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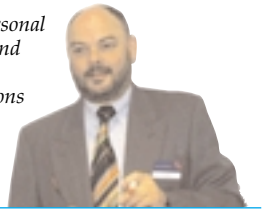
Train the Trainer

Phil Green is the first guest editor of 'Train the Trainer', a new and regular section that will contribute to trainers' personal development. Over time, we will cover and re-cover the entire cycle of training – from needs analysis to evaluation – and will offer something for every trainer, whatever their level of experience.

Phil Green's company is Optimum Learning, a consultancy that has helped some of the UK's best known organisations to achieve business improvement and has trained hundreds of trainers in the skills and techniques of analysis, design and delivery. He is a member of the Forum for Technology in Training (www.forumtt.org.uk), a committee member of TACT (The Association for Computer-based Training – www.tact.org.uk), an active training consultant, and a former teacher and shoe salesman.



Editorial

The pace of change in the second half of the 20th century has had an enormous effect on the world of work and how we approach education and training. Throughout my tenure as guest editor of 'Train the Trainer', I will chart some of the more significant changes and help trainers to make sense of their emerging roles for the 21st century. For training managers and more established trainers we will create as we go along a bibliography, links and cross-references so they, too, may find something tempting or challenging to augment their knowledge.

Any document that sets out to guide a widely mixed population of trainers towards greater effectiveness is something of a Trojan Horse. Therefore, within its boundaries you should expect to find a mix of approaches – telling, suggesting, questioning, allowing for activity, investigation and reflection and so on.

I consider it an honour to be the first guest editor of 'Train the Trainer'. I look forward to the challenge and hope you will consider my effort has been worthwhile.

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In this introductory article, Phil Green lays the groundwork for coming issues of 'Train the Trainer' as he asks what we mean by effective training. He also shares some personal thoughts on the changing nature of work, and discusses the critical roles of instructional strategy and instructional design.

What is effective training?

For the time being, let's adopt the notion that effective training is the development and transfer of knowledge, skills and attitudes that people will acquire and use once they are back at work. This may be a narrow definition, and we will challenge it later in future issues, but the key lies in defining effective training in terms of what trainees do; not what trainers do. This means that trainers must begin with a very clear picture of how the trainee will use the new learning after the training event. If you are someone who likes to attach ideas to a known theory, then you could call this a behaviourist approach to learning. In subsequent issues we will review some of the trends and theories that have led us to this distinction. We will also give you a process and tell you of some theories that will help you to do a proper job of building that clear picture of your customer, the learner.

Often in industry, trainers have been recruited because they were good at the job they were doing, and not because they showed aptitude for the quite different job of helping others to learn. Knowing no better, once they set foot in a classroom they immediately regressed to their own early experiences of pupil and teacher. The problem was that this was a model from childhood learning (and not a particularly successful one at that). Adult learning (sometimes labelled andragogy) is quite different from childhood learning in a host of ways. We'll examine this idea along with the thinkers and research that bear out the theory in a later article. In essence it is vital to know:

- who the learner is
- how adults learn
- how to increase learning using a mixture of strategies
- how to shape the design, method and medium for learning
- how to create commitment, enthusiasm and motivation within learning activities and
- how to measure the success of the learning.

Once, at a management conference, an over-excited delegate glared at me and bellowed: 'Get out of your box!' He had wanted to challenge what he saw as my more conservative ➤➤

view and had recalled the hoary old exercise on divergent thinking where you join nine dots with three connected lines only. (Email me if you want the details.)

'A little learning is a dangerous thing', warned the poet Alexander Pope. It is sad to witness the consequence of trainers who latch on to a fashionable theory or model, half understand it and take it to be all you need to know to meet learners' needs. Prime examples are the excellent works of:

- Honey and Mumford – on the distinctive approaches different learners prefer to take to the same content
- Kirkpatrick – on evaluation
- Bloom – on building up and classifying types of performance according to how hard you have to think in order to complete them.

You may bluff your way through learning styles, evaluation stages and cognitive taxonomies, but these cannot be worn as a talisman to ward off failure.

Trainers: how's business?

For management theorist Peter Drucker, there are only two questions that you need to answer in order to build a successful business. The first is 'What business are you in?' and the second is 'How's business?'

Ask a group of trainers what business are you in, and the answers can be quite revealing. Knowing what business you are in ensures you direct your energy towards the things that will make a difference. Start at the end. So says Dr Stephen Covey. Trainers should not lose sight of the reality that their tenure is only as secure as the end result of the last job. Measuring and monitoring the true value of all your activities within the business is the only way for training to answer that second Drucker question (How's business?). Ultimately it is the only way to secure your long-term survival.

The changing nature of work

We have seen a great change in the way in which work is organised over the last quarter of this century. We have been living through a technological revolution that has spawned the birth of the most significant utility of our generation – more powerful than gas or electricity, more thirst-quenching than water, more chattering than the telephone … I refer to the utility called information.

Very practical thinkers such as Robert Mager, Tom Gilbert, Gary Rummler and Joe Harless were challenging training to come down to the foothills and focus on the question: 'What will the trainee be able to do as a result of training?' Programmed learning emerged and later re-emerged under new titles such as self-directed learning, job aids and human performance technology.

At a time of world war, there was a very obvious imperative to deliver not learning, but measured competent performance with as efficient a resource as possible. There was no time for over-indulgence or fancy nice-to-know events. This gave rise to the instructional systems development (ISD) model, while the emergence of computers led to the invention of development processes used widely in commerce and industry.

In a succession of books from the 1960s to the present day, Peter Drucker impressed on us that, whereas in the past the workforce was dominated by those who worked with the strength of their bodies, the future belonged to those who worked with the strength of their minds.

By the end of the 70s, the notion of knowledge capital was well-established. This completely altered the concept of 'the trainer'. Whereas instructors stood over their workers and drilled until they had mastered a physical task, inductors provided the encouragement and resources for workers to develop thoughts, ideas and skills for themselves. Once again, if you want a name for the theory you might try cognitivism or constructivism, about which we will say more later.

Two other new terms slipped into the language, 'organisation development' and 'human resource management'. In a later issue, we'll review the importance of the work of people like Douglas McGregor (x and y manager), Abraham Maslow (needs and motivation) and, in the early part of the century, Elton Mayo ('Hawthorne effect'). These and other innovative thinkers created the demand for a great volume of management training and development events on both sides of the Atlantic.

The term 'human resources' was invented in the USA as an alternative to 'personnel'. It has not crossed the cultural gap to the UK very easily. The British do not take well to being counted among the machinery, buildings, stock and other balance sheet assets of an organisation.

The march of the machines

Since the moon landing projects of the 1960s, technology has been on a rapid advance. This has caused a rich debate about the usefulness of technology as a medium for learning. Educators became sceptical and nervous; after all, teaching is a Secret Art into which only the chosen can be initiated.

For teachers who typically struggled with the technology of the OHP, the threat of being replaced by a machine was an affront to dignity and personal esteem. For trainers, the bridge between machines for business and machines for learning was an easier one to cross.

Instructional strategies

'Stand at the front', 'use visual aids' and 'don't mumble' may have been the only advice a school teacher needed. But for business there has been a fast-growing recognition that more is involved in instruction than a learner, a trainer and a curriculum. There had to be a plan of action where the interdependencies were weighed together, such as that indicated by the questions below.

- What was the nature of the subject?
- How did its elements fit together?
- What was the desired outcome, the business goal?
- How much money could be spent on the training?
- Where would learning take place and then be applied?
- What were the technical considerations?
- What was the most suitable teaching strategy? Classroom? Coaching? Guided study? On the job?
- What were the learning strategies to consider? Self-directed study? Individual or shared learning?

And because trainers now had to balance this number of different options, their role expanded. They were required to develop not only the skills of presentation, but also of instructional design and organisational consultancy. They were required to distinguish, as psychologists might, between objectives as mental, physical or attitudinal.

No longer someone who trotted out the prepared script, the trainer took responsibility for preparing activities to present information, model skills, engage learners in activity and so on, then assess the transfer to the learner against the backdrop of defined learning objectives. Success was linked with the ability to plan the introduction of progressively complex skills and knowledge at a pace and using a method to suit groups of learners often of widely

mixed abilities and preferences.

Under the old regime, if the learning did not stick, then it was the learner who failed the course. Under the new regime, if the learning did not stick it was the trainer who failed the course.

Modes of teaching

There are several theories that seek to describe how learners respond to various types of stimulus. Most important to consider is what comes to the sense through the ear, through the eye and through touch.

We will say something more about instructional strategies and learner preferences later. For now let's keep in mind that for learners, as with fingerprints, no two are exactly the same. Recently I saw a 'snake oil' demonstration of a high technology learning program that claims to adapt to the preferred learning style of users. I remain unconvinced. Do we really carry the same learning style through life for all situations and circumstances?

