PAPER
09

Design for learning

Bob Dick (2001) *Design for learning: processes and models for the design of learning activities*. Chapel Hill: Interchange. (Version 5.06) [1]

First edition 1981. Reprinted and reformatted with only minor revision, 2001.

Contents

Preface

In 1978 the Queensland Branch of the Australian Institute of Training and Development (AITD) was beginning the initial planning of a state conference. Cliff Bunning asked me if I would give a couple of papers, including one on "building inductive models". I asked him what he meant by inductive models. "You know," he said. "The way you ask participants a series of questions, and as you write up their answers, in their own words, you build out of them a model of what is going on." I agreed.

In the event, it became a national conference. One of my planned papers, the one on building inductive models, was dropped to make room for interstate speakers. In retrospect that was probably just as well—I'm not sure that I could have given a coherent account of just how I did it at that time. But because of Cliff's request I started paying more conscious attention to that aspect of my training and consultancy work.

Eventually I came to understand consciously just what it was that I did unconsciously to build conceptual models out of participants' own data. The first version of this paper, prepared for limited distribution in 1981, was the result. At that time written mainly around the application of the FIDO and FUSS models, it has been revised at least yearly since that date, sometimes substantially. I later discovered the learning cycle.

Later still I discovered that the learning cycle and FIDO were related, though I probably should have suspected it. I therefore rewrote the book to include the learning cycle. Material on energy management, and on designing and managing transitions, was also added. I originally intended in the present edition to

expand the material on transitions; but Tim Dalmau and I did that in our joint monograph *Managing transitions*, mentioned again below, so I have left that piece pretty much as it was.

This version of the document continues the process of revision, particularly through minor correction or clarification, and some expansion. The main changes take the form of further clarification and fine tuning, and some rearrangement to the overall structure and exposition of the ideas.

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This is, above all, intended to be a practical book. Its main focus is actually theoretical, but the models it presents can be applied in practice easily and effectively. I expect it to be useful for anyone hoping to use experiential learning methods, whether novice or more experienced. For novices, particularly, the combination of the learning cycle and the notion of energy management allows an immediate improvement in the quality of experiential workshops which can be designed and conducted. For more experienced trainers, facilitators or consultants, the simpler models are probably already quite familiar; but some of the more detailed exposition may provide a somewhat different perspective on experiential learning. Several trainers and consultants of my acquaintance use the experiential cycle for the initial design; FIDO and FUSS then provide almost a checklist to help them fine-tune their initial design.

In this book I don't try to cover all aspects of workshop design and conduct. The major emphasis is on those models which can be used to design and conduct experiential workshops. Or, for those who prefer to use "off-the-shelf" designs from the literature, to better understand how such designs work and how they can be modified.

In some respects I would have liked to make this monograph more complete. But that would have required going over ground I have already dealt with elsewhere, in some instances in substantial depth. Other relevant material is dealt

with in *Helping groups to be effective,* [2] originally partly written for the *Strategies for change* programme in group facilitation. The FIDO model, which plays an important part in the present document, is also dealt with in more detail there, as it is in my *Learning to communicate:.* [3] You may find that these provide useful supplementary reading. However, I think you will find that the present document is sufficiently self-contained not to depend upon those other documents. I should also mention *Managing transitions*, [4] which Tim Dalmau and I wrote. It talks about the design and management of learning activities conceived as a sequence of transitions. I think you will find that it provides a very useful alternative perspective.

Finally, I fully expect the revisions to continue. If you have any comments on the usefulness or otherwise of the material here, I would be very pleased to hear from you.

Acknowledgments

Firstly, many thanks to Cliff Bunning, who in a sense started it all. And if the first version owed much to Cliff's initial question, the subsequent revisions have been prompted by ideas which I owe, in different ways, to many different people. I have spent many fruitful and productive hours working and talking with a variety of people.

2. *Helping groups to be effective: skills, processes and concepts for group facilitation*, Chapel Hill: Interchange, 1987.
3. *Learning to communicate: activities, skills, techniques, models*, Interchange and University of Queensland Bookshop, St Lucia, 1986. Available only through the University of Queensland Bookshop
4. Dalmau, Tim and Dick, Bob (1990), *Managing transitions: a key to creating effective learning environments*, Chapel Hill: Interchange.

Foremost among them in the early years was Tim Dalmau of Dalmau and Associates. He was always ready (and still is) to be a sounding board and to trade ideas. My associates from the Centre of Applied Behavioural Science (CABS) also played a similar role: George Blackgrove, John Damm, Phil Hanford, and Hollis Peter.

I have incurred a substantial debt to Keithia Wilson, Elinor Drake and Alf Lizzio of Core Consulting Services during our planning of the group facilitation programme *Strategies for change*. Our planning sessions have been an important part of my learning.

Conversations with numerous people at the Second International Conference of Experiential Learning also helped. In particular, I owe much to discussions at the presentations given by David Boud and by Robert Shumer.

It certainly seems to be true that teachers learn more than learners, at least when they pay attention to what they are doing. Certainly, that is my experience. What has contributed most to my recent understanding of the material in this monograph has been my "teaching" of process design at Queensland University. I am pleased to extend my thanks to the members of a number of classes, especially a fourth year class in *Advanced social consultancy* and a postgraduate class *Training and development*, and particularly since 1985. In trying to help them learn the essentials of process design for learning activities, I have been given many insights and have identified some of the more important gaps in the early versions of the models and of this monograph.

Introduction

This monograph assumes that the design of effective learning activities depends on the use of an appropriate process. By appropriate, I mean a process which accomplishes two goals. Firstly, it takes participants through steps which are so sequenced that they have acquired skills or information before they are required to make use of them. Secondly, that their energy and involvement is high enough for them to maintain interest and alertness, and thus to acquire the information or skills.

In short, I assume here that you can design and conduct effective learning activities if you pay enough attention to sequence, and to energy.

The early part of the document briefly considers the nature of intentional behaviour. It then links this to the "experiential learning cycle".

The experiential learning cycle is a model (or rather a set of models) which traces its lineage back to Kurt Lewin and beyond. It describes the overall shape of a learning experience. Its greatest development has been in the hands of David Kolb, [5] though some other versions add to Kolb's formulation. I depend most here on a variation of Kolb's version.

In its many forms, almost all bearing a family relationship to each other, it is the most widely known learning model. For understanding the design of learning processes and for developing a grand plan it is extremely useful. In the form in which I use it here, some modifications increase its generality. I also discuss some evidence that different people prefer learning activities with different starting points.

5. Kolb, David (1984), Experiential learning: experience as the source of learning and development, Englewood Cliffs, NJ: Prentice-Hall.

The learning cycle can be valuable as a guide to the overall structure of a learning design. For more detailed design, something else is needed. I therefore also demonstrate the use of what began life as a decision-making model. It can be used to develop the finer details of a design, or for critiquing designs already developed.

The decision-making model has been described in a number of other papers. Rather than cover it in detail again, here I give a brief overview followed by its application to the design of activities for concept teaching. A variation is then used to address the design of activities for skills-teaching.

The nature of learning

A useful starting point is for us to consider the place of learning in behaviour. If you think of a young baby's behaviour, it is clear that by adulthood we have learned an enormous amount. Much of it, too, is not acquired through formal schooling. It is picked up, through experience, along the way.

Consider the part of *intention* in behaviour. It will lead us into a consideration of the learning cycle.

Intentional action

Most working days of the week I drive from my home to the University where I work. This isn't all that conscious an activity on my part — I leap in the car, remind myself where I am going, and it happens without incident. The intention produces the desired end-product of arriving without incident at university.

This drive-to-university "program" is so automatic that sometimes it operates when it isn't supposed to. I may be going somewhere else, and at the start of the journey I may travel in the same direction as university. To my surprise I sometimes finish up at university. Once the program has begun it proceeds with little

or no conscious involvement. Sooner or later, however, I become aware that I'm not achieving the intended outcome. The sooner this occurs, the sooner I can correct it.

As it happens, I've had a driving licence for only ten years or so. Before that, I did a lot of walking. To amuse myself I engaged in a variety of games. One was triggered by my curiosity at noticing a regularity in my automatic behaviour. When I crossed a road, I almost always stepped onto the kerb on the other side with the ball of my right foot. This too happened without any conscious awareness on my part.

At some hazard to life and limb, I began to study what was happening. Until then, it had been entirely automatic. I hadn't even been consciously aware that it was the ball of my right foot which hit the kerb. Studying it consciously led to changes.

The most immediate change was that I began to stumble. You may remember the caterpillar in the traditional poem. Asked which leg came after which, it "lay distracted in a ditch". I didn't ever reach that stage of incapacity, but I soon learned that studying the automatic reach-the-kerb program interfered with its operation. In a related discovery I have also learned that studying how I run up stairs is a health hazard.

Eventually I learned to use some study methods which were less threatening to my physical well-being. I then discovered that there was a fascinating unconscious strategy which came into operation whenever I crossed a road on foot. It ensured that I crossed the road in such a way that the ball of my right foot made contact with the edge of the far kerb.

This is how it operated. Three paces before the kerb I shortened or lengthened my stride. I also typically changed direction slightly so that I approached the kerb at an angle instead of square-on. If necessary I further adjusted the angle of

approach in the last stride. (If you approach a kerb at an angle, a minor change of direction makes the point of aim closer or more distant.)

Think for a moment about the first two of these three paces. It appears that, without being consciously aware of it, I developed a goal: to strike the kerb with the ball of my right foot. To this end, I decided which of two strategies, shortening or lengthening my stride, would best achieve this end. As the kerb neared, I checked again to find out if my strategy was working. If not, I made a further adjustment.

I want to suggest that this is a fundamental process.

The stages of intentional action

Sometimes, as in the previous example, the process operates without me being consciously aware of it. On other occasions it it conscious. Aware or unaware, it is a three-stage process...

- develop an intention to behave in a certain way;
- act on that intention;
- check the success or otherwise of the action (Figure 1).

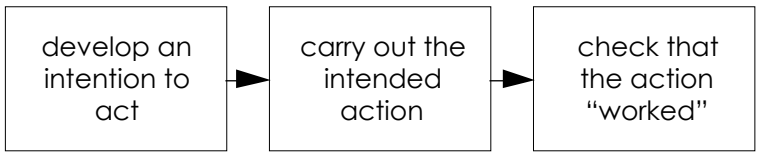

Fig. 1

Intentional action

Notice that all three are about action. The first intends some action: it imagines the action happening as a *future* action. The second carries it out, in the *present*. The third reviews it, or in other words imagines how it happened in the *past*.

Notice, too, that it is the intended outcome which provides the basis both for deciding what to do, and for reviewing if it happened as intended.

The importance of outcomes

The essence of intentional action is purposive action—action directed towards the achievement of some outcome or goal (Figure 2).

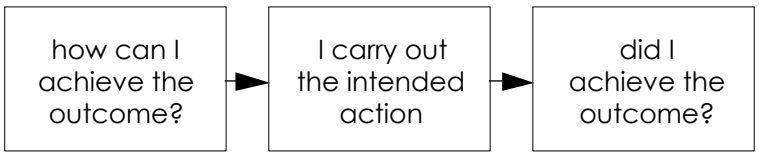

Fig. 2

Intentions as outcomes

Before we proceed, it may be useful to summarise the foregoing. What I have so far suggested is that actions are in some sense intentional, and that the intention is to achieve some outcome. I have further suggested that this often occurs outside conscious awareness. However, it is possible to become consciously aware, and study what is occurring.

To draw out the practical implications of this, I need to take this a bit further.

The review indicates if the action has been successful. In this context, success means that the outcomes have been achieved. If so, the next outcome can be pursued. If not, another attempt can be made.

The sequence as a cycle

In any event, review is followed once again by intention. The three stages form a sequence in which the order has a logic to it. Intention precedes action, which precedes review. And review leads again into action—the sequence is in fact a cycle, as shown in Figure 3.

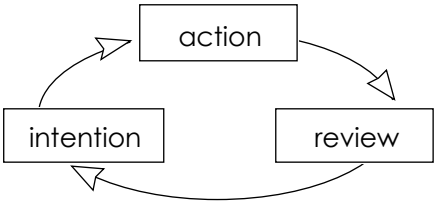

Fig 3

The three stages form a cycle; review leads either to a revision of the intention, or to the next step in the sequence of intentions.

I will shortly elaborate this further. Before doing so, I wish to note some similarities to other models.

