2 Undescriptive | 3 Somewhat Undescriptive | 4 Somewhat Descriptive | 5 Descriptive | 6 Very Descriptive |
|---|---|---|---|---|---|---|
| 16. I am afraid to bring conflicting points of view out into the open. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. I am sensitive to others' ideas. | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. I am open minded. | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. I can describe many facets of what I observe. | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. I know when I am confused about my thinking. | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. I help others understand their feelings. | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. I think carefully about problems rather than act on impulse. | 1 | 2 | 3 | 4 | 5 | 6 |
| 23 I become defensive when others reject my ideas. | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. I can engage with the perspectives of others. | 1 | 2 | 3 | 4 | 5 | 6 |
| 25. I have noticed a general improvement in my observation skills. | 1 | 2 | 3 | 4 | 5 | 6 |
| 26. I can easily identify what is implicit in other people's statements. | 1 | 2 | 3 | 4 | 5 | 6 |
| 27. I know when others are confused. | 1 | 2 | 3 | 4 | 5 | 6 |
| 28. I value different ideas. | 1 | 2 | 3 | 4 | 5 | 6 |
| 29. I am sceptical about what others call certainties. | 1 | 2 | 3 | 4 | 5 | 6 |
| 30. Once I have carefully formed an opinion I tend to reject contrary opinions. | 1 | 2 | 3 | 4 | 5 | 6 |
| 31. I can sense when others react strongly. | 1 | 2 | 3 | 4 | 5 | 6 |
| 32. I have noticed a shift in myself towards being more open minded. | 1 | 2 | 3 | 4 | 5 | 6 |
| 33. I am good at making sense of behaviour. | 1 | 2 | 3 | 4 | 5 | 6 |
| 34. When making observations I am aware of my biases. | 1 | 2 | 3 | 4 | 5 | 6 |
| 35. I question my own framework of thinking. | 1 | 2 | 3 | 4 | 5 | 6 |

## HOW TO SCORE YOUR CRITICAL REFLECTION RESPONSES

Use the Self-Report Scale to note your specific strengths and weaknesses on individual items. Scores of 5 or 6 indicate a strength in each item except items 2, 9, 11, 16, 30. In these few cases a score of 1 or 2 indicates a strength. It is important to note that items 2, 9, 11, 16 and 30 are scored in reverse to all other items in the Self-Report Scale.

Tally your scores from all thirty five items. A total score of 90 or less is low; a score of 91 to 139 is average. An average score indicates that you could benefit from further development in critical reflection skills; a score of 140 plus is comfortable. Regardless of the result, you can benefit from checking your self perceptions with your colleague(s). Discussing your profile with your colleagues can offer additional valuable insights.

> *The essence of personal mastery is learning how to generate and sustain creative tension in our lives.*
> Peter Senge, Systems Thinking and Organisational Learning Program, Sloan School of Management, Massachusetts Institute of Technology.

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Dr. Sofo is the Foundation Director (1992-1995) of the Centre for Human Resource Development in the Faculty of Education at the University of Canberra. The Centre conducts research and consultancies at local, national and international levels, and offers fee for service courses such as an Advanced Certificate in HRD (Australian Public Service) and a Graduate Certificate in HRD. The Centre has conducted many projects of significance, such as establishing a competency framework and a set

of integrated core competencies for Australian Customs Service, designing and delivering an accredited program for investigators, conducting annual national summer schools in HRD and, in collaboration with the University's National Centre for Value Management, introducing the first accredited program for Value Management facilitators. This course has been approved by the professional body, the Australian Institute of Value Management, Inc..

He was regional co-ordinator, for A.C.T., of the Australian Institute of Philosophy for Children (A.I.P.C.) from 1985 to 1990. Currently he is researching critical reflection strategies using teams for learning in the work place.

He is a member of a number of professional bodies including the Australian and American Institute/Society of Training and Development, the Australian Association of Adult and Community Education, the Australian Association of Research in Education and the Australian Institute of Value Management.

Dr. Sofo would be pleased to correspond with anyone working in or conducting research in critical reflection. Please contact him at the following address.

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## *REFERENCES*

Andersen, T. (1987). The reflecting team: Dialogue and meta dialogue in clinical work. *Family Process*, 26, 415-428.

Apps, J. W. (1985). *Improving a practice in continuing education: Modern approaches for understanding the field and determining priorities.* San Francisco: Jossey-Bass.

Argyris, C. (1982). The executive mind and double loop learning. *Organisational Dynamics*, August, 5-22.

Arlin, P. (1975). Cognitive development in adulthood: A Fifth Stage? *Developmental Psychology*, 11.

Baron, J. & Sternberg, R. (1987). *Teaching thinking skills: theory and practice.* New York: Freeman.