The complexity of matching learning style to different

situations, at different times and with progressively challenging content, seems like the Holy Grail to me. Certainly there is a lot more to be said regarding this, and regarding how to make sensible use of the wisdom about learning styles and preferences.

The work undertaken on how to select a strategy and media for learning is complex and very clever but none the less useful. We'll look at some of this work in our later articles which tackle designing and developing solutions for learners. In essence, they share the following characteristics.

- They use a systematic process.
- They identify the goals of the sponsor – that is, the company that foots the bill.
- They consider the needs and preferences of the learners.
- They look for media that best correspond to the task requirements.
- They combine the best possible properties of the media.
- They take account of the work required from you, as designer.
- They take account of the material constraints and limitations of all users (trainers, learners, instructors, groups, line managers).

Media has an important part to play in instruction. There are four broad groups to match different modes of perception.

1. Printed material, which goes far beyond workbooks, worksheets and textbooks.
2. Audio, which includes radio, audio-cassette, telephone and the new technology of audio-conferencing.
3. Audio-visual – that is, mass media, videocassette, videoconferencing or interactive television.
4. Computer, which covers computers, interactive multimedia, hypermedia, electronic mail and computer-mediated teleconferencing.

How to match mode to medium is the subject of our later articles on analysis and design. ➤➤

The trainer as instructional designer

Wearing an instructional designer hat, the trainer must begin with recognition of the learners' prior knowledge. Too much training is every bit as costly as too little. The true art is not so much what you can put in to training but what you can (and should) safely leave out.

It's very easy to blame learners when the message just doesn't seem to want to stick. But you can only build understanding if you link new ideas to what you already know. This is sometimes referred to as going from the known to the unknown. Try to visualise it as a set of footsteps in the sand. To follow in those footsteps you might take one print at a time or perhaps make a giant leap if you can cope with bigger gaps. You are not likely to straddle an entire beach in one great stride.

In the same way, if learning has a logical and gradual sequence that increases in complexity, the trainer must verify prior knowledge and skills in order to set learning objectives that will extend the learners' comprehension. Teaching at the middle is not good enough, and the test of what has been learnt has to be individualised – you cannot teach a group! However, you can combine instructional approaches to create what is often called a module of learning. We shall deal with this concept and the idea of 'criterion-referenced instruction' in another article later in this series.

To pass back once more into history, the 60s saw the beginning of a struggle between two opposing ideas about learning. The first of these was centred on the content and subject matter. Learners were compared to a container into which the instructor pours knowledge. What happens in reality is that the instructor uses their personal experience of the subject to impress and entertain their audience. Learners are seen as inferior. Success is attained at the expense of others and competition among learners is encouraged. There is no allowance for individual differences.

The second idea was built upon a different philosophy (humanism), where a person's powers and abilities were recognised to be highly individual. Instead of telling, instructors provide activities and ask questions to guide and encourage learners to discover new ideas for themselves and thus grow in intellectual strength. The power rests with the learners. They are in control of their own futures, and they apply their knowledge to the environment in which they live and work. It is acceptable to reach a wrong answer – the process of solving problems and making decisions is just as valuable as arriving at the best outcome.

This is a far better approach to adult learners. However, it often causes nervousness in companies who fear that if they equip their workforce with easily transferable skills they will take them into the marketplace and some other organisation will benefit from their investment.

ACTIVITY

Take a quiet moment to reflect on these questions. You may wish to note your answers on paper.

- Speaking for the present time, how do (or will) you know you are doing a good job as a trainer?
- Will your success be measured for building:
  - volumes of knowledge?
  - the ability to think for oneself?
  - measurable performance by individuals?
  - more success for your organisation?
- What are the main activities in your role?
- How would your line manager, your chief executive or a learner in your care answer the same questions?
- What personal skills do you already possess that enable you to design, manage or deliver a learning programme?

It is not true to say the role of the trainer is changing; it has changed irretrievably and for ever! The old boundaries have fallen. It is no longer acceptable for trainers to assume that pay and rations, motivation, workplace environment, documentation and so on are someone else's business. All who survive are in the business of making a difference to the accomplishments of their organisations. Whether that is measured in terms of contribution to People Satisfaction, Impact on Society or Business Results depends on the model you adopt. Trainers please treat this as nothing less than a call to arms – what business are you in and, Oh … How's business?

In next month's 'Train the Trainer' …

Next month we pick up the trail towards making a difference as trainers. We will examine the process of analysis from a **'performance engineering'** point of view. How do you make the **link** between what goes on in a classroom or learning package, and **what goes on** at work? How do you **avoid the excesses** of the past and make training an event that **enhances real work** rather than something that takes you away from it? Throughout we shall consider the issue of **evaluation**. How do you **make a difference**? Is evaluation something you can **leave to the end**?

'Train the Trainer' is a supplement to *Training Journal*, a Fenman publication.
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Train the Trainer

If I had a hammer ...

Suppose your car became difficult to handle because the tyres were worn and inflated to the wrong pressure. One solution would be to take an advanced training course and learn how to handle the car in difficult circumstances. Or (and a more obvious solution) you could simply replace the defective tyres. In this example, training is clearly not the solution to the underlying performance problem even though it may help you to become a more accomplished driver.

We are often guilty of throwing training at a problem before we understand what the problem is. Sometimes we even anticipate problems and their solutions by creating a directory of courses for workers to run through like sheep dip. But there is little point in developing a training solution without first asking probably the most important and telling question of all: 'Is training the solution?' Only when you have answered this question can you begin to consider how training can help and how it fits in with the business, its culture and style, its mix of people, mission, working practices and so on.

As trainers, we are not just in the business of training; we need to view things through a different lens, one that offers a wider perspective to the problems of organisational performance. As Abraham Maslow said: 'If the only tool you have is a hammer, you tend to see every problem as a nail.'

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In this issue Phil Green sets us the task of how to approach effective analysis. There's a self-assessment for you to try, plus a look at two principle types of analysis.

How do you approach analysis?

It has been suggested that the first step towards rescuing a struggling training department is to rename it the 'Human Performance Department'. I have some sympathy with this idea. Training is a process, whereas performance is an outcome. Some argue that we should think of training as the last chance saloon, to be used only when there are no faster or cheaper ways of arriving at the desired outcomes. In the corporate world, training is what trainers do and performance is what workers do. If, as trainers, we are to add value we must be aware of what workers do now and what they must do in the future to meet the objectives of the organisation. This implies analysis.

The fable of the performance tuner

In another place and at another time Another Senior Manager (ASM) stood and observed a large crowd that had gathered outside his competitor's workplace. 'I wish I could discover the secret of their success,' he mused aloud. A small man in a big suit overheard and announced: 'Your wish is granted. I just happen to be a wizard. With magic (I might even throw in some smoke and mirrors), I'll surely tell you the answer you want to hear.'

With that, he presented his business card, silver foiled and embossed. There was no mention of a fee, but ASM knew the rules of engagement ... and wizards don't come cheap. Four months and several invoices later, the wizard unpacked his magic mirror and projected his findings to a stunned board of directors. The presentation lasted for three coffees and a platter of sandwiches (mixed). Then the wizard reached his summary. 'What you need,' he said, 'is a piano.'

Now this did ➤➤

make some sense, because ASM was urged to recollect the strains of Rachmaninov's Third on the city streets. His competitor had, indeed, bought a Bechstein and employed a concert pianist. That surely was the reason for the large crowd gathered at their premises. ASM did some hasty calculations. He estimated 250 new customers an hour at his competitor's. That must be worth a quarter of a million pounds, taking the lifetime value of a customer into account. With his corporate buying power, he could purchase a Bechstein for £25,000, the latest model, better than his competitor's. And he had no need to employ a concert pianist either. Betty in Accounts played the organ at church, so surely she could tickle the ivories for a mention in the staff magazine.