It is a very similar model in some respects to one proposed by George Miller and his colleagues in *Plans and the structure of behaviour*. [6] They describe what they call a TOTE unit, "tote" being an acronym for test → operate → test → exit. The initial test is equivalent to the intention in the present model; the second test is equivalent to review. One either repeats the operation after the second test, or exits to the next tote unit in sequence.

For those of you who are familiar with the Kolb cycle, the material above will not come as a surprise. The intention-action-review cycle almost fits Kolb's cycle. Only "theory" is missing, and its place is suggested by the discussion so far. Let us examine the Kolb cycle.

The experiential learning cycle

It is useful to recognise at the outset that learning experiences are intended to produce change. All else being equal, you would therefore expect that models of the change process could be used. And indeed they can. Further, most learning

6. Miller, G.A., Galanter, E.H. and Pribram, K.H.(1960), *Plans and the structure of behaviour*, New York: Holt.

experiences pursue *particular* objectives. Problem solving models might then be expected to apply. And again they do. In what follows I will take it for granted that the processes which can be used for change and problem solving and learning are closely similar.

Learning and change

The simplest model is perhaps that of Lewin. [7] He described change as a three stage process (Figure 4). The first stage is "unfreezing", which prepares the organism or system to adjust its operation. The second stage involves bringing about the actual change. In the third stage of "refreezing" the effects of the change are analysed and the organisation or individual is restabilised. While I think it can be argued that this is no longer an appropriate model for community or organisational change in the 1980s and beyond, [8] it still appears to be an appropriate model for learning.

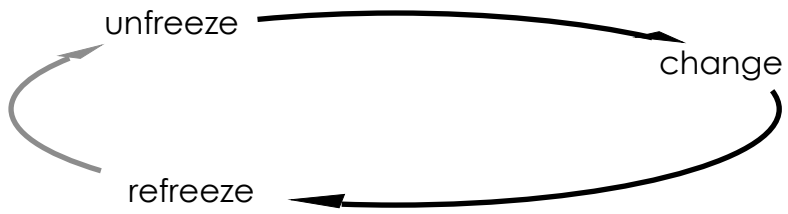

Fig. 4
Lewin's model of change

Certainly, some willingness to change is a precondition for effective learning. And a substantial literature (on "transfer of learning") attests to the difficulty of

7. Lewin, Kurt (1951), *Field theory in social science*, New York: Harper.
8. I think it can be argued that, commonly, the next change is under way before the previous change can be consolidated. Lewin's cycle implies stability punctuated by periods of change. Nowadays, it seems to me, change is more continuous than that. The consequence of this is that change programs have to be adjusted, on the run, to take account of newer changes which could not have been anticipated at the outset. The process therefore becomes a continuous tracking of a shifting goal.

exporting the new learning into the situations the learner faces outside the learning situation.

Unfreezing might also be related to the notion of "warm-up" in psychodrama. Participants are readied for the activity to come, so that they engage willingly and energetically in it. Similarly, refreezing bears a resemblance to what many trainers call "closure", when an activity is drawn to an end with a definite finish, and the loose ends tied up. I shall have more to say about these topics later, especially about the way in which closure can be an enemy of learning.

As you might expect, experiential learning models can be related to Lewin's change cycle. Most learning models involve some experience or information which adds to or challenges a person's beliefs or feelings or behaviour. Most of them then ask the person to draw conclusions from this experience or information, and to consider how it might be used in future.

The learning cycle

The Kolb cycle has four stages. In turn it cycles through what Kolb [9] labels concrete experience, reflective observation, abstract conceptualisation, and active experimentation. That is, act, review, generalise, experiment, and act again. Palmer [10] has shown how similar most of the learning cycle models are to this basic schema.

For some purposes I find it useful to regard the third stage as planning to act (Figure 5). This relates more closely to the intentional action cycle, and is the version I will use. The notion is that once people have drawn generalisations, they can then usefully plan what use they might make of them elsewhere.

9. For example see the preface to Kolb, David A., Rubin, Irving M. and McIntyre, J.M. (1984), *Organisational psychology: Readings on human behaviour in organisations* (fourth edition), Englewood Cliffs, NJ: Prentice-Hall.
10. Palmer, A.B. (1981), Learning cycles: models of behavioural change. In Jones, J.E. and Pfeiffer, J.W., *The 1981 annual handbook for group facilitators*, San Diego, Ca.: University Associates.

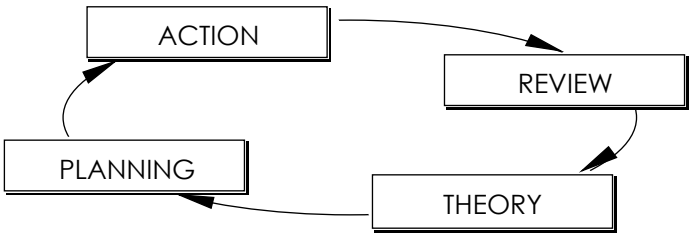

Fig. 5

Kolb's learning cycle
(slightly modified)

If you accept that discovery learning (where the learners learn for themselves) is valuable, then the learning cycle has an almost-unavoidable logic about it...

- Learning by doing can be both powerful and enjoyable; but the people often remain unaware of what they have learned (as I found when I began to use experiential methods [11] in university teaching). In other words, without reflection the learning may remain invisible.
- Drawing principles from the learning allows it to be extended beyond the immediate situation. But this only occurs if the evidence from the situation is taken into account. The evidence comes from reflection. Therefore, reflection logically occurs between experiencing something and drawing principles or conclusions from it.
- Using the principles in practice both keeps the theory honest, and develops further evidence. Developing plans for using it increases the likelihood that it will be used. Therefore, application reasonably follows theory and principles. Using the principles creates more experience, leading once more into the cycle. As a fringe benefit, planning also checks that the principles have some application.

Action → review → principles → application → action. You can leave pieces out (at your own risk). I later argue that you can choose a different start. But the order within the cycle seems very nearly inescapable.

11. See my *Mechanisms for democracy in learning: some reflections on continuing experiments on democracy in the tertiary classroom*, Chapel Hill: Interchange, 1987.

With this as a skeleton framework, a more elaborate cycle can be developed by adding stages for the exchange of information. This may be between trainer and learner, or between learner and learner.

We are now ready to compare the intentional action cycle of Figure 4 with the Kolb cycle of Figure 5.

The role of theory in learning

Consider the *intend* → *act* → *review* cycle, and the earlier discussion. At the point of intention, I may or may not be conscious of my intended outcomes. But most of my behaviour is goal-directed, at least subconsciously. I try to reach the kerb safely. I try to drive to university or elsewhere.

In everyday behaviour conscious review is often omitted unless there is a surprising outcome: finding myself by error at university, for example. That the outcome is surprising, however, demonstrates that at least unconsciously I was monitoring the outcome. A growing literature on "reflection" attests to the advantage of making the review conscious and deliberate. [12]

As we are here focussing on planned learning, conscious intention and review are my main interest. The intention, then, can be conscious. So can the review.

But what about the action? I can assure you that running up stairs is not an activity I would lightly undertake consciously. And the same applies, I think, to all complex skills which have to be done in real time.

In my work as a consultant or teacher, for example, I do what seems like a good idea at the time. When it matters most, I don't have time to be conscious about it: there is too much information arriving on too many channels.

12. To name a few of the most important: Boud, David; Keogh, R. and Walker, D., eds. (1985), *Reflection: turning experience into learning*, London: Kogan Page; Schön, Donald A. (1985), *The reflective practitioner*. New York: Basic Books; Schön, Donald A. (1987), *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

So I can consciously intend some outcome; and I can consciously review whether I achieved it or not. That is, I can draw on conscious theories or models or principles or recipes during intention and review. When I am in the middle of action, however, the theories I draw on are often unavoidably intuitive (Figure 6). There isn't time for anything else.

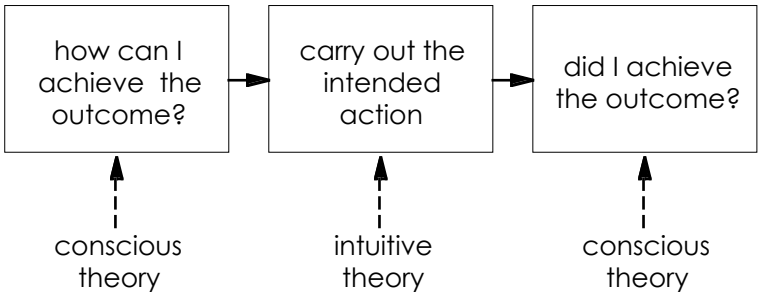

Fig. 6

While intention and review may be conscious, action draws on intuitive theory

In short, theory (or principles, or models, or recipes) underlie each phase of the intentional cycle. In making learning deliberate, however, the theory can be reviewed only during intention or review. You might describe the purpose of review as making the learning conscious. It relates conscious theory to intuitive theory.

The more directly the theory relates to action, the more easily it can be converted into intention. This, I think, is the intention of the European tradition of social science: action informed by theory; theory developed by action. It also explains how easily the Anglo-American tradition of social research can lead to sterility.

What I am suggesting is that theories be couched in terms of situations, actions and outcomes. They can then be directly converted into intended actions, and their results reviewed consciously.

To apply this to my own learning, I can begin by asking myself two questions:

"What outcomes do I hope to achieve?"

"In this situation, what actions do I think will achieve those outcomes?"

Left to their own devices, participants tend to summarise their learning in the form of absolute principles such as "Do this" or Don't do that". But it is apparent by now, I think, that a more constructive approach is to think of theories as tentative actions for achieving particular outcomes in a given situation. This is why, in my own learning designs, I often ask participants to collect their learning in the form...

"In situation *x*, to achieve outcome *y*, do action *z*." [13]

To put this to use, the intentional cycle can be elaborated into Figure 7. Note that the review of goals after they are achieved helps to build what is sometimes called "double-loop learning" [14]

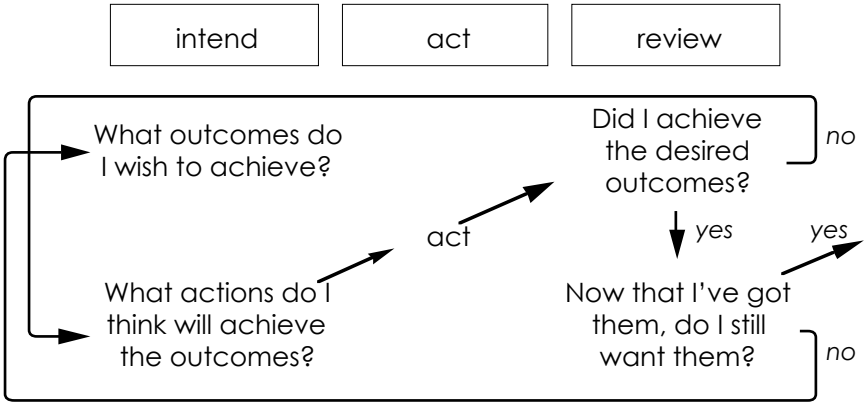

Fig. 7

An expanded form of the intentional cycle

I find this a useful model for examining my own learning, and also for designing interventions and planning short-cycle evaluation. It can obviously also be used

13. This is Argyris's "theory of action" formulation. See, e.g., Argyris, Chris, and Schön, Donald A. (1974) *Theory in practice: increasing professional effectiveness*. San Francisco, Ca.: Jossey-Bass.
14. For example, see Argyris, Chris (1985), Strategy, change and defensive routines, Boston: Pitman. Tim Dalmau and I have also discussed the Argyris view of double-loop learning in Values in action, Chapel Hill: Interchange, 1990.

for design learning activities; though for that purpose I prefer a variation of the Kolb cycle. This follows.

Publishing and inputs: exchanging information

Another well-known experiential learning model is that of Pfeiffer and Jones. It is a cycle with five stages, reported [15] in a variety of documents. The stages are: experiencing, publishing, processing, generalising, applying. Four of the stages translate directly into those of Kolb (Figure 8). The stage of publication (by which they mean sharing information between participants) is a useful addition to Kolb's model.