Bateson, G. (1988). *Mind and nature.* New York: Bantam.

Bateson, G. (1990). *Steps to an ecology of mind.* New York: Chandler.

Best, J. (1986). *Cognitive psychology.* Saint Paul: West Publishing.

Boud, D., Keogh, R. and Walker, D. (Eds.) (1985). *Reflection: Turning experience into learning.* London: Kogan Page.

Brookfield, S. (1987). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting.* San Francisco: Jossey-Bass.

Bruner, J. (1990). *Acts of meaning.* Cambridge: Harvard University Press.

Castaneda, C. (1974). *Tales of power.* New York: Simon & Schuster.

Corey, G. (1986). *Theory and practice of counselling and psychotherapy.* Monterey, California: Brooks/Cole.

Crow, L. D. & Crow, A. (Eds.) (1963). *Readings in human learning.* New York: McKay.

Daft, R. L. & Weick, K. E. (1984). Toward a model of organisations as interpretation systems. *Academy of Management Review,* 9, (2), 294-295.

Daloz, D. (1990). *Effective teaching and mentoring.* San Francisco: Jossey-Bass.

D'Andrea, A. L. (1986). *Teachers and reflection: A description and analysis of the reflective process which teachers use in their experiential learning.* Unpublished doctoral dissertation, Department of Education, Ontario Institute for Studies in Education.

de Bono, E. (1970). *Lateral thinking. A textbook of creativity.* London: Penguin.

de Bono, E. (1992). *Serious creativity. Using the power of lateral thinking to create new ideas.* London: Harper Collins.

Dewey J. (1933). *Experience and education.* New York: Collier.

Dixon, N. (1992). Being intentional about organisation learning. In Proceedings of the HRD Asia '92 Conference, *Building talent for competitive advantage: new challenges, new solutions.* Singapore Institute of Management, Singapore, November, 1992.

Egan, G. (1982). *The skilled helper.* Monterey, California: Brooks/Cole.

Erickson, E. H. (1964). *Insight and responsibility.* New York: Norton.

Freire, P. (1972). *Pedagogy of the oppressed.* Harmondsworth: Penguin.

Gardner, H. (1983). *Frames of mind.* London: Fontana.

Grow, G. O. (1990). Teaching learners to be self-directed. *Adult Education Quarterly,* 41, 3, 125-149.

Habermas, J. (1976). *Legitimation crisis.* London: Heinemann.

Habermas, J. (1984). The Theory of Communicative Action. *Reason and Rationalisations of Society.* Volume 1. Boston: Beacon.

Hewitt, J. & Stokes, R. (1975). Disclaimers. *American Sociological Review,* 40, 1-11.

Hilgard, E. R. & Bower, G. H. (1966). *Theories of learning.* New York: Appleton-Century-Crofts.

Jarvis, P. (1992). *Paradoxes of learning. On becoming an individual in society.* New York: Jossey-Bass.

Jarvis, P. (1987). *Adult learning in the social context.* London: Croom Helm.

Keeney, B. (1983). *The aesthetics of change.* New York: Guildford Press.

Kinlaw, D. (1989). *Coaching for commitment: Management strategies for obtaining superior performance.* San Diego: University Associates.

Knowles, M. (1984). *Andragogy in action.* San Francisco: Jossey-Bass.

Knowles, M. (1990). *The adult learner: A neglected species.* Houston: Gulf Publishing.

Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs, New Jersey: Prentice-Hall.

Korzybski, A. (1973). *Science and sanity.* Clinton, Mass.: Colonial Press.

Lewin, K. (1951). *Field theory in social science.* New York: Harper.

Lipman, M., Sharp, A. M. & Oscanyan, F. S. (1980). *Philosophy in the classroom.* Temple University Press.

Lonnergan, B. J. F. (1983). *A study of human understanding: Insight.* London: Darton Longman & Todd.

Malinowski, B. (1923). The problem of meaning in primitive languages. In C. K. Ogden & I. A. Richards, *The Meaning of meaning.* New York: Harcourt Brace Jovanovich.

Maranhao, T. (1991). Reflection, dialogue and the subject. In F. Steier (Ed.), *Research and reflexivity.* London: Sage Publications.

Maslow, A. H. (1968). *Towards a Psychology of Being.* New York: Van Nostrand.

Merriam, S. B. & Clark, M. C. (1991). *Lifelines: Patterns of work, love and learning in adulthood. San Francisco:* Jossey-Bass.

Mezirow, J. (1977). Perspective transformation. *Studies in Adult Education,* 9, 2, Leicester NIAE.

Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education,* 32, 1, 3-24.

Mezirow, J. (1990). *Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning.* San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco: Jossey-Bass.