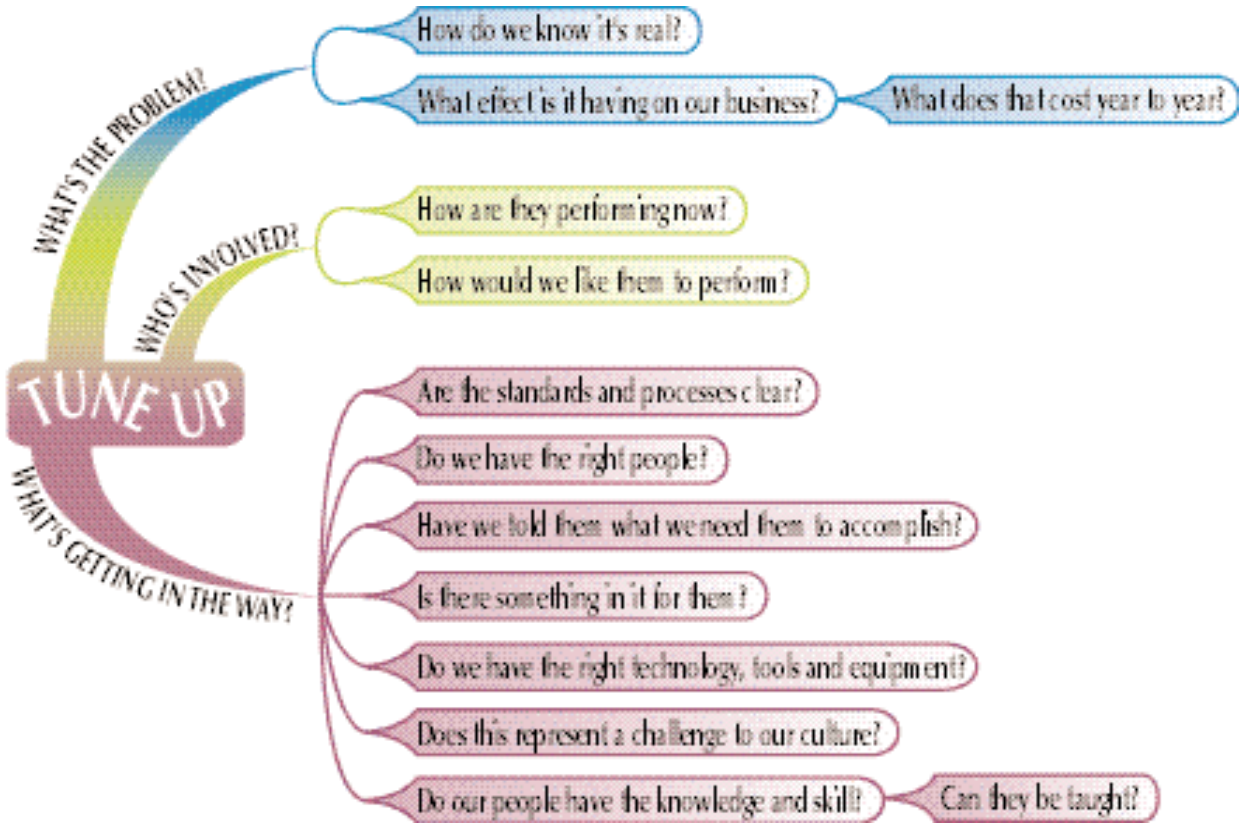
But no new customers came. In fact, old customers deserted in droves. ASM called the wizard back to account. 'Well it's obvious,' said the wizard, 'that you need to get Betty trained properly. Your crowd would probably like Beethoven more than Rachmaninov. And you might as well get the piano tuned, too. I'll put you in contact with our Tuning Division.'

But in the shadows, someone was listening. He had been a loyal employee grade 3 (LE-G3) for generations, and he was not about to stand by until the last customer left the firm and the lights went out. Stepping forward, he announced: 'Mr ASM, Sir, I'm a tuner. Let me help.' ASM looked up in surprise. 'Wilkins, I didn't know you had this talent,' he replied. 'When did you learn to tune pianos?' The wizard broke in with a sour smile: 'I think this is a job for a specialist, don't you?' But Wilkins went on: 'Many here have talents you wouldn't dream of.' Always cost conscious, ASM slapped his loyal employee (grade 3) on the shoulder, smiling: 'Go on then Wilkins; get on with it!'

ASM moved towards the piano and the wizard followed. But Wilkins turned in the direction of ASM's office. Before anyone could object, he explained: 'I'm not a piano tuner, I'm a performance tuner. And before we get started on anything, there are one or two questions I'd like to ask.'

After three hours and innumerable plastic cups of tea, ASM and Wilkins stood before a whiteboard that resembled a map of the metro. But the mood was light, the two were on Ted and Gerry terms, and the Wizard had studied his timesheet and left. Transferred to ASM's blotter was a diagram and various doodled questions, some with answers.

The Performance Tuner's model



Epilogue

You can't always see what you're closest to. At the end of the month, Ted and Gerry visited their competitor's store. The crowd was no longer there, so the signs on the windows and doors were now clearly visible. They read: 'Bankruptcy sale – no reasonable offer refused.' The piano had been sold to the liquidator. The concert pianist's last invoice lay with the unopened mail on the mat.

Antidote to solutioneering

For sure the wizard had fallen in to the trap of solutioneering. Let's do a little self-assessment exercise. Use the table on page iv to indicate each type of activity you have run or resourced in the past 12 months. (Newcomers to training should mark those they think they might run in the next 12 months.) Try to show what proportion of your time you have spent or will spend. Put a percentage in each box (the whole should total 100 per cent). We'll look at each of these activities in turn over the next two 'Train the Trainer' supplements. (Incidentally, I wonder how much time you devote to the final three activities in the list.)

Observing, thinking and planning

We are often too busy to stop, look and listen. Sad, isn't it? The most influential and charismatic managers are those who are said to walk the talk. They know what is going on, not because they have read it in a textbook, but because they have stood shoulder to shoulder with workers and seen it first hand. They have also truly understood the obstacles that might be getting in the way of the goal.

I believe you will notice the same behaviour – stop, look, listen, think – in the most successful of trainers and training managers. Of course, the product of a training department is seen to be training: how much you do, how much it costs, how much new knowledge we can measure. And if that is your reality, then you clearly have to do much internal selling and influencing upwards before you can wield the power to make a difference.

Two principle types of analysis

The trainer's business often starts when someone says: 'What we need is a course or workshop on …' Through analysis we answer questions such as the ones that follow.

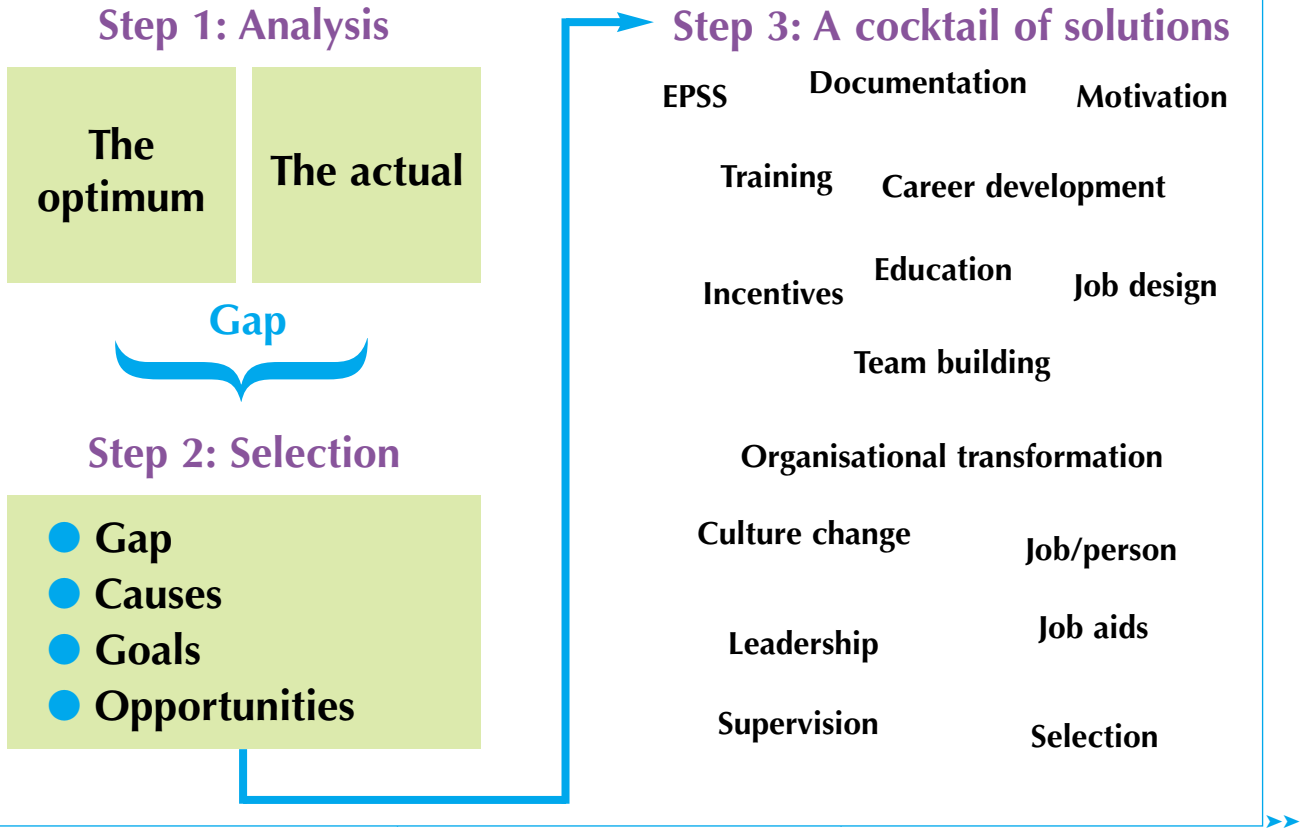
- Will training solve this problem?
- What are the goals of training?
- What are the attributes of the learner?
- What organisational issues have prompted this request?
- What are the learner's needs?