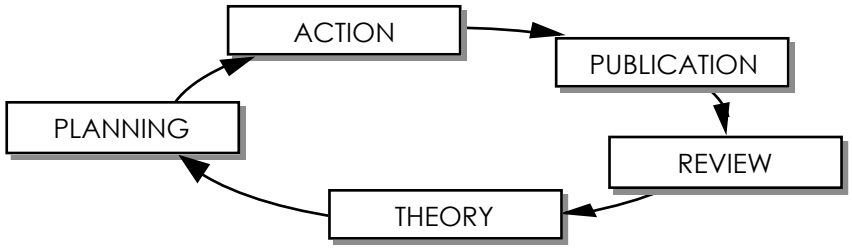

Fig. 8

after Pfeiffer and Jones' learning cycle

The additional component, publishing, could in fact be inserted after any or all of the stages of Kolb's model, as Figure 9 later demonstrates. It may be experience that you want people to share with others — this is where Pfeiffer and Jones locate publishing. Or people may exchange their reflections; or their theories; or their plans for action.

All of these models presume that in general, people learn best what they discover from their own experience. I am prepared to accept that this is true — I myself make a lot more use of experiential and discovery learning than most of my university colleagues, or for that matter than most people in primary, second-

15. See, for example, the introduction to the structured experience section of Goodstein, L.D. and Pfeiffer, J.W. *The 1983 annual for facilitators, trainers and consultants*, San Diego, Ca.: University Associates.

ary or tertiary education. But I don't believe that it is an imperative for all of the people for all materials or skills.

In any event, there may also be room for people to learn from other people's actions or reviews or generalisations or plans. There is a trade-off between quantity of material and depth of understanding. It seems to me that experiential learning often achieves greater depth of learning, but at the cost of consuming much more time.

It's often appropriate for some of what is learnt to be developed experientially, and for other material to be added in a more didactic way. If the key concepts are developed experientially then other related information may be added at low cost.

Many learning activities can therefore benefit from the addition of inputs of one form or another to enhance individual learning. This explains the extra boxes labelled "inputs" in Figure 9.

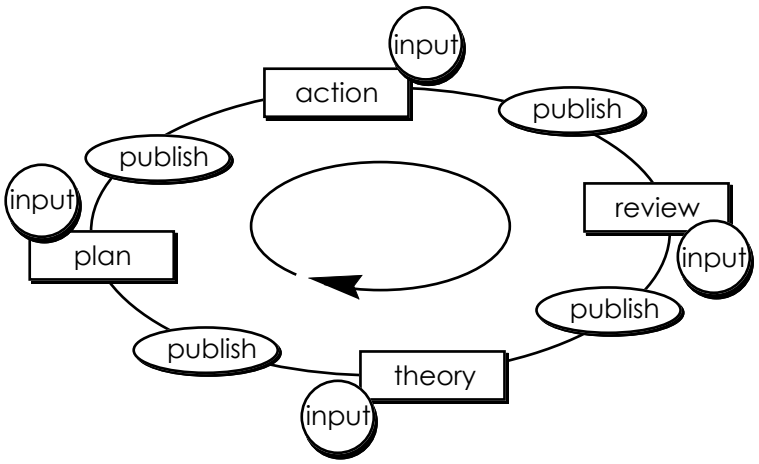

Fig. 9

The learning cycle with optional input and publishing components at each stage

It is also sometimes useful for the inputs to cover more material than any one learner will take in. People come to learning situations with differing levels of

experience, different interests, and different applications in mind. It is therefore often impossible to meet all the needs of all the people in a single tight program.

But there is no rule which forbids the offer of a smorgasbord of material from which people take only what they wish to. Experiential sessions may then focus on the material which is relevant to all or most; didactic sessions can present the economical smorgasbord.

To illustrate a typical learning session, here is an experiential exercise of the type that might appear in the *Annual handbooks* and similar publications. It includes examples of publishing and input at each stage. It probably goes without saying that there are many ways this could be done; this is intended only as an example.

Assume that participants take part in some activity of the type known in the literature as a structured experience. It may be a role play or simulation or exercise. It may engage participants in different roles in small groups...

Phase 1: Activity

- Participants take part in the activity. Before or during or after the activity, the facilitator or trainer may say something about what has happened in the past, to sensitise participants to some aspect of the experience.

  The activity itself is the "experience" or "act" stage of the learning cycle. The facilitator's account of what occurred on other occasions is an input.

- At the end of the activity the participants may compare notes on what happened, and perhaps why it happened.

  Participants comparing views at the end of the activity is an example of publishing.

Phase 2: review

- In their original small groups participants recollect and review the exercise they have taken part in. To help with this they may be given briefing sheets to compile the information for the report.

  Here the small group work makes up the review. Briefing sheets are a form of input; they direct the attention of learners to issues they might otherwise disregard.

■ There is then a brief report from each small group to the other groups.	The small group reports are an instance of publishing.
Phase 3: generalising	
■ Participants again gather in small groups, perhaps so formed that each group contains people from each of the earlier groups. Their task may be to draw some conclusions from their experience.	The discussion is the processing or the generalisation.
■ This is followed by a report from each of the small groups.	The report serves the purpose of publishing the various conclusions.
■ The trainer or facilitator usually gives a brief lecture at this stage of some theoretical model or set of principles. Or the input may take the form of a handout.	The lecture or handout is an input.
Phase 4: planning	
■ In a final session participants are asked to develop an action plan which applies the fruits of their new learning.	The individual work provides the opportunity for planning.
■ Some examples may be given to help with this. Each describes her [a] plan briefly.	The individual work provides the opportunity for planning.
■ In a final session participants are asked to develop an action plan which applies the fruits of their new learning.	The individual work provides the opportunity for planning.

a. To avoid both the sexist use of male pronouns and the awkward expressions usually used to escape sexism, I use feminine pronouns throughout this document.

As with all models, there are some oversimplifications in the versions of the learning cycle I have related above. In this respect there are six points to be made about the various models.

Further considerations

Firstly, note that the cycle described immediately above may be only part of a workshop. This cycle may be part of a larger cycle which may itself follow a similar path. And there are usually smaller and perhaps implicit cycles of activity and reflection within an exercise. Many learning processes (and change processes, and problem solving processes) consist of cycles within cycles within cycles...

Secondly, some of the models imply that learning starts with activity. I will assume instead that as with most cycles you can start wherever you like provided you close the cycle. If you reflect on the matter you will probably decide that some designs actually work better if they have a different starting point.

For example, some years ago Alf Lizzio and I were involved in a training program for managers in which the major learning vehicle was a change activity which the managers carried out on the job, within their usual area of responsibility. In this instance the activity could not easily begin until the managers know something of how to manage the change process. The first workshop in the overall exercise therefore finished just before the activity began; the workshop was preparation for that activity. Because there was a later review of the activity, the overall design ran several times through the experiential learning cycle. The main cycle was...

plan → (activity) → review → generalise → plan

with the activity taking place outside the workshop. The overall design was as shown in Figure 10.

It is worth mentioning, too, that this workshop program itself had many segments. Most of them traversed the whole cycle, with varying starting points.

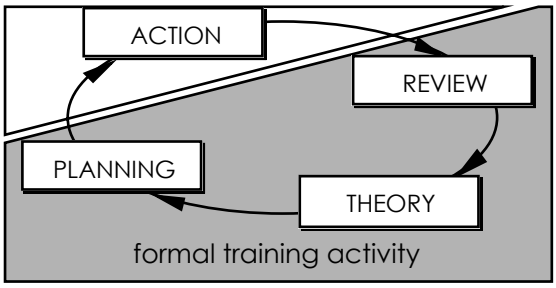

Fig. 10

In project-based training, the action may take place outside the formal training environment.

Thirdly, there is also some reason to expect that different people may prefer learning designs which begin at different points. I return to this shortly.

The fourth point is important. The models above identify the overall shape of experiential learning activities. They still require some off-the-shelf activity or some creativity before any specific activity can be designed. Fortunately there are many structured experiences available—several hundred in the University Associates publications alone. For those situations where you cannot find a suitable activity, however, it would be useful to have a process for designing processes: in other words, a metaprocess. A later part of this document explains a model for this purpose, and its use.

Fifth, and also important, is the bias of the learning cycle models towards the learning of understanding. But much learning is a combination of understanding and skills. In many settings, in fact, it may be that understanding is more easily acquired than skills, and skill learning is more important. Some approach to the design of skill-learning processes is therefore also useful. This, too, is covered shortly, and again later.

Sixth, all of this assumes that you have the attention and cooperation of the participants. As you may recognise from your own experience of school and elsewhere, this is not to be taken for granted. To maintain energy and focus requires ongoing attention.

This last point is considered immediately below, followed by a brief account of skill learning and some consideration of learning styles.

Managing energy — openings

One of the most important differences between effective and ineffective workshops and the like is the energy of the participants ... Yet it is not something that most novice trainers (or even some who are more experienced) deal with very well.

I recall a group facilitation workshop at which Keithia Wilson introduced a variation of the parlour game "wink murder", in which one of the players surreptitiously "murders" others by winking at them. To focus the attention of participants on energy, Keithia suggested that anyone believing someone else was bored might wink at them. If bored, the person would "die"; the deeper their boredom, the more spectacular their death. During an activity in which two of the participants were facilitating an activity they had designed, energy dropped. It wasn't until almost all of the participants were stretched out on the floor that the facilitators paid explicit attention to the energy in the group.

The issue of energy is perhaps most obvious and most likely to be addressed at the beginning of an activity. Participants bring to workshops the distractions and concerns from their life and work, and their expectations about what is about to happen. The expectations may or may not be helpful. The distractions most probably are not.

It is typical, therefore, that one of the earliest events in an effective design is some activity to raise energy and focus it on the workshop topic. This "warm-up" manages the transition from outside the learning experience to within. Similarly, it is useful to have another transition activity, often known as closure, to manage the transition out of the learning activity (Figure 11).

Before moving into activity, some way of capturing people's attention and raising their energy will increase the impact of the activity. Physical activity or excitement will often serve the purpose.

Sheer physical activity may be used. At the beginning of a workshop or training course I often find that the furniture is too reminiscent of a classroom. Explaining what is required, and then asking those present to help in rearranging the furniture, both gets their blood circulating and orients them to the style of activity.

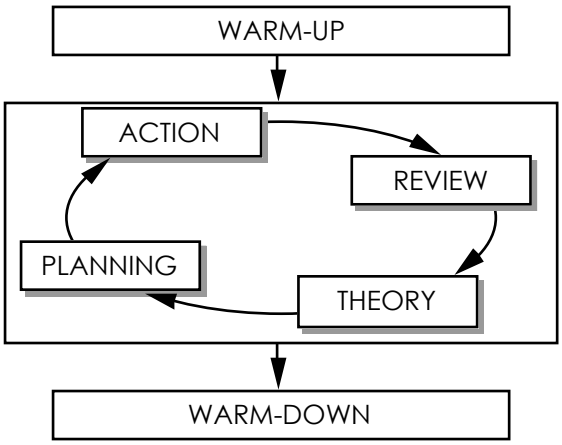

Fig. 11

Learning activities may be preceded by a warm-up to manage the transition into the workshop, and "warm-down" to manage the transition out

Anything which has intrinsic excitement and enjoyment may work. Discussion in pairs can be effective if the topic is sufficiently arousing. For example I may start an activity on process and content by asking people to tell jokes to two others; one of those focusses on the content (the joke itself) while the other focusses on how it is told (the process). Their different reactions clearly draw attention to the difference in content and process: those attending to process don't laugh at the punch-line.

Mild taboos, if carefully chosen to suit those taking part, work well: the ideal is to select something which is just on the boundary of what the people will regard

as allowable, and then use instructions which make it legitimate. Misjudge, however, and you may place the whole workshop or course in jeopardy. Used cautiously, physical contact can be excellent.

In fact, openings attract attention. At the beginning of a workshop people may have little information about what is to happen. Almost anything that occurs will be treated as deliberate and significant. Openings which are not congruent with what is to follow may create later problems in the workshop.

The choice of openings will be influenced to some extent by what is to follow. Openings are intended to help create a focus on the topic to follow: that is, to create realistic expectations. Physical activity may be most appropriate for a workshop which is highly experiential and especially action-oriented. More intellectual openings may be a better preparation for more cognitive workshop activities.

Because openings influence people's expectations, they may be used to develop appropriate expectations. Those of you who, like me, have been asked to carry out activities within a management development program or something like that will occasionally have had the experience of walking into the room to find that desks arranged in a large ∏, probably with a desk for you at the front. This undoubtedly gave *you* some expectations about the program. Why not ask the participants to change it to something more suited to activity, thus lifting their energy levels and telling them something about the workshop at the same time?

In brief, the start of a workshop is a transition from outside the workshop to within. Some activity is desirable to manage the transition so that people are alert and focussed, and with appropriate expectations. Another transition occurs at the end of the workshop. It, too, may benefit from being deliberately managed.