Mezirow, J. (1995). Emancipatory learning and social action. In seminar papers, *Social Action and Emancipatory Learning,* 18-20 September, School of Adult Education, University of Technology, Sydney.

Miles, L. (1989). *Techniques of value analysis and engineering.* Lawrence D. Miles Foundation: USA.

Nowlen P. M. (1988). *A new approach to continuing education for business and the professions.* American Council on Education. New York: MacMillan.

Paul, R. (1993). *Critical thinking: How to prepare students for a rapidly changing world.* Santa Rosa: Foundation for Critical Thinking.

Pedler, M., Burgoyne, J. & Boydell, T. (1991). *The learning company.* Europe: McGraw-Hill.

Rogers, C. (1969). *Freedom to learn for the 80's.* Colombus, Ohio: Merrill Publishing Co.

Schlossberg, N. K. (1981). A model for analysing human adaptation to transition. *The counselling psychologist,* 9, 2, 2-18.

Schön, D. J. (1990). *Educating the reflective practitioner.* San Francisco: Jossey-Bass.

Senge, P. (1992). *The fifth discipline.* Melbourne: Random House.

Skinner, B. F. (1971). *Beyond freedom and dignity,* Harmondsworth: Penguin.

Sofo, F. & Imbrosciano, A. (1991). Philosophy? for children. *Educational Review,* 9, 2, 283-305.

Sofo, F. & Kayrooz, C. (1994). Multi frame reflecting team strategy. *The Journal of Organisational Practice.* 1, 2, 56-66.

Sofo, F., Kayrooz, C. & Kendall, L. (1994). *Critical reflection inventory.* Unpublished manuscript, University of Canberra.

Sofo, F. & Kendall, L. (1995). *The CRI (Critical reflection inventory) self-report scale. Forms A & B.* Unpublished manuscript, University of Canberra.

Tough, A. (1978). Major learning efforts: recent research and future directions. *Adult Education,* 28, 4, 250-263.

Tuckman, B. (1965). Developmental sequence in small groups. *Psychological Bulletin,* 63, 384-399.

Turney, C., Eltis, K. J., Hatton, N., Owens, L. C., Towler, J. & Wright, R. (1987). *Sydney Micro skills Redeveloped. Series 1 Handbook. Reinforcement Basic Questioning Variability.* Sydney: Sydney University Press.

Turney, C., Eltis, K. J., Hatton, N., Owens, L. C., Towler, J. & Wright, R. (1987). *Sydney Micro skills Redeveloped. Series 2 Handbook. Explaining, Introductory Procedures and Closure, Advanced Questioning.* Sydney: Sydney University Press.

Vialle, V. (1995). *Nurturing the multiple intelligences in Australian classrooms.* London: Hawker Brownlow.

Watzlawick, P. (Ed.) (1984). *The invented reality.* New York: Norton.

Watzlawick, P. (1978). *The language of change: Elements of therapeutic conversation.* New York: Basic Books.

Weeks, D. (1992). *The eight essential steps to conflict resolution.* Los Angeles: Jeremy Tarcher.

Woolner, P. (1991). *Integrating work and learning: A developmental model of the learning organisation.* In Proceedings of the Commission of Professors of Adult Education, Annual Conference, Montreal, Quebec, October 13-15.

Zuboff, S. (1988). *In the age of the smart machine.* New York: Basic Books.

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# Critical Reflection
# Strategies using teams



*Frank Soto has recognized the profoundly social dimension of critical reflection and has crafted a practical book for adult educators with instructional methods designed to facilitate critically reflective learning in groups in different instructional settings. Educators should find much that is helpful in planning learning exercises to encourage critical reflection among their adult learners.*
Jack Mezirow, Emeritus Professor of Adult Education,
Teachers College, Columbia University, New York City.

*The CReST provides an exciting means of effectively and efficiently learning interpersonal skills. This book is an invaluable resource for anyone working in the helping professions.*
Trudy Ainsmith, Psychologist - Consultant, Australian Capital Territory.

*Soto's book is a welcome addition to the literature which attempts to translate theoretical ideas regarding critical reflection into practical activities which can be utilised by facilitators. Soto's contribution is to focus on the group or the team as a vehicle for critical reflection. Too often in the literature the critical reflection is portrayed as an individual exercise, but the importance of the group in solving problems is receiving renewed attention; and this publication addresses the issue of how to promote critical reflection in groups or teams. Soto provides concrete exercises to guide facilitators who wish to improve problem solving in a variety of contexts. He also links the various exercises to the literature which underpins the concept of critical reflection.*
Professor Mark Tennant,
Dean, Faculty of Education, University of Technology, Sydney.

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Photo by Mary Soto

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