We hear trainers refer to TNA (Training Needs Analysis). But if training is to be effective, used when appropriate and successfully rolled out, there is another form of analysis to undertake first that sets training on one side as just one possible solution to consider among others.

Performance analysis

Performance analysis looks at the whole system first, then selects a range of solutions to optimise performance. I am not arguing against training, but don't fall into the trap of assuming that training is the only solution for an organisation's problems. If training is a magic bullet and the magic bullet doesn't work, then it's obvious who must accept the blame!

The Performance Engineering model



Performance analysis tells us when and how to use training and information resources. It happens when we get together with clients to identify and respond to opportunities and problems. It involves taking a close-up snapshot of individuals and the organisation, to tease out appropriate cross-functional methods of raising and maintaining performance. It's not only trainers and HR people who do it; in the best of organisations, it is a tool at everyone's disposal.

In the past, we have built fences to keep operational training, management development, HR management, performance management and so on apart. These are unhelpful boundaries that exist primarily in the mind.

There are a number of enthusiastic role models for whom performance engineering is a way of life. They regularly scan the business to check how things are (now) and probe into how they ought to be (in the future). This is front-end analysis and expresses clearly the gap between the two. They have good open channels of communication with strategic and operational managers, and all jobholders.

The temptation in business is for managers to look for a place to shift the blame, if things are not as they ought to be. Unless you protect yourself, training takes the blame. 'Your course was a failure; they are still making the same mistakes as before.'

You will recognise in the performance tuner's approach the same process that Mager and Pipe (see 'Recommended reading') have championed for generations. If you want to develop and run courses, then so be it. But if you want to make a difference to the business you're in, then I recommend you start here.

WEBLINKS

- For further information on front-end analysis and performance engineering, you might like to visit the following two websites.
  www.bso.com/ispi
  www.nwlink.com/~donclark/hrd/sat2.html

SELF-ASSESSMENT EXERCISE:
Activities run or resourced in the past 12 months

Activity	Proportion of time spent on activity (%)
Product knowledge training	
Developing job aids	
Training in operational practices and procedures	
Training to do with ethics, compliance and legislation	
Training 'soft skills'	
Team building	
Outdoor bound	
Training in core skills such as language and numeracy	
Overcoming resistance to change in attitudes towards training	
Walking about and observing the business	
'Blue sky' thinking and planning	
Other	

RECOMMENDED READING

- Fournies, FF, *Why employees don't do what they're supposed to do … and what to do about it*, McGraw Hill, 1988. (Sixteen common reasons why people don't, can't or won't perform. This is an easy-to-read, one-sitting book with many practical suggestions.)
- Gilbert, T, *Human competence: Engineering worthy performance*, McGraw Hill, 1978. (Gilbert is the founding father of the concept of performance engineering.)
- Mager, R and Pipe, P, *Analyzing performance problems*, Lake Publishing Company, 1984 (ISBN 1-879618-17-6). (An outstandingly useful and easy-to-read book, flow diagram and worksheet to hand-hold you through the process. The book also has lots of examples to illustrate the process at work. If you have only one book on your training bookshelf, let it be this one.)
- Stolovich and EJ Keeps (eds), *Handbook of human performance technology*, Jossey-Bass, 1992. (A comprehensive guide to who's who and what's what in the field of performance technology.)

In next month's 'Train the Trainer' …

In the March issue we will examine Training Needs Analysis, which will set you on the road towards the design, development and delivery of successful training activities.

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Train the Trainer

How to analyse training requirements

A 'course' does not come from thin air. The apparent need for training may emerge in one of two ways: either *you* uncover a need or *others* uncover a need. I like to think there are three main reasons why organisations train people: to grow the business or change its direction in some way; to fix some kind of problem; or to protect it from some dire consequence or sanction.

However, it is what you do with an apparent training need that sets the successful trainer apart from the rest. If you listen hard, take notes, then go right off to design a course, I'm afraid you make yourself and your organisation very vulnerable. Learning is not a one-size-fits-all product. You need a process by which to establish the fit. Whether or not you regard yourself as a designer of training, it is an instructional design model that will meet your need.

There is a wonderful tale at the front of Robert F Mager's book *Measuring Instructional Results* (see 'Recommended reading' for details). In the story, the Royal Barber is appointed because he can relate the history of barbering, describe its importance and identify the instruments that are used for cutting hair. However, he loses his head for taking a slice from the king's ear. A salutary lesson for us all!

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This month, Phil Green helps you to score the winning goal of training, through TNA.

Training Needs Analysis

In last month's 'Train the Trainer', we looked at how performance analysis sets training on one side as just one possible solution to consider among others. The process involves looking at the way things are (now) and the way they ought to be (in the future), and expresses clearly the gap between the two. Once you've determined that training is the solution, Training Needs Analysis (TNA) will be your next step.

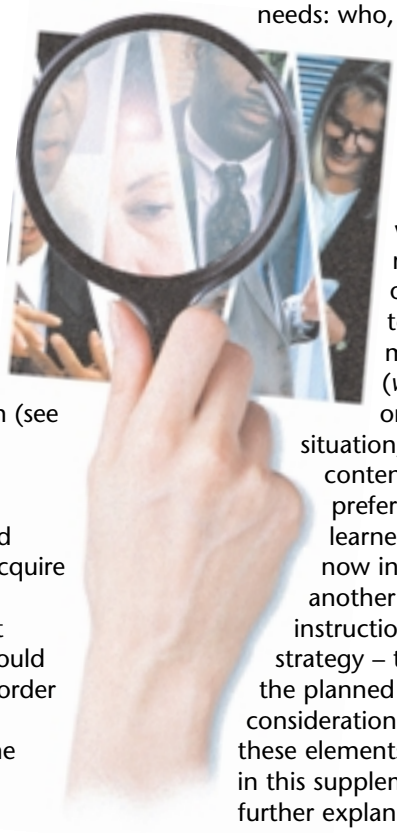
TNA leads you to the overall goals of training. It is at this point that the outcomes of learning are set out in the form of learning objectives. It is often an artificial distinction to draw a line between analysis and design (see Table 1 on page iii). Design includes the following.

- Task analysis: the skills and knowledge learners will acquire through this instruction.
- Subject matter or content analysis: what content should be included and in what order it should be taught.
- Instructional strategies: the best way to learn the particular content.

The output is an outline design specification of what will be taught, and how.

The five Ws

If you are not offended by 'dumbing down', you are considering five basic elements when you analyse training needs: who, what, why, when and where. You could also add a sixth – which – to remind you of the need to match media (*which* one …) to situation, type of content and preferences of learners. We can now introduce another term – instructional strategy – to describe the planned consideration of all these elements (see later in this supplement for a further explanation).



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Instructional design

We have been careful to think in terms of a performance gap rather than a knowledge or skills gap up to now. There is a set of tools that leads you to a range of solutions once you have found a performance gap. This set of tools is generally known as an instructional design system. There are many

different models of instructional design (see panel below). Usually they are shown as a set of steps that includes analysis, design, development and evaluation. Some models tweak the terminology so that convenient mnemonics emerge – for example, the four Ds model refers to analysis as 'Definition', followed by 'Design', 'Development' and 'Delivery'.

Because I am thoroughly sick of TLAs (three-letter acronyms), I'll give you an SLA (six-letter acronym). Please do not think that I am urging you to adopt my own preferred model. Use what works for you. Whatever model you adopt (or develop!), the binding characteristic is that the first stage is some form of analysis, research or enquiry. Subsequent stages, whatever you choose to call them, will always include the processes of design, development, testing, implementation and evaluation (hence my acronym, ADD TIE). Let's now break this down further.

Analysis

- Identify the problem and who is involved (see panel above).
- Clarify the learning goals and learner needs.
- Identify necessary skills and knowledge.

Design

- Draw a specification for the learning.
- Apply principles of learning and instruction to assist learners to learn the content.

Development

- Create the models, tutorials, activities and assessments that match the specification.

Test and improve

- Test and validate the courseware/learning materials.

Implement

- Launch the materials, deliver the events, brief the delegates and their managers, and so on.

Evaluate

- Evaluate the outcomes.

As we have seen, analysis is invariably the first step in a process known as instructional systems design. In general, the goal is to find out more about the context in which a training need arises. *Table 1* contains questions that cover most of the areas you will need to consider. Use it to rehearse some analysis.

ANALYSING TARGET GROUPS

What do you need to think about when you analyse a target group? How do you identify individual characteristics, prior knowledge and specific needs? Several authorities have suggested factors that affect how a person learns and retains information. We might call these target group characteristics and they include:

- intellectual ability and cognitive style
- prior knowledge and experiences
- affective characteristics and personality
- personal characteristics such as sex, age and state of health.

You might add to the list:

- language level
- prior knowledge of related subjects
- motivation to study the topics to be learned
- familiarity with the mode of teaching.