Endings

In a short workshop the ending may serve primarily to build in some likelihood that people will apply what they have learnt. Action planning for on-the-job or in-life behaviour is a frequent ending.

You may have noticed, though, that people prepare for their own transition back to the so-called real world. Outside concerns begin to reappear as the end draws closer. It seems to me that the "real world" is a misnomer. The relationships and behaviour which can emerge in an effective workshop often differ from the rest of existence precisely in being real, less constrained by roles and rules and expectations than is usual. But that isn't how participants think about it. The risk is that they will regard the workshop as a more-or-less pleasant interlude. "Now back to the real world."

It is conventional to call a planned ending a "closure", with the intention of tying up the loose ends. Speaking for myself, I would rather that people left with ideas and plans gnawing at their brains. Workshops are almost never long enough to do what they are required to do; so I don't want people to be able to parcel it all up neatly and then put it aside. Left to themselves, people manage their transitions by compartmentalising their experiences. The purpose of a training experience, on the other hand, is to change their behaviour outside the training.

On one occasion Phill Boas, Tim Dalmau and I managed the end transition by declaring the workshop open just before the participants left to return to the outside world. To discourage them (and us) from adopting our workshop behaviours we kept postponing the start. "Please don't let the workshop begin just yet, there are a few things we have to do first." We kept postponing the start for all eight or nine days of the workshop. Our intention was that the skills and understanding they developed would be used in their outside life.

Skill development

I have so far talked about an approach which is best suited to the development of understanding on the basis of some experience or activity. Frequently, of course, skill development is intended as the emphasis of the course.

In such an instance, the activity is fairly easily chosen. Any activity which enables participants the practise the required skills is appropriate. The remainder of the cycle is then for feedback on skill development. For complex skills, the same cycle can be used. A promising starting point is planning (with the theory component optional), or theory...

(theory)	participants identify the outcomes they desire, and review their beliefs about which actions will produce the desired outcomes;
planning	participants decide which actions they will try to use;
action	participants practise the skill (or sometimes one "focal" participant does so);
review	participants review the previous activity; this can often usefully take the form of identifying the actions taken, and the outcomes which resulted.

Actually, I have a preference for including concepts. My experience, especially with micro-skills, is that people often don't use them because they don't know *when* to use them. Concepts can act almost as higher-order skills, which guide people in the use of micro-skills.

I return now to the issue of learning styles.

Learning styles

It was my friend Tim Dalmau, drawing on the work by Mitroff and Kilmann, who first drew my attention to this. [16] Mitroff and Kilmann demonstrate that people who are identified as having different types on Jung's typology treat such activities as science or evaluation in different ways.

Jung, as you may know, formulated a theory of human personality (incidentally bequeathing the terms introvert and extravert to the language). The popularity of his work has been increased enormously by the availability of several measures of his personality types, most notably by the Myers-Briggs Type Indicator or MBTI of Isabel Myers. [17] She has also written an introduction [18] to Jung's typology which is clear and useful. I have myself treated Jung's theory as a theory not of personality type, but of decision-making style. [19] On these grounds one might expect learning style and Jungian type to be related.

Elsewhere, Kilmann [20] has looked specifically at problem solving. (Figure 12 is based upon his results.) As problem solving and learning cycles are similar, one can on these grounds identify certain types as having a preference for certain parts of the learning cycle.

16. Mitroff, Ian and Kilmann, Ralph (1978), *Methodological approaches to social science*, San Francisco: Jossey-Bass.
17. Myers, Isabel Briggs, and McCaulley, Mary H. (1985), *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*, Palo Alto, Ca.: Consulting Psychologists Press.
18. Myers, Isabel Briggs (1980), *Gifts differing*, Palo Alto: Consulting Psychologists Press.
19. Dick, Bob (1990), *Jung for sceptics: Jung's types as decision-making preferences*, second version, Chapel Hill: Interchange.
20. For the material on type and problem solving see e.g. R.H. Kilmann, Problem management: a behavioural science approach, in G. Zaltman, *Management principles for non-profit organisations*, Amacom, 1979.

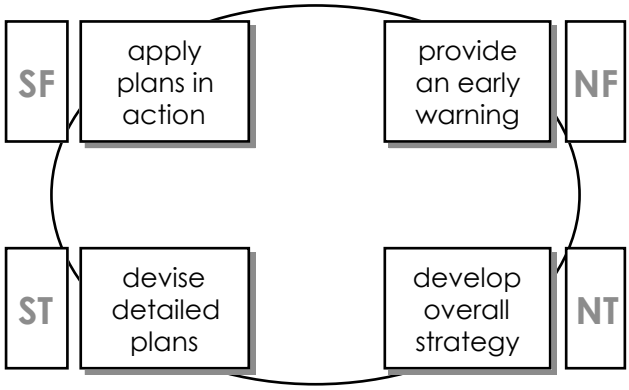

Fig. 12

Stages of problem-solving (modified from Kilmann: see text)

I don't intend to go into Jung's typology in great detail here. [21] But for those unfamiliar with it, a summary of the four dimensions of the theory may be useful ...

Introversion ... extraversion. This dimension very nearly resembles what you might expect from the common meaning of the terms. Extraversion is an action orientation, valuing the "real world" over thoughts and ideas. It is often characterised by sociability, and perhaps impulsiveness and a preference for variety and stimulation. Introversion is oriented more to ideas, and may be characterised by a relative reticence and a lower sociability. It may be accompanied by a relative tolerance of boredom, a preference to work at one task at a time, and is sometimes evidenced by a characteristic hesitancy before speech or action.

Sensation ... intuition. Sensation is "left-brain" perception, in the sense that the left brain [22] tends to be narrowly logical, step-by-step, atomistic, and literal. The orientation is to detailed stimulation taken in through the senses in the present. It may be accompanied by a preference for order, punctuality, and prac-

21. Stephen Moss has provided a useful summary: *Introducing type: an Australian handbook on Jungian type theory and the Myers-Briggs Type Indicator MBTI*, DMP Press, Brisbane, 1988.
22. For example see Bergland, Richard (1985), *The fabric of mind*, Ringwood, Vic.: Penguin Australia.

ticality. Intuition is right brain operation. It is more global, less accessible to awareness, and more to do with sensing patterns than with paying attention to detail. Intuition is characterised by imagination, and may be more oriented to past or future than the present.

Thinking ... feeling. Thinking is left-brain judgment. It is similar in some respects to sensation: systematic, narrowly logical, step-by-step. It deals most easily with numerical and specific data, and can take place almost entirely within awareness. Feeling, or right-brain judgment, is more global and depends more on "gut feeling" than on systematic analysis. It deals more easily than does thinking with ambiguous and complex decisions, including those involving people.

Judgment ... perception. Judgment focusses on thinking or feeling more than on sensation or intuition. It is characterised by decisiveness, order, and pre-planning. There is usually a tendency to set goals, to work to deadlines, and to be willing or even eager to organise others as well as oneself. Issues may be seen in black-or-white terms. In contrast, perception stresses information-collection rather than decisiveness. It is characterised by a willingness to wait to find out what happens, and then "roll with the punches". Goals, and especially deadlines, may be avoided. It may sometimes produce fence sitting and procrastination.

Although I will mainly refer to the second and third of these, the other have their effects too.

Combining the second and third of these gives four personality types (Figure 13), or (as I prefer) decision-making styles. As learning involves the making of decisions about some aspect of the world, or some information, a relationship between the typology and different learning preferences is to be expected.

It is also my impression that people do often limit themselves to one of the four quadrants of the learning cycle. Therefore each of the four Jungian types might

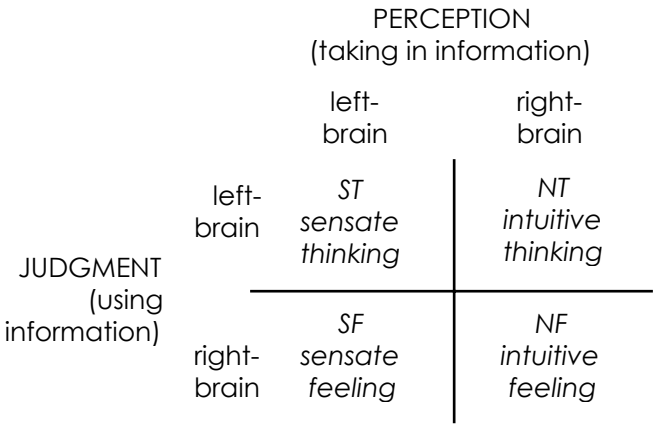

Fig. 13

Four styles formed by combining two dimensions

also be expected to have misgivings about learning which uses mainly the quadrant opposite the one that they prefer.

The following paragraphs describe each of the four quadrants in turn, relating them also to the possible decision-making style which may be favoured by their adherents.

Learning by doing

This is learning which is based in action. In my experience, it is also characterised by a very tight cycle, where the reflection is often outside awareness. Learning in a sense *is* doing (Figure 14), and it is almost as if such people have their memory in their muscles.

Intuitive feeling is a decision-making mode where both perception and decision are global and impressionistic. Kilmann identifies it as which might be called the "early warning" mode in team work — being first to notice that something is wrong. One might therefore expect learning to be outside awareness, and derived directly from experience. In other words, this may be the style of learning which they prefer. [23]

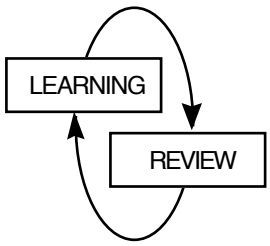

Fig. 14

For the intuitive-feeling type, learning is doing; learning and review form a tight cycle

One might expect that people who prefer "learning by doing" may be distrustful of theory or step-by-step plans.

Note that the problem with this approach to learning is that there may be little generalisation. For example I have known some counsellors (who often score as NF) whose communication skills within the counselling situation is excellent. But some of them use a very different style of communication when they are being "people" rather than counsellors.

Building theories from evidence

In the second quadrant, learning consists primarily of generalising from experience. It also admits the possibility that other people's experience can also be used as a source of experience.

Intuitive thinking is right-brain perception, left-brain judgment. That is, ambiguous and complex information can be analysed; but the conclusion drawn from it is narrowly logical and explicitly consistent. In Kilmann's work, intuitive thinking is a style of thinking suited to strategic planning; the ambiguous early warning of the intuitive feeling type is elaborated into a strategy or process for

23. I also have a suspicion that this is the preferred learning mode of those who have a sensate perceiving approach to decision-making (that is, those who score ISTP, ISFP, ESTP, ESFP on the MBTI). I can't be sure, as such people are rarely encountered in the classroom or training room for the most part. I have noticed other similarities too between people scoring -NF- and those scoring -S-P.

dealing with the issue. I therefore propose that people who score as intuitive thinking types are most likely to draw generalisations from observations (Figure 15).

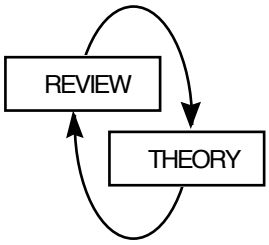

Fig. 15

For the intuitive-thinking type, the preferred focus is theory-building from experience

People who most favour this quadrant may have no desire to follow through into plan or action. The evidence and theory are important; but once the theory is developed, it becomes the filter through which the evidence is classified. The danger, then, is that the theory gradually comes to be seen as a reality in itself.

In passing, you may note that academics commonly score as preferring intuitive thinking.

Applying principles

The third quadrant is characterised by learning which consists primarily of the application of principles. That is, theories and principles are taken from others (or perhaps deduced from previous experience), and then drawn upon in deciding what to do.

Sensate thinking is left-brain problem-solving and decision-making. Especially combined with a judging [24] preference, it may lead to the acceptance of

24. In Kilmann's work, too, the descriptions of sensate types in problem-solving seems more like -STJ than -STP. I presume that -S-P types are as uncommon in Kilmann's experience as in mine.

traditional principles and theories, and to a practical orientation. Figure 16 summarises. Such people may therefore prefer third-quadrant learning.

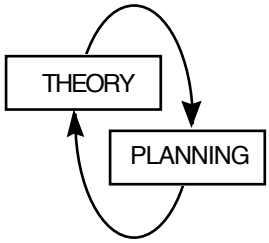

Fig. 16

The sensate-thinking type often prefers to learn the principles, which are then translated into planning

Kilmann describes sensate thinking as what is often regarded as "problem solving" in our culture. It involves the systematic analysis of information to develop a "right" answer. Kilmann proposes that people who score as -ST- (probably -STJ) on the MBTI were most useful in problem-solving after a strategy for problem-solving has been devised.

The cost of this approach to learning may be little experimentation once an answer has been found or a conclusion reached. There may also be a gap between learning and life, arising from a difficulty in dealing with ambiguity (the province of intuition).

Applying recipes in practice

The fourth quadrant goes from plan to action (in the variation of Kolb's cycle used here). In practice this might require taking a plan or recipe previously developed, but getting it to work by helping adjust it to the needs and requirements of the people who are affected by it. It can be summed up as *implementation*, taking the people into account.

Sensate feeling is the decision-making style which best seems to fit (Figure 17). The detailed perception allows attention to detail. The feeling-based judgment is more likely to be able to take account of the people involved. Implementation

seems to be the preferred stage of those scoring as sensate feeling types in Kilmann's work.

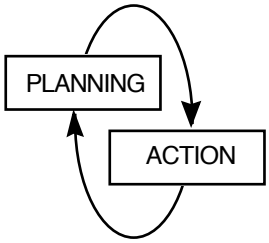

Fig. 17

The sensate-feeling type may have a preference for recipes, which are used in action

The cost of this approach may be that learning is atheoretical. Also, there may once again be little generalisation from one setting to another which is different, and perhaps little wish to combine elements from different recipes.

You will have noticed that the four styles of learning correspond to the four quadrants of the learning cycle. To some extent, learning experiences based on the learning cycle cater for all four. At the same time, this allows some of the short-comings of each learning style to be overcome to some extent.

This completes the brief account of Jungian types. Figure 18 summarises what one might expect from relating this to the Kolb cycle.

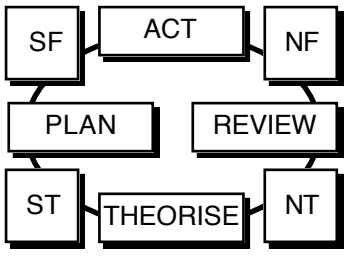

Fig. 18

One way of relating the four "inner types" of Jung's typology to the Kolb learning cycle

At workshops on Jung's typology I have asked people to identify their learning style. They are asked to imagine that they have attended a workshop on team

building or something like that; I ask them to rank their preferences for four different streams, described by the trainers as follows...

> *"I propose that we develop ourselves into an effective team. As we do this, we can study what things help us to develop good team work, and which things get in the way."*
>
> *"Each of us already has a lifetime of experience in working in groups. We will pool this collective experience, and then work out from it what are the principles of team building."*
>
> *"I've summarised the key principles from some of the authorities on team building. Drawing upon these principles we will devise step-by-step approaches to team building which suit our various situations."*
>
> *"There is a very detailed team-building package which I have brought in multiple copies. We will use this package to develop ourselves into a team, doing whatever fine-tuning is needed for it to work."*

Learning by doing, the first option, is then the clear choice of people who score as intuitive feeling types on appropriate measures, particularly those who are also extraverted. Similarly, intuitive thinking types seem to prefer the second quadrant: to develop theories and generalisations from reflection on their own (or others') experience. This is stronger if they are also introverted. The pattern is less clear for the other two quadrants.

This matter is also given brief attention in Kolb's book. [25] Based on work by Charles Margerison, [26] Kolb identifies the active quadrant of the cycle as preferred by extraverts, and the theory quadrant by introverts. Drawing on Margerison's research, Kolb associates introverts with the right hand (reflective) part of the learning cycle, and extraverts with the left (action-oriented) part. As implied above, my guess (based on the evidence from workshops, and on theoretical

25. Kolb, *Experiential learning*, previously noted.
26. Kolb's reference is to Charles J. Margerison and Ralph H. Lewis, *How work preferences relate to learning styles*, Cranfield School of Management, Bedford, 1979. This was subsequently published as a paper "Working and learning", *Personnel Review*, 8, 2, 1979.

grounds) is that extraversion and introversion interact with the other dimensions of Jung's typology. I discuss this at greater length in *Jung for sceptics*. [27]

This may explain the strong preference amongst trainers for starting with activity. As extraverted intuitive feeling types (as many of them are, in my experience) they prefer to learn through action.

I suspect there is also a tendency for people to inflict on others the *results* of their own learning preference. [28] Thus intuitive feelers may entertain participants with their own observations on their own experience. Intuitive thinkers may offer the theories which they have developed from observation. Sensate thinkers may concentrate on teaching step-by-step plans for doing something. And so on.

In any event, two conclusions emerge clearly from all. Firstly, what suits some learner very well may leave others cold. Secondly, learning which traverses the whole cycle is more complete than learning which is confined to one quadrant.

It would appear that there are some advantages in closing the cycle. This provides a better integration of theory and practice. And, whatever their preferences, people will then find something of appeal. It may also be helpful to let people know what is ahead of them so that they are less likely to be turned off by a first stage which does not suit them.

I have certainly found the learning cycle a convenient design tool. It is sufficiently powerful that it can be extended to cover many different types of learning. On a recent occasion, Alf Lizzio and I ran a workshop where we deliberately tried to avoid using the learning cycle; but we were unsuccessful.

27. Previously noted.
28. I have also noticed a tendency for people to have a second preference which is one quadrant "downstream" from their first preference. Some trainers seem to provide to others a combination of their own learning experience, and the outcomes of that experience. Their own preferences reflect this, in a sense.

On reflection, perhaps we were rash to expect to escape the learning cycle. There is an almost unescapable logic to it. Experiential learning, as I found to my cost when I first began to use it, is often invisible to the learner unless followed by review and theory. [29]

When you think about it, experience without reflection may yield learning which remains inaccessible to awareness. Learning without supporting concepts is hard to generalise. Learning without application has little impact on a person's behaviour, and therefore little impact on the world. And learning without action is a very narrow form of learning (though curiously enough, it is the most common type of formal learning).

Using the learning cycle for designing learning activities

To use the learning cycle, you can think of your task as being that of designing or choosing five activities. The first four are the elements of the cycle; the fifth is some variation of the first, to close the cycle.

There is a tendency to think of the learning cycle as describing an activity followed by three sets of conversations or discussions or inputs. Experience suggests that you will find that thinking of each component as an activity will lead to better and more interesting designs.

Suppose, for example, that you start with activity. It may be some structured experience, a simulation, a role-play, or something else again. You then need four other activities...

29. As I relate in my account of my teaching experience at university. See my *Mechanisms for democracy in learning: some reflections on continuing experiments on democracy in the tertiary classroom*, Interchange, Chapel Hill, 1987. People whose skills visibly developed over the course of the semester or year reported at the end "I don't know what I learned."

- an activity in which people recollect and reconstruct what happened during the learning activity;
- an activity in which people draw generalisations or principles from that reconstruction;
- an activity in which people devise some way of making use of what they learned; and finally
- an activity in which they practise the new skills, or apply the new learning in some way.

To illustrate the learning cycle in action, Figure 19 shows the design of a workshop on accepting compliments. It is an instructive example in that it is content-free—the generalisations are devised entirely by the participants, from their experience in the workshop. Further, it integrates skills practice with conceptual understanding.

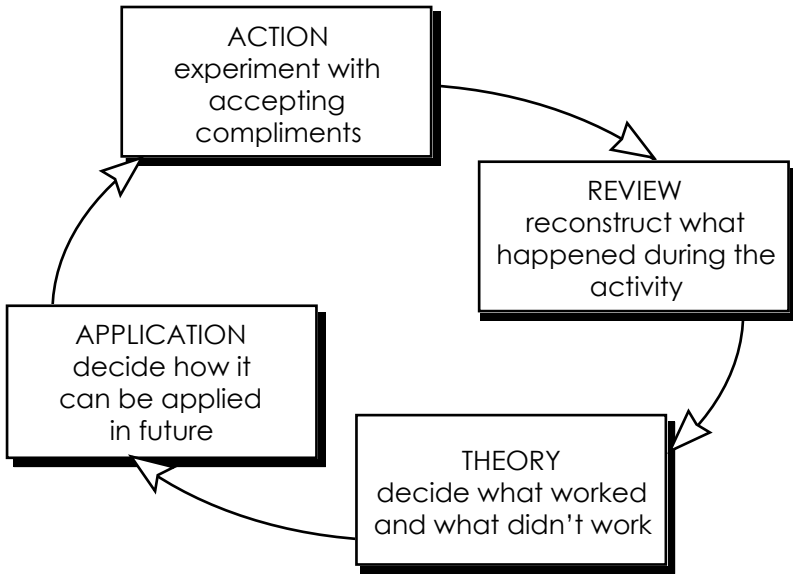

Fig. 19

The learning cycle used for the design of a learning activity on accepting compliments

Warm-up

Participants self-select into small groups, as mixed as possible, and preferably strangers. They introduce themselves to one another, by describing two or three things they particularly like about themselves.

A slightly-taboo topic for raising energy. The content is related to the workshop topic. The self-disclosure helps relationship building in the small groups.

Activity 1: Action and review

In the same small groups, participants rotate quickly through three roles...

the *complimenter* pays a compliment to the second member of the group;

the complimentee experiments with different ways of accepting the compliment;

This is the action, in which people actually practise receiving compliments.

The activity also provides the evidence from which a conceptual model for "accepting compliments" can be devised.

the observer notes the outcomes, positive and negative, for complimenter and complimentee, of different styles of acceptance.

Strictly speaking, this phase combines the two steps of activity and recollection in a tight cycle. As people move from role to role, they alternate between taking part in the activity, and observing and reflecting on it.

Activity 3: Reflection and generalisation

Small groups compare individual notes on what they observed. They draw conclusions in the form "In situation *x*, to produce outcome *y*, do *z*."

This reinforces reflection, and also moves individuals into generalisation. The generalisations are behavioural to allow easy application.

Activity 4: Generalisation and planning

Participants reconvene in the large group. Their generalisations are collected on butcher paper or whiteboard. By individual vote, the two or three most useful generalisations are collected.

Generalisation. The collective experience of participants is gathered as a set of suggestions on how to accept compliments. At the same time, by choosing their preferred approach, participants are planning for future behaviour change for themselves

Activity 5: Action again

Participants gather in different small groups so that each previous small group is split up entirely. They again experiment with accepting compliments as they rotate around the three roles. On this occasion, however, the begin each round by mentioning what they

like about themselves; their group colleagues then react to this with their own compliments.

This is a repeat of action, to close the cycle. It gives the participants a chance to try out what they learned from the previous parts of the workshop, thus reinforcing it. By using the priorities individuals

have already chosen, it improves the possibility of transfer to their everyday life and work.

Activity 6: Warm-down

Participants form pairs with someone they haven't yet worked with. They discuss with each other what they learned, and what use they intend to make of it. Then, treating their partner as proxy for the whole group, they say what the workshop participants have meant for them, and say their farewells.

The warm-down prepares for the transition to the world outside the workshop. Two tasks are addressed: doing some future planning, and saying farewells.

A number of points need to be made about this design.

First, it is an actual design for an actual workshop which I have run on several occasions. It usually doesn't take precisely this form, as I tailor it to the time, the participants and the situation. But it generally follows roughly this overall shape.

Second, I have left out a lot of detail which makes a difference to the conduct of the workshop. For example, when I ask people to draw generalisations from the first round of activity, I often use instructions like this...

> *"You are seeing off a close friend at the airport. She is travelling overseas, to receive an award at a conference for a paper she has written. Just before she disappears into customs, she confesses that she is scared stiff of the compliments that will probably be showered on her: accepting compliments is not something she does well. She asks for simple, practical advice. Knowing that two or three concrete good points are more practical than a large number of suggestions or a lot of theory, you say...?"*

Particularising the situation in this way seems to produce better generalisations than more general instructions. I could similarly expand, at length, about most steps of the workshop. However, even presented in a fairly simple and unpractised way, it is still an effective design.

For me part of the value of the learning cycle is how easily even novice trainers can use it to develop effective designs, and run them in practice.

Third, you will have noticed that the phases of the workshop don't fit neatly into the learning cycle. In fact, I have tried in most phases to anticipate the next phase as well as address the present one. This is part of what I later describe as paying attention to the transitions. Related to this, there can be cycles within cycles. Especially in Step 2 above, their is a very short and implicit act-review-generalise-plan-act cycle for many participants.

———

Having said all that, it still remains true that the learning cycle is a "big picture" model. For a guide to more detailed learning designs, I turn to a decision-making model: FIDO.

The FIDO model

I have described it elsewhere as a metaprocess for designing group interventions [30] and as a model for planning and decision-making and communication. [31] This can also be used to help in the construction of learning activities.