MODELS FOR INSTRUCTIONAL SYSTEMS DESIGN

Dick and Carey

One of the most known of ID models is the Dick and Carey Design Model. Using a systems approach to designing instruction (similar to the way software is engineered), the model describes an iterative process that begins with analysis and the identification of instructional goals, and ends with summative evaluation.

Jerrold Kemp

The Jerrold Kemp Design Model is complex and far-reaching. It takes a holistic approach to ISD and leaves virtually nothing out. The model focuses on the 'learning environment' taking into account content analysis, learner profiles and characteristics, learning objectives, teaching methods, activities, resources and evaluation. Where most models operate in linear mode, the Jerrold Kemp Design Model is a truly iterative process where each element within the process, and not just the process itself, is subject to constant revision.

Hannafin and Peck

Although simpler than Dick and Carey and the Jerrold Kemp models, the Hannafin and Peck Design Model is no less effective. Its strength is in acknowledging and making specific reference to evaluation and revision at each of the three design stages: needs assessment, lesson design, and development and implementation.

Rapid Prototyping

Tripp and Bichelmeyer's Rapid Prototyping Design Model is perhaps the one best suited to computer or web-based learning. Rather than designing an entire curriculum, the model focuses on a single model (the prototype) which contains all the functionality of the complete programme. The prototype is used to evaluate and test screen design, navigation, branching and test items, and to resolve installation problems prior to the complete system being installed. The term 'rapid' should not be mistaken for quick or easy. The method calls for an intuitive approach and experience of instructional design principles.

Task analysis

Once you have isolated a particular job skill that needs to be built, you have to find a way to organise the training in a logical sequence. If you (or any materials you design) are to be credible as a knowledge expert, you must become familiar with the task. There are various ways of doing this, as the list below shows.

- Observe the task being performed.
- Interview workers.
- Interview supervisors.
- Perform the task yourself.
- Focus groups.
- Surveys, checklists, questionnaires.

Behavioural changes

If improving performance is about changing the way somebody behaves, then we need to articulate what that change (the outcome or product of our training) will be. In 1956, a group of education psychologists headed by Benjamin Bloom set out to develop a classification of behaviour important in learning. The classification – *Taxonomy of Educational Objectives: the classification of educational goals* to give it its full title, or *Bloom's Taxonomy*, as it is more commonly known (see 'Recommended reading') gave us a way of thinking about a range of simple to more complex types of human behaviour.

- Knowledge level: identify, name, list, repeat, recognise, state, match and define.
- Comprehension level: explain, discuss, interpret, classify, categorise, cite evidence for, compare, contrast, illustrate, give examples of, differentiate and distinguish between.
- Application level: demonstrate, calculate, do, operate, implement, compute, construct, measure, prepare and produce.
- Problem-solving level: troubleshoot, analyse, create, develop, devise, evaluate, formulate, generalise, infer, integrate, invent, plan, predict, reorganise, solve and synthesise.

The verbs within each category of learning (and they by no means represent all the possibilities) can help to define what it is the learner will be able to do or is expected to do as a result of training.

Think again about the course you will run. What level of change does it need to bring about? Make a short note of the need using one or several 'levels' of change. You will find some examples by looking at the websites listed (see 'Weblinks', page iv).

Subject matter or content analysis

In the first article of this series (*Training Journal*, January 2000) I suggested that, in a specification for learning, what to leave out is often more important than what to leave in. As Oscar Wilde once observed: 'I'm sorry I sent you a long letter; I didn't have time to write a short one.' So it is with lesson design.

The amateur sits at a desk and writes, and writes and writes … The learner is bombarded with information that bears no relevance to his or her needs and interests. The content grows into an over-indulgence of things the training designers thought they might like you to know. The assessments are riddled with trips and tricks and traps to show not how much you have learnt but how little you know.

How to constrain the content is actually very simple: stick to the objectives. The main output of analysis is a statement of the accomplishment that is required of each key group involved in some kind of change or improvement within a business. The learning objective defines the performance of a particular target group. ➤➤

TABLE 1: ANALYSIS AND DESIGN CHECKLIST

The training need
- Who wants it?
- Why do they want it?
- Is there a lack of skills and/or knowledge?

The audience
- Who is the audience?
- What is their knowledge of the topic?
- How do they react to the topic?
- What are their job duties?
- What are they probably expecting?
- What is their previous experience of training?
- Are there any motivational problems?
- What is normal behaviour for this target group?

Content
- Regulations.
- Possible resources.
- Procedures.
- Policies.
- Case studies and examples.

Timing issues
- Starting dates.
- Length.
- Frequency.
- Location of training: where; number of learners; space required.

The company
- The business the organisation is in.
- Attitude to training
- The current strategic mission.
- Future plans.
- Quality standards affecting the organisation.

Regulatory trends
- Anticipated regulatory trends.
- Sanctions or fines received.
- Possible barriers to the training.

Anticipated difficulties
- Budget constraints.
- Availability of learners.
- Resource issues.

Instructional strategy

Instructional strategy is shaped by the quality of learning objectives. It is a framework that encourages you to think about the types of skill and knowledge to be learnt with the methods of teaching based on what is known about how people learn. For instance, we learn facts by rote, procedures through demonstration and hands-on experience. We'll examine the development, testing, implementation and evaluation stages in more detail in a later issue. But for now it is crucial to keep in mind that evaluation cannot be undertaken apart from analysis; they are essentially the same processes.

It is during analysis that you set up and agree the criteria against which a programme of learning can be said to succeed or fail, and these criteria then become the focal point for your evaluation.

What to train people to do, and how to train them to do it are two sides of the same instructional strategy coin. They are served by the same rigour: set clear objectives. Trainers and managers all over the UK pay homage to a method of writing objectives recognised by the acronym SMART (Specific, Measurable, Achievable, Relevant and Time-bound). SMART is fine, but by far the best and simplest rubric for writing learning objectives – Condition, Performance, Standard, Assessment – is to be found (once again) in the work of Robert F Mager.

Writing objectives has a number of pitfalls, but it is the skill that, more than any other, determines how far your training will be successful. It is also the discipline, which will remove the pain and confusion from the process of designing learning material. Write a clear set of objectives and 80 per cent of the design process is done. The performance should be one single verb (I refer you again to the work of Benjamin Bloom). The tests that are often used are 'Watch me' or 'Show me, dad'. Many learning objectives contain words such as 'understand' and 'know'. These fail the 'Watch me' or 'Show me, dad' tests because you cannot observe somebody knowing or understanding.

How to write effective objectives is such an important skill that we plan to devote an entire article to it later in the 'Train the Trainer' supplement. For now it is important to recognise that if it does not include all four parts Condition (given this), Performance (do this), Standard (to this degree or in this time) and Assessment (as measured by this judgement or criterion), it cannot work as an instructional objective. What is more, each part of the objective tells you something special about the method, medium and level of the learning. 'Condition' tells you what equipment or resources to supply; 'Standard' tells you how many attempts and at what level of difficulty; 'Performance' tells you exactly what you will see someone do or hear them say; 'Assessment' tells you the medium (on paper, with a coach, on screen). And as for what to leave out – well, that is simple too. If it is not in the objectives, it is not in the learning.

WEBLINKS

- For further information on analysis, visit
  www.nwlink.com/~donclark/hrd/sat2.html
  www.teachnet.com/lesson.html
  www.kn.pacbell.com/wired/bluewebn/
  www.education.indiana.edu/cas/ttforum/lesson.html
  www.yahoo.com/Education/Instructional_Technology/
- For a detailed description of *Bloom's Taxonomy*, visit
  www.valdosta.peachnet.edu/~whuitt/psy702/cogsys/bloom.html

RECOMMENDED READING

- Benjamin S Bloom and David R Krathwohl, *Taxonomy of Educational Objectives; Handbook 1: Cognitive Domain*, Addison-Wesley Publishing Company, January 1984 (ISBN 0582280109).
- Benjamin S Bloom and David R Krathwohl, *Taxonomy of Educational Objectives; Handbook 2*: *Affective Domain*, Addison-Wesley, January 1984 (ISBN 058228239X).
- Robert M Gagne, *The Conditions of Learning Training Applications*, Harcourt Trade Publishers December, 1995 (ISBN 0155021060).
- Robert F Mager, *Measuring Instructional Results: The Robert Mager Six Pack*, Atlantic Books (ISBN 187961801X).

In next month's 'Train the Trainer' ...

In the April issue, we will continue the trail through instructional systems design, looking at some typical examples of training activity and meeting that most efficient of performance improvers, the job aid.

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Train the Trainer

In praise of motherhood (... and apple pie?)

Consider my cat. Among her many skills she is highly competent at hunting, personal hygiene and advanced negotiation (if you've lived with a cat, you'll know what I mean). She has never been to school, has attended no courses and has no operating procedures. How amazing; so tiny and unprepossessing, and yet so highly functional. She knows how to thrive in her world.