Other people tell me that the FIDO model is simple and intuitively-satisfying. It consists of a set of priorities which can be used in any task-oriented situation, for example in problem-solving, decision-making, and work-oriented communication. By defining some of the prerequisites of effective decision-making, it develops a set of priorities; these can be used in managing the decision-making process.

Briefly, the model assumes that the main purpose of work-oriented communication is to bring about some future change. It further assumes that information is the raw material out of which decisions are constructed and that people's reactions often interfere with this process.

People's feelings often influence the information they use and the decisions they make, sometimes quite strongly. Evidence of strong negative emotions during decision-making may be a sign that decisions are not being made on what others would see as a rational basis.

The model can be shown in the form of a diagram (Figure 20).

30. *Helping groups to be effective: Skills, processes and concepts for group facilitation*. Interchange, Chapel Hill, 1987.
31. *Learning to communicate*, previously noted.

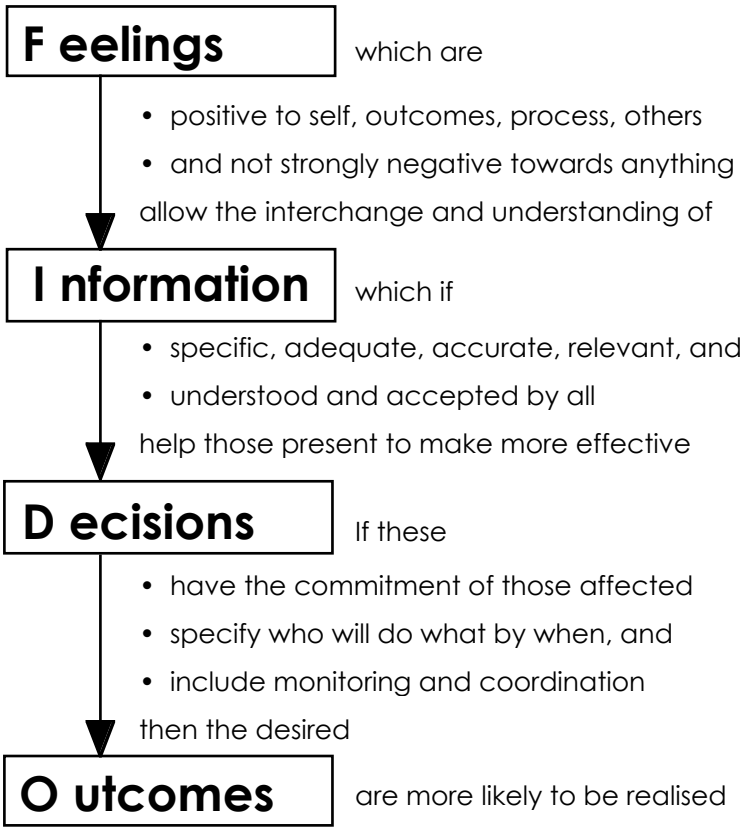

Fig. 20

The FIDO model

Notice, by the way, that levels 2, 3 and 4 roughly constitute a version of Lewin's three-stage cycle, mentioned earlier. If information is viewed as one of the vehicles by which change is produced, then it has an unfreezing effect. The resulting decisions represent the change. Implementing the change and stabilising the operation corresponds to refreezing. If the resulting outcomes are unsatisfactory the cycle can be repeated.

A learning activity could be designed on the same basis. Generate the information in a structured experience of some type and you have a slightly impoverished version of the learning cycle.

Priorities in problem-solving

An important feature of the FIDO model, however, is that is does not seek to define stages of decision-making. It is instead framed as a set of priorities. These priorities have clear implications for managing or designing processes for decision-making. They are applied in this manner: Whenever it seems that a process is not working, define the level at which the process has stalled, and seek to resolve it at the level above.

At the level of feelings the model can be further refined. Feelings often arise as a direct reaction to the immediate situation. At other times they are a response to the beliefs people have or develop about the situation, or themselves, or each other. On yet other occasions they arise out of a conflict between the demands of the situation and the beliefs people bring to it from elsewhere.

In a similar manner the fourth level of outcomes may be further subdivided. When someone carries out some action it is often directed towards some immediate end. That may be a step towards a target set at some intermediate time, weeks or months away. In turn, the action and the immediate outcomes may be in pursuance of some distant ideal.

These two elaborations convert the original four levels into the eight levels of Figure 21.

Thus if outcomes are not being achieved, revert to decisions level by re-examining ways of achieving those outcomes. If decision-making breaks down, have participants exchange more of the relevant information; work to ensure that the information is understood. If the information is available but people are resisting it, assume that feelings and beliefs are involved. Have them surfaced and resolved.

1a Feelings arising out of beliefs and values
1b Feelings arising out of beliefs from the past
1c Feelings arising from some aspect of the present

2 Information

3 Decisions

4a Outcomes for immediate achievement
4b Outcomes directed to intermediate targets
4c Outcomes in the form of distant ideals

Fig. 21

Priorities in problem solving

A similar logic can be applied within a learning activity. If a process isn't working, it may be that you will get better results by backtracking to the previous stage. The germs of later problems are often found in earlier segments.

Designing concept-learning activities

The FIDO model can be applied directly to the learning of conceptual material. The following section, and Figure 22, describe the process. In outline, it goes like this: work upwards from outcomes to information while defining each, and then work back down to make the decisions and produce the outcomes.

Here is the process more detail …

1. Define the learning outcomes

It begins with Level 4, outcomes, of the model. Define the learning outcomes in terms of the concepts that participants are to understand and accept by the end of the activity. It is useful to bear in mind that the number of concepts they actually remember may be inversely related to the number of concepts addressed.

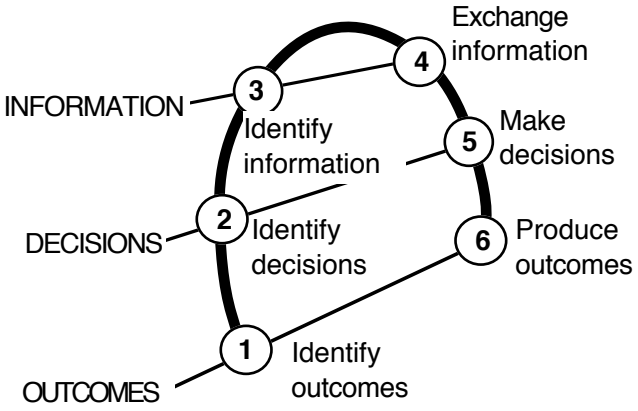

Fig. 22

The FIDO model as a description of the stages of decision-making

For example, assume you have been asked to design a course to teach the principles of job design to engineers. You would probably clarify the learning objectives with the person asking you to run the course. In the absence of this information, however, you might reasonably decide that the desired outcome was that in future the engineers would create jobs and equipment which was more motivating for the people who had to do the work. All else being equal, knowing the outcomes allows the course to be more integrated and impactful. It also provides the basis for later evaluation.

2. Specify participants' personal decisions

This is level 3, decisions. Participants are more likely to pursue a particular outcome if they have personally decided to do so. If they have a particular concept at their fingertips it is because they have personally weighed up the evidence and decided that it is useful, or correct, or true. The decision may or may not be one taken on objective information, but it is the decision which summarises for them all the data (including their own feelings and beliefs). Therefore, specify the sort of decision participants will have made if they understand the concept, and intend to make use of it.

Imagine that you are pursuing a reasonably specific learning outcome: you wish participants to engage more creatively and more analytically in problem solving. A key concept in problem solving and decision making is that of keeping separate the generation of information and its analysis. If participants realise this, and act on it, their decision making is likely to be both more imaginative and at the same time more careful. Somehow, you have to provide them with the opportunity to realise that information generation requires a different frame of mind from analysis.

Notice in this that an intellectual decision alone often does not lead to change. As a medical practitioner recently said on talk-back radio when asked the easiest way to give up smoking, "Have a heart attack". When learning has some emotional significance it is more likely to be acted on.

This is one of the advantages of experiential learning. It offers a greater possibility that intellect, action and emotion are all involved in learning. As Chris Argyris [32] has pointed out often enough, we are all well practised in keeping our beliefs and our behaviour in separate boxes. In general, you don't change people's behaviour by changing their beliefs. You obtain lasting change by changing beliefs, feelings and actions all at once.

3. Identify the relevant information

This is level 2, information. Define the information on which the decision (to accept or reject the concept) will be based. You may not know the specific information at this point; but you will usually be able to define at least the type of information.

32. Argyris, Chris (1982), *Reasoning, learning and action: individual and organisational*, San Francisco: Jossey-Bass. In some respects the clearest explication is still to be found in Argyris, Chris and Schön, Donald A. (1974), *Theory in practice: a theory of action perspective*, San Francisco: Jossey-Bass.

In the example of job design you might decide that the relevant information includes the sources of motivation in people. For the problem solving example the information might include the existence of the different states of mind which function best for creativity on the one hand, and critical analysis on the other.

Note that I am using the term *information* broadly. I include information about beliefs and feelings, particularly the beliefs and feelings of the learner.

4a. Decide if participants already have this information

This is still level 2. Decide if the relevant information is already available to the participants, directly or indirectly, from their own experience. If it isn't, proceed normally to step 4b. If it is, you may skip step 4b if you wish and proceed with 4c.

Engineers, for example, have good information about problem solving. They have a strong commitment to effective problem solving in the area of their professional expertise, and some well-practised procedures. They also know from their own experience that people are often not completely rational. These two sets of information are often all that is needed for them to acquire a beginning understanding of how to work with people. (Contrary to popular opinion, I find engineers are easy participants for people skills because they are already analytical and adept at using processes to make decisions. For some engineers, all that is needed is a language that allows them to make sense of behaviour and at the same time fits in with their engineering experience.)

4b. Design a structure to generate relevant information

Still level 2. If the participants don't have the relevant information within their normal experience, you may generate it within the workshop. Design an activity within which the information will be available. Then structure the activity so that the information will become salient or obvious.

At this point you face a trade-off between the amount of time it takes, and the impact. As the adult learning literature [33] attests, adults (and, I suspect, children [34] too) learn best what they discover for themselves. But often at some cost in time and efficiency.

You may find that some experience or discovery accompanied by some straight input gives you a reasonable balance. I suspect, however, that most teachers and trainers err on the side of too much input rather than too little. I think I do unless I take pains not to (though I'm getting better). The time for the input may be later, after participants have already formed some ideas of their own.

There are many forms of experience which can be used. "Real life", simulations, and structured experiences come immediately to mind But don't overlook vicarious experience; in particular, introverts may prefer to learn vicariously, for example through observing others. Being placed in the "hot seat" may stress them too much for effective learning.

Discovery learning may also be mostly cognitive rather than experiential — project work and contract learning are intended to achieve this end (and sometimes do), by involving pupils in searching out information for themselves.

As an example, suppose you are introducing people to the notion of self-managed groups and shared leadership. In some settings, particularly managerial, people do have the relevant information. After all, they spent their teenage years in self-managed groups of peers. But this is so alien to their ideas of the business world that it is easier to generate the information afresh than it is to elicit it.

33. e.g. Rogers, J. (1971), *Adults learning*, Harmondsworth: Penguin.
34. For example it becomes apparent when I run workshops for teachers that the behaviour problems are not to be found to the same extent in pre-school. They somehow arise in Grade 1. The teachers tend to blame the pupils, their parents, the surrounding culture, the neighbourhood. But the problems aren't as great when the teaching is learner-centred, as in pre-school, rather than teacher-centred and curriculum-centred as in primary school and beyond.

So you might use a structured experience such as the *New truck dilemma* [35] to show the advantages of more subordinate involvement in decision-making. The activity allows people to discover that there is more satisfaction in democratic decisions than in imposed decisions. Participants experience the benefits of involvement in decisions. Their learning involves feelings, belief and behaviour. Because it is set in a business environment, participants are less likely to believe it is irrelevant to the so-called real world.

If you want the information to be available at the next step, you may have to include some information collection during the experience. Asking participants to place the activity on hold ("press the pause button") once in a while to collect some information may be useful. Appointing observers can also assist.

Information about emotions is particularly evanescent. If you expect feelings to change over the course of an activity you may find it helpful to collect them along the way. For instance, you can ask people every so often to jot down a few adjectives which capture their attitude to other people, or the activity, or whatever you are interested in.

I strongly recommend collecting information about feelings before other information. It is so readily overlaid by ideas or "facts" that if you don't collect it first, you may lose it.

4c. Design a structure to elicit the information

Still level 2. Whether the information is already available in participants' previous experience or was generated by some workshop activity the next step is to get it out into the open. Develop a structure to do this.

35. N.R.F. Maier, N.R.F., Solem, A.R., and Maier, A.A. (1956), *The role play technique: a handbook of management and leadership practice*, La Jolla, Ca.: University Associates. (I might mention in passing that this, despite its age, is an excellent book on the use of role play to generate and elicit information.)

Often, this can be done by changing the rules in such a way that you tap into other beliefs. You can then draw attention to the relevance of the information to the present topic. People often compartmentalise their beliefs. Remove the compartments and you give them more choice.

For instance, beliefs about physical touch between people can vary greatly; it depends on the situation. If you can give participants a task which legitimises touch, the review phase can compare this to other settings where contact is viewed as less legitimate. So you might ask a group of managers to find out how many of them can fit onto a sturdy table or into a telephone box.

Legitimation is a valuable idea generally. Provide a legitimate context or rationale, and people feel more comfortable about doing or saying what they might other resist. For example, try labelling court jester with their permission, and briefing them for the role. They may say things which need to be said but which they wouldn't usually consider saying unless drunk to the point of foolhardiness.

Another useful strategy is to elicit related information about a topic which isn't so threatening. Then invite attention to the relevance of that information.

For example, I would expect that almost everyone realises at some level of awareness that many of our social systems are inefficient and dissatisfying. But we have such an emotional investment in them that information about this may sometimes be hard to gather.

Rather than tackle this directly I use English spelling as an analogy. We discuss why enough is not spelt "enuf". In the course of doing this we collect information about people's beliefs and feelings when they come across unconventional spelling. I explain why it is spelt the way it is. [36] We then explore together why people hold such strong beliefs about matters on which they have very little

36. As with much of our spelling, "enough" captures reasonably well according to eleventh century Norman French spelling conventions the pronunciation of eleventh century English.

information. Eventually they conclude that it is precisely because they have so little evidence that the belief is so hard to challenge. From here it is a small step to looking at other arational beliefs such as those about social systems.

You can often draw on the previous experience of people. In terms of the learning cycle the first stage exists already outside the workshop or activity. In such cases find I get better information if I particularise it. For example, to compile a list of the early warning symptoms of stress I might say something like this:

> *"Take out your diary, or imagine taking it out. Open it at today's date. Recollect what you did. As you come across any stressful experience, make a note of it. Work backward through your diary, recalling how each day was spent. Keep doing this until you have at least four or five stressful situations.*
>
> *"Choose one of those situations. Pick one that is common enough and stressful enough to be worth analysing. Now imagine that situation in detail. What time of day was it? Where was it? Recall the surrounding, the furniture. The people. Who was there? Where were you standing or sitting, and where were the other people? How did it start? Recreate it in detail in your mind. Play it through.*
>
> *"As you do so you will begin to experience to some extent what happened then. Use this to get in touch with your own early warning symptoms of stress. What are the bodily signs that tell you, right at the onset, that you are coming under stress?*
>
> *"Note these down. When you have collected a short list, you might like to compare notes with a neighbour or two. Pay attention to the differences and the similarities. I'll collect a public list of early warning symptoms in a few minutes."*

By thus cueing people in to their detailed experience, I encourage them to *engage* with their daily life, not to treat the exercise as intellectual. If you want to avoid the behaviour problems of the primary (or secondary or tertiary) classroom, involve the *whole* person.

5. Design a structure to interpret the information

This step moves back from level 2, information, to level 3, decisions. Design a structure within which participants can consider the relevant information, come to an understanding of it, and use it to draw some conclusions.

Compared to the learning cycle, this step includes review and theory. A partial review function is served by the way the information is elicited at step 6. This step completes the review and draws conclusions from it.

I suspect it is the hardest part of learning design. It is often skimped, or even skipped altogether. When it is included it is sometimes an exchange of ignorances. Or a lecture from the trainer or facilitator. As a rough rule of thumb, if you give less than half the available time to review and generalisation (or "debriefing", as it is often known) you may be skimping. Why, oh why, aren't there more designs for debriefing in the books and annuals that describe hundreds of structured experiences?

It is important, I think, to treat debriefing as an *activity*. It is not just a discussion or an exchange of opinions or a question and answer session.

Some trainers have become skilled at eliciting generalisations from an audience by questioning; but even here I suspect that only the brightest or most interested among the participants really draw the conclusions for themselves. It too quickly becomes a game of "Let's guess the right answer", where "guess" means playing a version of *20 questions*. This can be a strong form of discovery for the person who answers most of the questions. But it is a weak form for most of the rest of the participants.

You may find you haven't given enough attention to eliciting the information. Participants in the thick of some experience miss a lot. As with computers, "garbage in, garbage out". The decisions can't be any better than the information on which they are based.

Another of my misgivings is the tendency to treat generalisations as universal truths. It's healthier, it seems to me, to encourage the view that the truth *depends* — on the people, the time, the situation, or whatever else.

As I have mentioned before, I often ask people to compile statements in the form "In..., if..., then". In situation *x*, if you do *y*, then *z* is likely to result. If you do such and such, then such and such happens. This gives you generalisations which are both easy to apply, and which are somewhat less likely to be gross oversimplifications. All theories are simplifications. But it seems to me that they are more useful if they are not too gross at the same time.

You may decide that an input is needed. If time permits I suggest that you allow participants to draw some tentative conclusions first. Then provide the input. Then give them time to elaborate their conclusions to take the input into account. In this way it is more likely to be integrated with their own experience and conclusions.

6. Develop a structure for application of concepts

This completes the core of the exercise by moving back to level 4, outcomes. Look for some appropriate situation where the concept has application. This may be in work settings or elsewhere. Develop a structure within which the applications and implications of the concept can be explored.

This is most commonly done by asking people to develop and report on an action plan. It may be done in small groups, devising applications for the ideas addressed in the activity. Or it may consist more of a personal action plan. In stress management, for example, people can work in pairs to develop realistically-modest programs for changing only one or two of the more stressful aspects of their life or work. (If they try to do more than that, they will probably keep postponing it as too difficult until they have enough time.)

But you might like to try experimenting with action methods here, too. Role plays and simulations are often better at involving the whole person than intellectual planning. As with debriefing, application is too often left to chance.

7. Refine the structure to eliminate negative feelings

At this step we convert a rational model into one which takes more account of the people. We move from levels 2, 3 and 4 (where structure has been developed) back to level 1, feelings (Figure 23).

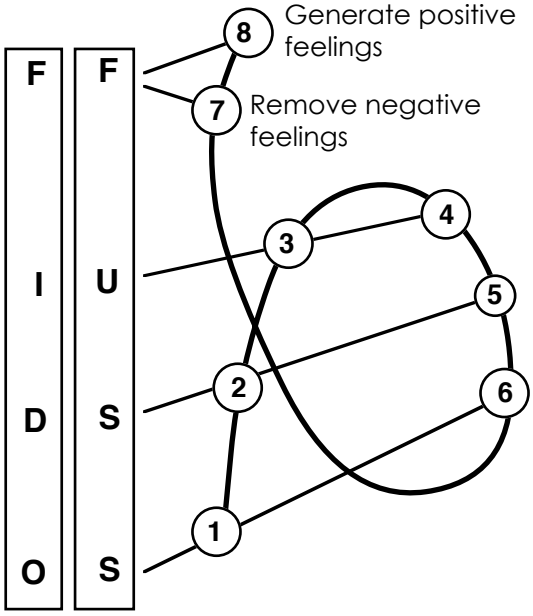

Fig. 23

To take account of people as people, pay attention to feelings

Critique the structure carefully, looking for instances of anything that may generate negative feelings towards self, others, staff, structure or outcomes. Where such negative feelings seem likely to arise, look for a way of redesigning the structure so that the feelings will not be aroused. If this is not possible, add to the structure a component to identify and resolve the aroused feelings before proceeding.

In some experiential workshops, extraverted and sociable trainers ask introverted participants to do such things as introduce themselves or select groups. This can be a threatening exercise for someone unpractised at it. Arranging for people to introduce themselves to their next door neighbour can provide some safety. Those pairs can then be the basis for public introductions and the formation of larger groups.

In role plays and simulations it may be important to make a strong distinction between the role and the person. Clearly marking the transitions at the beginning and the end of the activity, and asking people to use fictitious names during the activity, can help. You can also ask people to make a distinction in the comments between someone in role, and someone being herself.

Sometimes I divide the reflection part of debriefing into two parts. In the first part, people answer in role. They then explicitly put their role aside, and answer as themselves.

Helping people to identify their feelings and acknowledge them as real may be adequate.

8. Add to the structure to encourage positive feelings

This is still level 1, feelings. On the evidence you have available, decide if it seems likely that participants will feel sufficiently positive about the activity: towards themselves, others, and the intended outcomes (that is, purposes) and processes. If not, develop a further structure for the beginning of the program which will generate these positive feelings before proceeding.

Some of the early activities in workshops can be viewed as ways of achieving this. Icebreakers and team-building create a team climate where people feel more secure and able to take part.

Compiling the agenda to take account of people's own needs helps to demonstrate that the activity is relevant. Negotiating your own role with them serves a

similar function. Airing expectations and misgivings may give you pre-warning about potential issues, and sets the scene for later disclosure of feelings. Tim Dalmau and I say more about this in *Managing transitions*. [37]

The goal where feelings are concerned can be described as *arousal without anxiety*. [38] Unless arousal is sufficiently high, little learning will take place. But anxious arousal may interfere with the learning.

In summary, the procedure is:

- work backwards from outcomes, through decisions, to information, defining what content is required at each level to produce the learning outcomes;
- work back down from information, through decisions, to outcomes, at each level devising a structure which will provide the necessary content;
- revise the structure at each level so that negative feelings are removed or managed;
- add to the structure whatever is necessary to encourage positive feelings at the outset.

Designing skills-learning activities

For designing skills-learning activities a variation of the FIDO model can be used. The names of the elements are changed so that they can be applied more easily to the learning of skills. The acronym then becomes, instead of FIDO, FUSS.

Situations are the problem situations that participants need skills to deal with. Sequences of behaviour are sometimes called macro-skills such as listening skills

37. Chapel Hill: Interchange, 1990.
38. Discussed at some length in *Mechanisms for democracy,* previously noted.

1 **F** eelings
2 **U** nits of behaviour
3 **S** equences of behaviour
4 **S** ituations

and the like. Unit behaviours are often called micro-skills. Feelings are as they were in the FIDO model (see below).

Applying this to the design of skills-teaching structures gives a process similar to that developed using Fido, above. It follows shortly.

The essence of the model is that complex sets of skills can be broken down into more simple skills. The model works with three levels of a skill hierarchy: situations, sequences of behaviour, and unit behaviours. One could, of course, use a deeper hierarchy if necessary (Figure 24). (I have heard this approach to skill analysis called skills analysis training, or process analytic training. [39])

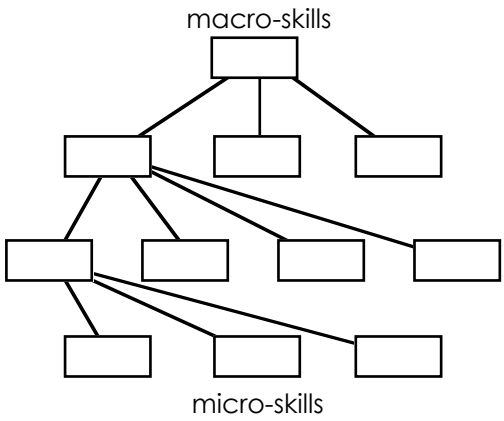

Fig. 24

Skills analysis decomposes a complex set of skills into a hierarchy of skill components or micro-skills

39. As I recollect, the Federal Department of Labour, now renamed, used to produce a booklet on skills analysis training. I haven't been able to track down a copy.

To use this approach, you first analyse the complex skills into their components. In training you first elicit the skills at a particular level, and then "assemble" them into the next level.

Here is the process. Many of the points are similar to those made already, and will not be repeated.

1. Define the target situations

This is level 4, situations. You define the learning outcomes by identifying the situations which people want to be able to manage. Defining the skills in this way also aids later transfer to learning to the so-called real world [40] — the world outside the learning venue.

Again, there is a trade-off between breadth and depth. The more limited the situation, the greater the chance to practice the skills in depth.

This step discourages you from running general workshops, for instance on assertion. Instead, you define the actual training needs of participants in terms of the situations they would most like to be able to handle better.