How she developed her competencies is a moot point. Some would argue that her instincts were laid down as part of her genetic soup. Others would point to the activities of her mother, coaching and coaxing during kittenhood. But people are not cats and so we have kindergarten, school, university and training departments.

The training department is often a kind of corporate mother. But Mother is seldom confused about her role – whereas Training often behaves more like school. Sometimes training even calls itself 'university' – the Hamburger University, The University of Banking, and now in Britain we have The University for Industry. In the April 1992 issue of *Training*, David Cram said the first thing he would do to rescue a struggling training department would be to rename it the human performance department. I have some sympathy with this idea. Training is a process, whereas performance is an outcome. Remember to think 'analysis'.

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This month, Phil Green continues on the trail through instructional systems design, looking at some typical examples of training activity.

Design, development and method

Last month, I discussed the role and importance of training needs analysis. The next stage in the instructional process, once the learning need has been established, is design. In this context, design is the process you go through to determine the method by which the subject matter will be communicated – in other words, what people will learn and how they will learn it. At one time, this usually meant taking people off the job and 'training' them in a classroom. But while we are seeing a decline in the use of the classroom it is still the method of choice for a great many trainers and a great many companies. In the February issue of 'Train the Trainer' I asked you to consider how you allocate your time as a trainer against the following activities.

- Product knowledge training.
- Developing job aids.
- Training in operational practices and procedures.
- Training to do with ethics, compliance and legislation.
- Training 'soft skills'.
- Team building.
- Outdoor bound.
- Training in core skills such as language and numeracy.
- Overcoming resistance to change in attitudes towards training.
- Other.

These subjects are ones that often have the classroom treatment applied to them (with the exception of outdoor bound). Let's look the different activities in turn.

Product knowledge and a word about job aids

Without product knowledge you cannot operate, sell or support the company's products. Let's accept that the modern training department analyses precisely what people need to be able to do. But what next? Design a course? Develop learning materials? Let's apply a three-step process.

1. Develop job aids where possible.
2. Offer training only where necessary.
3. Create opportunities for practice.

Job aids are so important that we'll devote a whole feature to them in a future edition of 'Train the Trainer'.

When a major retailer established a new call centre, a smart and friendly trainer delivered short overviews. That was how their people preferred to be inducted into the product. There followed lots of scenarios in which they got a feel for the physical attributes of the ➤➤

products and practised handling calls. New starters had to find their way around the product catalogue not only to answer questions, but also to look up information and then act on it in as appropriate. Sales advisers had to describe features and benefits, overcome objections, identify opportunities to sell up and sell on, and so on. Their confidence grew through applying solutions for various kinds of customer needs. They also used a host of resources (phone, Internet, catalogues, store visits) to learn by discovery what the competition was like. For the support and supervisory team the emphasis was on troubleshooting and resolving problems and complaints. Let's contrast this with some product training we've known.

- A day or two in a classroom.
- Delegates take copious notes as each feature is presented.
- A test at the end to check recall of the specifications of the product.
- Those who appear to be destined to fail are 'helped to meet the standard'. This may be equally true of core knowledge for compliance with a regulator or to show due diligence.

If this sounds uncomfortably familiar, then read on!

Operational practices and procedures

Every organisation has its own ways of doing things. Some run courses – for example, how to do a stock-check. The outcome of getting it wrong once in a while is not particularly dire in the case of most company procedures. No wonder managers baulk at the cost of taking workers off the job to rehearse activities that could easily be provided in a procedures manual, and referred to only as and when required. Why not let the training department capture skills and processes, and design the best way of communicating them in the form of job aids? It will add great value to the business and save you time in the longer term. Modern organisations sometimes dignify this process by giving it a fancy name such as knowledge capital.

Maybe you cannot see yourself doing this. You know you will meet with resistance from managers whose expectation of trainers is that they will run courses. If so, then you have an education job to do and had best not delay. It is time to widen management thinking about the kinds of thing a training department can do.

In efficient organisations, all routine procedures (how to process an invoice, how to reset a communications link and so on) are documented in the form of job aids. This makes them easily portable from one site to another. In some cases, the business has not thought through the standard for certain operations. This leaves training exposed. It is not your role to define the standard; your job is to

communicate it! Too many trainers have been placed in the position of compensating for the fact that some manager somewhere is simply not managing.

By thinking job aids, an organisation is compelled to produce uniform operations. You do not have to do this yourself – it is the role of strategic managers to define strategy, of operations managers to define operations and so on. However, if you help with analysis and then with language, layout and format, you are adding quality and consistency for workers.

Old-fashioned training departments believe in teaching people to undertaking procedures; modern training departments believe in enabling people to undertaking procedures.

Imagine how it will feel when managers stop asking you for training, and come to you instead for guidance on how to get people to perform more effectively. They will have recognised that poor performance is not always due to someone not knowing how to do the job. Line managers will routinely look for factors that get in the way of proper performance or reward the performance that we don't desire. Let's think about that last point again. Do organisations *really* reward people for doing things wrong? As an example, pickers in a distribution centre are trained to handle packages and avoid breakage, but they are punished for care because their bonus is linked to how fast they can pick a batch and get on to the next load.

Ethics, compliance and legislation

Some things need special emphasis. Employees often find themselves placed in situations where they might innocently break the law. Directors risk imprisonment for being careless with privileged information. Managers risk tribunals if they ask the wrong questions during an interview. It's important to make them aware of the issues and let them practise how to avoid legal minefields.

We talk much about beliefs and values. Organisations have rules that guide choices and behaviour. The rules may or may not be written but they certainly exist. The rules for one organisation, industry sector or country may be very different from another. Standard policy in one place may be grounds for dismissal in another. Workers need to know what's expected. Many organisations include legal and ethical training in their induction programme for new starters. Because someone passes a test of understanding when he/she first joins the company, that does not ensure the person is permanently inoculated against risk. People forget, or legislation moves on or new ethical choices emerge. Again, wouldn't a policy document or ethics manual, perhaps linked to an annual MOT, be a more effective approach?

Soft skills

There is a plethora of courses on interpersonal skills, negotiation, influencing and presentation. These may be inbred talents or skills underpinned by principles and techniques that managers and supervisors can learn and practise. I'm not going to argue against training in these topics, but I do question the expectations of what can be achieved.

Learn to speak Spanish in ten days or your money back! Is that the same as learn to pass as a native in Barcelona? It takes more than a few days to learn a complex skill. You need regular practice over a long term, and someone to tell you how well you're doing and how to eliminate your mistakes.

No one seriously expects to learn the cello or to swim for England or to fly a plane in a few days. Imagine you have never been in the water, and you enrol for the course on swimming. The trainer tells you how to breathe, and how to distinguish between images of front crawl and breaststroke. You spend time rehearsing a stroke. By the end of day one you might even be able to put a toe or your head in the water, float or leave the side of the pool. So you have a new skill. But are you ready to apply it at the level of high performance? I doubt it! You draw up a regime of coaching and practice that takes months and maybe years.

But now think about a typical organisation. In the course directory you find 'Mastering personal presentation'. You wait for a place, and eventually spend two days learning concepts and practising techniques. You try to suspend the habits of a lifetime and become a confident, coherent presenter overnight. You return to work with renewed enthusiasm, determined to apply these new principles, but not convinced you can succeed. Your manager acknowledges that you have been on a course, but only to grumble that the work has begun to pile up while you have been away. In time, with no feedback and no consequences for using or not using the new skills, they are shelved and forgotten. And so your manager's view becomes reality – you just spent two days off the job with nothing to show for it.

Surely we begin to develop our 'people skills' in infancy. By the time we reach adulthood the pattern is fairly well fixed. Is there any point at all in these courses? I'd like to hear your view. It is true that how we interact with others can stifle the encouragement of good ideas. It must be worth the effort to build these skills, but the issue is should we attempt to teach them intensively in classrooms as traditionally we have done?

There doesn't seem to be much point in training those who already possess the skills and attitudes we require. Where we can make a difference is with those who are having difficulties now or who are soon to meet situations for which they feel unprepared. My prescription would be for training and coaching over an extended period, not just a few days.

A leading retail bank has nominated a pool of coaches and anyone may enrol for a series of sessions. They take part in a 45-minute lesson twice a week for a month. Practice is set in the real world, and feedback is by high performers who do a similar job under similar conditions.

Coaching is geared towards the specific skills that are absent. Participants take activities and exercises home to practise, with analysis and feedback from a peer or family member, or self-assessment of performance captured on video or audio. In this sense it is the trainer's role to design the goals and a structure or template for the activities, to set expectations, recruit and brief coaches and monitor, evaluate and quality control the project.

Team building

It has become a lucrative enterprise to supply daring, physical challenges to work groups. The goal is to open communication and develop trust. It is not immediately clear how climbing, abseiling, orienteering or white water rafting can engender skills that transfer to a business setting. If you know you can 'break through you own glass ceiling', does that help you to work more successfully with a manager who has the style of Attila the Hun? Maybe time could be spent more productively in confronting and resolving together the issues that actually hinder job performance?

A modern lean and mean training machine looks hard at any event that doesn't link back to an identified need, that doesn't allow for practice and cannot easily relate to a measurable bottom-line improvement.

Core skills in language and numeracy

If someone cannot write a letter, perform simple calculations, or express him or herself clearly through speech, what should the organisation do? Remember, as with the cello, it takes instruction and practice over a long time to build complex skills. A two-day course in report writing is unlikely to correct significant long-term deficit in a person's language skills. You might remedy one or two

habitual errors, but that's as far as it goes. Do you have the means to supply a series of lessons, lots of practice and feedback to break bad habits acquired since childhood?

Should an organisation even be offering core skills training? Many organisations in the UK have attained the standard of Investors in People. As part of the process they have had to define their policy in this matter or sponsorship for the development of transferable life skills. Commonly, an organisation will offer incentives to employees and pay the fees for ➤➤

going to night school. Upgrading basic skills (reading, writing, arithmetic) is usually done in an employee's own time.

If you encounter a secretary who can't write a letter or a production worker who can't process a batch, you might ask with justification about the criterion for selection.

Training and recruitment

These two need to be comfortable bedfellows. When managers recruit people on the basis of qualifications and experience, it comes as a shock to find that they don't possess the basics. The same criteria can apply for training as for recruitment. If you need particular skills to do a job, then it is vital to test for them. Everybody who applies for the job (internal or external applicants) must take the same test under the same conditions (as close to reality as possible). Typically a test of knowledge is drawn from a much larger pool of knowledge. If you can answer 20 questions out of 25, it is assumed you could answer 800 out of 1,000. You never let the applicant know the questions in advance of the test. In the case of skills testing, you can make public what you will ask people to prove they can do. Those who fall short of the standard will know what they must be able to do to qualify.

Testing has two benefits. On the one hand it ensures that we get the skills we need. On the other it forces those on the inside to be crystal clear about what skills are needed for each position. A job specification ought to list the skills necessary for beginning performance. All applicants should be tested to see if they have those skills.

Don't worry; we can free resources to do the development, coaching and maintenance if we:

- test applicants to screen out the unqualified
- eliminate hours wasted on training that has little chance of success
- train only when we can't find a better way
- train only those who actually don't know how to perform.

Action plan for greater effectiveness

- Teach people to operate, sell and service products.
- Create job aids for company procedures.
- Provide coaches who will enable managers and supervisors to improve their people skills.
- Forgo courses that have no immediately apparent effect on the goals of the corporation.
- Test to ensure that those selected for jobs have the fundamental skills required to do them.
- Provide moral support and money – but no company time – for those who lack basic skills and want to improve themselves.
- Help managers describe the skills their employees need.
- Seek out or develop tests for those skills.
- Maintain and update materials that were produced in the past.

Resistance to change

It is no mean feat to change attitudes towards training. We are familiar with the model where teacher is the jug and fills the learner with the delicious nutrient of knowledge. Stand anyone before a group to explain or demonstrate something, call it training, and it's training. No matter that the message was confused. No matter that no one learned a thing.

In classrooms we keep people busy and create the illusion of learning, but usually we demand no proof that the learner has acquired usable skills and a determination to apply them. We appraise trainers and training departments on the number of people trained. You can see how it is easier to count bums on seats than the accomplishments of competent performance.

Suppose we made a virtue of reducing the number of delegates taught and increasing the ratio of instructors to students. What if we praised a training department for spending more time diagnosing problems and refusing to apply a solution until we had a shared understanding of the nature of the problem. It might take longer to 'get started', but the organisation will get real, lasting performance improvement instead of simply courses. TJ

Recommended reading

- Bloom, B S, *Taxonomy of Educational Objectives, Cognitive and Affective Domains*, Addison-Wesley Publishing Company, 1969.
- Mager, R F, *Developing Attitudes Towards Learning*, Kogan Page, 1968.
- Mager, R F, *Goal Analysis: how to clarify your goals so you can actually achieve them*, Center for Effective Performance, 1991.
- Gilbert, *Human Competence: Engineering Worthy Performance*, Intl Society for Performance Improvement, 1996.
- Romiszowski, A J, *Producing Instructional Systems*, Nichols Publishing Company, 1984.

In next month's 'Train the Trainer' ...

In the May issue we will look at motivation to learn, developing the idea that learners' behaviour and accomplishments are of more significance than trainers'. We will take a look at what drives people to behave as they do and what can influence them towards greater achievement or hold them back. The implications for trainers and how they conduct themselves in classrooms or even in print are wide-ranging.

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Train the Trainer

Selling shoes: a path to enlightenment

When asked to provide a resume, I generally refer to three career paths that have intertwined down the years: the teacher, the trainer and the shoe salesman.

Admittedly the involvement with retail sales was a brief flirtation, during those early economic struggles of a student trying to make ends meet. All the same, I have found the experience to be as useful a preparation for my current work as any other role I have fulfilled.

There are two main reasons why I make this claim. First, for people to admit learning as a habit into their working or personal lives, they must 'buy in' to the idea. That is where pure selling comes in. Second, the process of effective selling involves target group analysis, needs identification, matching solution to need, closing and order fulfilment. Coincidentally, the process of effective training involves target group analysis, needs identification, matching solution to need, closing and order fulfilment.

But what rings loudest in my ear is the echo of the sales manager's voice reminding me that people don't buy products, they buy 'people'. The trainer or teacher represents a model of behaviour that has enormous capacity to help people to learn, or otherwise to hinder their development. You can see overt behaviour in action, but what you cannot see are the underlying beliefs and values and the tiny, subtle nudges, prods and blocks that teachers and trainers are constantly issuing. More than the overt behaviours, it is these subtleties that have the greatest influence over a person's sense of personal intelligence and worth.

To motivate someone first to learn, next to value the learning and finally to apply it in a meaningful way is the task in hand; the trainer is the delivery mechanism.

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This month, Phil Green discusses motivation to learn, pointing out some examples of easy mistakes that can get in the way of learning. He'll also suggest a blueprint for building positive rather than negative feelings within learners' minds.

Motivating the learner to learn

In earlier editions of 'Train the Trainer' we looked at the behaviour of learners, their accomplishments and how a trainer, as consultant, can develop strategies to increase the contribution of those learners to a business objective. We said the performance of trainers does not matter; it is the performance of learners that counts. And you wrote to me to ask: 'Are you certain?'

It is obvious that the measure of the success of a course is the amount and quality of learning, not of training that took place. However, it is also quite clear that the trainer holds the power to help or hinder that learning, and that help or hindrance does not always come as a result of deliberate and planned behaviour. If you have known what it is like when a teacher says 'Don't sing so loud, Barry; you're drowning out the choir', then you will know exactly what I mean.

The spotlight today is on the attitudes, demeanour and behaviour of trainers and teachers. We consider how subtle actions can have dramatic impact on the self-esteem and eventual success of learners. We look at how to programme learners to succeed, and how to avoid damaging self-limiting and self-fulfilling prophecies.

The greatest of inspirations is the brilliant conductor and teacher Ben Zander. On the first day of a new class, he announces: 'Everybody gets an A.' There's one condition; students must submit a letter, written that day but dated the end of term. And it must begin: 'Dear Mr Zander, I got my A because …'

We award 'grades' almost every time we interact with people. It happens through the amount of respect we pay, how actively we listen, how we deliver feedback and how much attention we pay to what that person brings to the encounter. As Ben Zander[1] reminds us, in a concert, the conductor makes no sound, but depends on the ability to make other people powerful.

Learning can feel like a hazardous pursuit, especially to the newcomer or to the participant who has previously met only failure and feelings of inadequacy.

Says Ben Zander: 'In any performance, there are always two ➤➤

people on stage: the one trying to play, and another one who whispers, "Do you know how many people play this piece better than you do? Here comes that difficult passage that you missed last time, and you're going to miss it again this time!" Sometimes that other voice is so loud that it drowns out the music. I'm always looking for ways to silence that voice.'

The same voice whispers to learners whenever they attempt a new skill.

Self-talk

Perhaps Ben Zander is mindful of the 'famous walk' of Francis Galton[2] (the founder of the science of heredity and he who discovered fingerprints). Through a kind of self-hypnosis, Galton imagined himself to be the most hated of all men. Then he set off on his routine daily walk. Londoners hurled abuse at him or turned away in disgust. A dock worker wrestled him to the ground. And when a horse kicked him, a crowd gathered around and jeered in defence of the horse! Galton only just made it back home. The point is that a person's inner attitude affects not only him or herself but others, too. Research has shown that body language sometimes expresses the exact opposite of what a person is saying! Unconsciously, we all analyse other people's body language and their tones of voice, and this way we often 'know' their true feelings. The study and analysis of body language is therefore of great use to trainers.