You may do this right at the beginning of the workshop. If so, you have the added advantage of demonstrating to participants that the workshop is likely to be relevant to their needs and concerns.

An example. For brief workshops on communication skills I often begin in this manner ...

> *"On a piece of paper, write down the names of the six people who can have the most influence on your productivity or happiness. You won't be asked to disclose those names, so you need identify them only to yourself.*

40. As I have said elsewhere, people can more easily be themselves, and relate more readily to others as people, than they can in much of their everyday work and life. "Unreal world" is a better description. One of my aims in workshop design is to help it to become more real than most of the situations that people experience.

"Think about each of those relationships in turn. For each, think of at least one change you would like to make.

"Now look back over the relationships and changes. Are there any themes in the changes you would like to make? Or is one of those changes somehow representative of something you would like to be able to handle more easily.

"When you have chosen one change you would like to be able to make, devise a sentence to describe it. I'll collect the changes from you in a few minutes so that we can compile a joint list and work out an agenda. Describe the change in a sentence which begins 'I would like to be able to ...'."

2. Specify the relevant sequences of behaviour

This is level 3, sequences of behaviour. Managing a situation requires more than having the necessary skills. It also depends on participants being able to assemble the skills into appropriate sequences of behaviour. Specify the sequences of behaviour. There will probably be several different ways in which a given situation can be handled. But if you can imagine two or three of these, that will provide a sufficient basis for designing the workshop.

Consider learning to drive a car, for example. Think of a situation which would be typically difficult—perhaps negotiating a sharp right-hand turn uphill in heavy traffic.

Better still, devise a structure within which participants will generate the sequences of behaviour for themselves. A lot of unstructured small-group training works on this principle. A person has difficulty dealing with some situation. The group as a whole helps that person devise a suitable strategy and put it into practice.

3. Identify the component units of behaviour

This is level 2, units of behaviour or micro-skills. Identify and describe the units of behaviour that comprise the sequences of behaviour that are needed. More complex skills are assembled out of simpler skills which people already have.

If you have developed a fairly detailed sequence at step 2, this step follows fairly easily. The motorist may have to: (a) change down a gear; (b) check the rear vision mirror for following traffic; (c) signal a right turn; (d) steer into the right hand lane; (e) approach the corner, changing down a further gear; (f) bring the car to a halt at the appropriate point, and so on ...

In communication skills training you may specify the types of skills on which a person will depend: verbal and non-verbal; listening and speaking; and so on. Because reality doesn't come in only two dimensions, you may have a choice of a number of ways of doing the breakdown.

As mentioned earlier, some skills can be broken down further, eventually giving a hierarchy. One of the assumptions of process analytic training is that you break down the skills until you reach a level where the person has all the needed microskills in her repertoire. You then need only devise a set of activities for assembling those microskills into the sequences needed to manage the target situations.

4a. Decide if participants already have these skills

This is still level 2. Decide if participants have the relevant skills in their repertoire. If so, as an option you can skip step 4b and proceed directly to step 4c. If not, proceed normally to step 4b.

You will sometimes find that the skills are available but not presently used in the situation. On other occasions some of the skills will be present and some will not.

In a group setting it will often occur that different people have different skills. This gives you the chance of using participants as teachers. Interestingly, people will often experiment more with different behaviour when they are given the role of helping others to acquire skills.

4b. Design a structure for practising units of behaviour

Still level 2. If participants do not have the skills, they will have to acquire them within some structure. You need a structure which serves at least three purposes:

- defining the skill;
- legitimising its use; and
- providing opportunity for practice.

Legitimising the new skill is important. Often the skill is not new, but merely novel for the person in the situation. Provided you can give them some legitimate rationale for using it in the new situation, many people will be able to do so. Physical contact has already been mentioned. The following instructions will legitimise a more assertive approach for some people.

> *"Over the next half hour or so, I'm going to ask you to try out some very different roles. This will give you some idea of the range of skills you have at your command. For the next five minutes, I invite you to imagine that you are Superperson. Nothing can hurt you. But you do care for people, and you do like to use your superpowers to help others ..."*

If you are using role play as a training device you will often notice that someone is behaving in a very stagy manner. Stepping in to strike up a casual conversation with them will switch them into a more natural style. After you have done this a few times, you may be able to draw their attention to the difference. They may then be able to behave more naturally in the role play.

In communication skills training, people only begin to perform well when they can use their skills to address the process—that is, when they can talk about *how* another person is communicating in addition to what the person is communicating. Again, step in. Ask "What is going on here?" Usually the person will make a comment about process: "I just can't get across to her. She isn't listening." "Fine. Why don't you try saying that to her?" After a few occasions, the skill of describing process transfers to a situation with a difficult person.

On many occasions, people will be able to manage new skills provided you slow the process down enough to give them thinking time. You can then slowly speed up the process until they are operating in natural time. In some settings you can have an observer give detailed feedback after a short time, and then start the participant over again from the beginning, this time adding another action or so.

Remember, too, that some people have trouble learning when they are the focus of attention. As observer, they may achieve learning vicariously.

4c. Design a structure to apply skills in specific instances

Still level 2. Using skills is both a matter of having them (either from previous experience or from recent practice), and of knowing when to apply them. Design a structure within which participants can learn to recognize the cues that indicate that a specific unit of behaviour is appropriate.

This step may be done simultaneously with step 4b. For instance, you may give people practice in recognising a particular situation and using the appropriate skill. You can then add another situation, and another set of skills.

When I learned to drive (not all that long ago), the instructor first chose off-road situations where I didn't have to worry about more than one or two operations at a time. When most of the basic operations were moderately fluent, we ventured into light traffic. But for some sessions he chose a setting where some skills were practised more than others, until they started to become automatic.

So on some occasions we went on long drives that required mostly steering, with only occasional stopping and starting. On other occasions, he chose situations requiring much stopping and starting, and thus many gear changes, but in a setting where I didn't have much traffic to worry about. He then slowly added progressively more difficult situations requiring a broader mix of skills.

5. Design a structure to assemble the skills

This step moves back from level 2, units of behaviour, to level 3, sequences of behaviour. Design a structure within which participants can learn to assemble the previously practised skills into longer sequences of behaviour, in response to some changing situation.

This may not appear to the participant as a separate step: it may follow naturally on from the previous step.

Typically, more complex situations require more ability at discriminating one situation from another. They also require a greater variety of skills to be assembled into ongoing behaviour.

A very different approach is to expose people to a natural range of settings right from the start. As they become more practised, they naturally discriminate better, and make better use of their developing skills. For this alternative to work, there must be sufficient support for people not to become too threatened.

6. Develop a structure for application of skills

This completes the core of the exercise by moving back to level 4, situations. Choose some example of a situation, either within the workshop or in the back-home situation, where the skill has application. The more salient the situation is for participants, the more likely that actual transfer to the back-home situation will occur. Develop a structure within which application of the skills can be planned and practised.

It may be important here to inoculate participants against failure. It is one thing to exhibit a skill in the safety of the classroom. It is another thing entirely to do so when you can't call a halt if it gets too hard. There is benefit in encouraging people to set modest goals at first, and to expect to fail at least some of the time.

Earlier in the workshop you can also prepare people by not being too polished in your use of the skills they have been learning. If you make it look too easy they will almost certainly fall on their face. They may then become discouraged. Instead you could model handling situations with a range of skills narrow enough to be within the grasp of participants. At the same time you may even do so a little clumsily. The message is that for many situations a few skills used somewhat clumsily are enough provided you stick at it.

7. Refine the structure to eliminate negative feelings

This step move from levels 2, 3 and 4 (where structure has been developed) back to level 1, feelings. Critique the structure carefully. Look for instances of anything that may generate negative feelings towards self, others, staff, structure or outcomes. Where such negative feelings seem likely to arise, redesign the structure so that the feelings will not be aroused. If this is not possible, add to the structure a component to identify and resolve the aroused feelings before proceeding.

8a. Add to the structure to encourage positive feelings

This is still level 1, feelings. On the evidence you have available, decide if it seems likely that participants will feel sufficiently positive towards self, others and intended outcomes (that is, purposes). If not, develop a further structure which will generate these positive feelings before proceeding. As before, the goal is arousal without anxiety.

Anything you can do to combine a sense of fun with a sense of purpose is useful here. (Small warning: some people believe that if they are enjoying themselves,

they are not doing any "real work". If you stress fun too much, you may undercut a sense of purpose. Balance is the aim.)

8b. Identify the beliefs which produce negative feelings

This is a subcategory of level 1, feelings. It also provides the link between the practice and theory.

Where participants will have negative feelings aroused by the skills being practised, it may be because of beliefs they hold about what is appropriate or "right". Conceptual models can often be a way of legitimising behaviour which otherwise participants may resist. Identify beliefs and models which will make it easier for participants to use the skills, and use the FIDO model to develop a structure within which the necessary concepts can be acquired.

Teaching people a set of "rights" serves this purpose in some assertion training. though it isn't my choice. [41] Role reversal (where people are asked to exchange roles) in interpersonal training can serve a similar purpose. By experiencing what it is like to be on the receiving end, people learn what is likely to work in practice.

A common problem in managerial training is that people resist new skills if they think their past behaviour is being attacked. Conceptual models (such as contingency theories of leadership) may make it possible for them to accept that their old ways of behaving are no longer appropriate. Different times require different skills.

Combining concepts and skills

It is often by treating FUSS and FIDO as a continuous sequence that you get the most effective learning designs. Understanding without skills may not lead to

41. I have private misgivings about the use of rights, which strike me as too much a matter of opinion. I prefer to help people discover problem-solving methods which are satisfying and effective, and then encourage them to apply these to situations involving people.

action. Nor may skills without understanding. There is a sense in which understanding provides the context which enables people to decide what skills are needed.

Above all, unless people know why certain skills are appropriate, they are unable to change or abandon the skills when the situation requires it.

It is often when the behavioural aspects of skills are overlearned that action is most timely and effective. But it is understanding which allows effective preparation, and effective review. A well-structured learning activity, by encouraging people to use skills and understanding, may also equip people with a useful strategy for learning from life.

On balance, I have a slight preference for preceding a cognitive activity by a relevant skill-development activity. People seem to develop a more intuitive understanding from skills learning. They then extend this learning into awareness during the conceptual learning. If conceptual learning occurs first, it seems more likely to remain compartmentalised.

In summary, the overall procedure then is...

- work backwards from situations, through sequences of behaviour (macro-skills), to units of behaviour (micro-skills), defining what skills are required at each level to produce the learning outcomes;
- work back down from units of behaviour, through sequences of behaviour, to situations, at each level devising a structure within which the relevant skills can be practised;
- revise the structure at each level so that negative feelings are removed or managed;
- add to the structure whatever is necessary to encourage positive feelings at the outset;

- identify beliefs and concepts which may help to legitimise the behaviours for participants, and then use the FIDO model to develop a suitable teaching strategy.

In practice, however, the two are more intertwined than this suggests. Just as learning designs consist of cycles within cycles within cycles, so do conceptual and behavioural materials interact with and reinforce each other.

To ensure the coherence of your learning design, don't worry too much about staying close to the model. Focus on the overall outcomes. And focus on the *transitions*. Each segment except the first requires that some pre-conditions are met. Each segment produces some outcome. If the outcome from segment *x* provides a suitable set of pre-conditions for segment *x*+1 (Figure 25), then your design will be fluent and easily managed. It is possible to regard learning design as the design of transitions. Manage the transitions, and to a large extent the rest will look after itself.

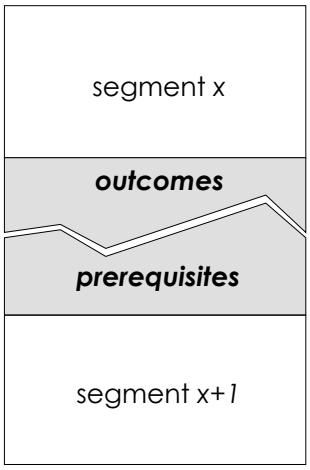

Fig. 25

In designing learning activities, focus on the transitions. If the outcomes from one segment satisfy the preconditions for the next, the design will work well.

The aim, as before, is to involve the whole person. If your design appeals to the whole person, and involves her intellectually and behaviourally and emotion-

ally, the learning is more likely to be effective. If your design treats her as a person, not a trainee or student or pupil, she is more likely to enjoy the experience.

And more likely to learn from it how to have confidence, and how to learn.
Those are precious gifts indeed.