Pygmalion Effect and the self-fulfilling prophecy

In Greek mythology, Pygmalion sculpts his ideal woman in marble, then falls in love with her. Aphrodite takes pity and brings the statue to life. The Pygmalion story is often related to teachers (and I include trainers) who mould a student according to their ideal of who they are and what they are capable of achieving.

In classrooms, in management and in coaching situations, the power of our expectations is so huge that it can determine whether or not a person is successful. This is what is known as a self-fulfilling prophecy.

As trainers we reveal our expectations to learners in three ways.

1. Through body language.
2. Through tone of voice.
3. Through our methods of teaching.

Robert Rosenthal is probably the best-regarded authority on the self-fulfilling prophecy. His experiments end with remarkable results that are deeply significant for anyone who adopts the role of trainer, teacher or coach. Rosenthal organised IQ testing for some inner-city primary school children. He then secretly disregarded the results of the tests and selected one in five names at random. Giving the teachers these names, he told them that, on the basis of the tests, they should expect substantial progress from these pupils in the course of the coming year. In actual fact, the only difference between the test group and the control group existed in the minds of the teachers. Towards the end of the school year the children were given the same test. On average, those said to be more promising had increased their IQ beyond the pupils in the control group. It made no difference if they were in a class designated above or below average.

In a similar experiment, instructors at summer camp were told that their group was made up of potentially good swimmers. At the end of the lessons, those identified could certainly swim better than the others.

Rats!

The Pygmalion Effect is such a powerful phenomenon. Rosenthal (again) told a group of students that it was possible to breed intelligent animals. He gave each student five rats. The object was to train the rats to run in a particular route through a labyrinth. Six students were told their rats were specially bred for intelligent labyrinth activity. The other six were told they had normal, unintelligent rats. By now you can doubtless guess the outcome. Rats thought to be more intelligent improved daily. They ran faster and more confidently through the labyrinth. By contrast the 'dumb' animals achieved much poorer results. Almost one in three even refused to move to the start of the labyrinth. Students touched the 'dumb' rats infrequently but abused them verbally whenever they failed to do what they required. They spoke to the 'intelligent' rats less, but touched them more often. One conclusion was that students showed more care, optimism and confidence in handling their 'intelligent rats'. You may have your own theory as to why this happened.

The four-point theory

Trainers with positive expectations of trainees:

- create a warm, emotional climate for those individuals
- give feedback to that group on their performance
- give more input (information), set higher expectations and demand more of them
- give more opportunity for output (question and answer).

Equal opportunity for all

Trainers who think they are working with well-motivated subjects display more positive body language. They smile more often, nod agreement, bend forward to their favoured trainees and sustain eye contact for longer. They give more feedback whether the preferred trainee gives a right or wrong answer. The 'haloed' trainees receive more praise and less criticism. Trainers encourage them to answer more questions and solve more difficult problems. They receive more time to answer, and more help.

There is also one outcome of Rosenthal's experiments that bears careful thought: when pupils who are dubbed untalented perform above expectations, teachers often punish them with sarcasm.

We have to deal with all manner of people in our daily lives in classrooms. Some we warm to rapidly and others we positively dislike. As trainers we must be aware of the 'halo and horns' effect, and make conscious adjustments to offer the same opportunity to all.

Basic needs

We have been considering the responses people make in classrooms because they or someone else are driven by a script that is guiding their behaviour and shaping their accomplishments. For trainers, another essential piece of learning is the notion that basic human needs should be divided into rough categories.

1. **Physical needs** that keep us alive and well.
2. **Social needs** that enable us to live in a group with our fellow men and women.
3. **Self-fulfilment needs** that feed our self-esteem.

Abraham Maslow showed these as a pyramid (see Figure 1). Survival comes before everything: we must eat, drink, sleep and reproduce. Only then do we attempt to secure our existence. Where our ancestors made homes in caves and tree-tops, we now seek refuge in money, taking out a mortgage, saving for a rainy day, buying life assurance, pensions and investments.

Then we fulfil our social needs, making friends, joining clubs or political parties. We reaffirm our belonging to society and we form or join groups. Most people, when they reach this point on the pyramid, are content to earn enough to afford the standard of living they feel they deserve.

People who were deprived of love as children may compensate by dwelling on step four, the needs of the outer self. Perceived status and recognition takes on huge importance. Drive a flashy car, buy a bigger house, send your children to private school, occupy a large office with a personal secretary. Very few of us rise to the higher regions of Maslow's pyramid to reach self-actualisation, the fulfilment of our inner self.

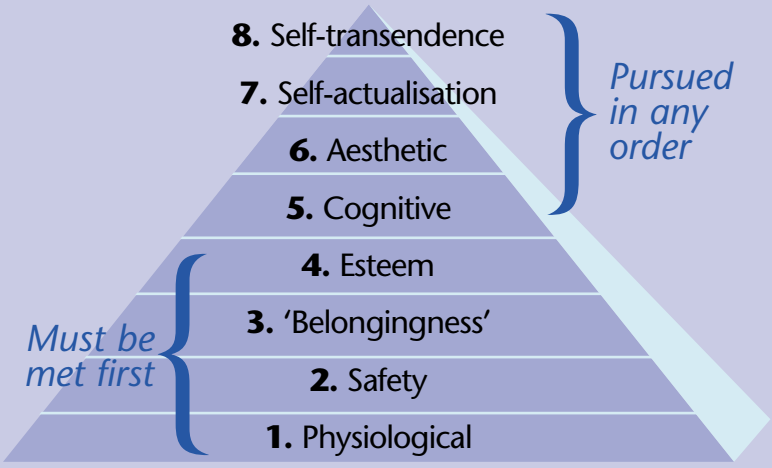
It may appear hackneyed in the modern age, but Maslow's conclusions are of particular importance to trainers. If we are hungry, we may wander from the text of the novel we are reading and first deal with what's in the fridge! Of course we can read, eat and socialise all at once, but the point is that a basic need cannot be denied, and will become more and more insistent until it blocks out all higher considerations.

If we are declared bankrupt or imprisoned for theft, we fall back a step or two. We abandon self-fulfilment or even social need, and we must ascend steps 1 and 2 again before we can approach the 'higher' needs.

There are exceptions, of course. The poet in a garret may go hungry and dirty as long as he has the strength to go on creating. He does not care what people may say, but resides exclusively on Maslow's fifth level.

If you see your role as a motivator and you hope to influence others to change their current behaviour, you cannot succeed without some knowledge of Maslow's hierarchy of needs.

Figure 1: Maslow's hierarchy of needs



Developing self-esteem

We cannot develop self-esteem without feedback from others. If we lose self-esteem, we replace it with feelings of inferiority. Robert Mager tells us people learn to avoid the things that hit them. This is highly significant for trainers, managers and educators. Consider these alternative examples of feedback.

- 'Why are you so stupid, Donald?'
- 'Why can't you ever get anything right, Donald?'

It does not require a doctorate in psychology to see that the first makes a critical statement about the person, not the behaviour. The second example is not likely to inspire a greater effort. Both will reinforce feelings of failure and personal inadequacy. Now consider these.

- 'I am impressed that you keep on trying Donald; let's see where things went wrong this time and work out how to fix them.'
- 'You are the sort of person who perseveres until you get things right, Donald. Let's try it another way.'

I'll leave you to make up your own minds. And when you have decided, let me suggest you revisit April's edition of *Training Journal* where Carol Laughlin's excellent article on feedback offers the soundest advice. TJ

LEARNING BLOCKS

What are learning blocks? Most arise from early experience when we adopt particular ways of looking at and thinking about things. For example, school might have left you with the idea that laughter and ridicule are the appropriate responses when someone makes a mistake. So people learn to fear making a mistake. A number of factors (singly or in combination) may block our capacity to learn.

- How we look at problems and situations.
- What is generally accepted as good and bad, right and wrong.
- How we feel about things.
- Our ability as thinkers and our specialist knowledge.
- Our ability to express ourselves effectively.
- The systems, procedures and attitudes at work.

The situation in which learning is taking place may cause other blocks. For example, a manager who is strongly competitive or fears failure (a consequence of his/her traditional schooling) may have a 'block' about reorganising and giving credit to others for their ideas.

Before you can do anything to overcome learning blocks you must recognise and identify what particular type is occurring. You can then select the optimum method of overcoming it (or them). Without that discrimination, you may reinforce the block unintentionally.

- **Perceptual blocks.** These prevent the learner from clearly perceiving the situation or problem, or the information needed to tackle it – for example, taking too narrow a view of the situation, looking at it from only one point of view, not distinguishing between cause and effect and seeing only what you expect (the obvious) or want to see.

An example is where a trainer exerts pressure because someone is obviously disinterested in a task, whereas the real problem is that the trainee is fed up with being given challenges that are too simple.

- **Cultural blocks.** We are conditioned to accept what is good and bad, right and wrong, proper and not proper. This creates blocks such as reluctance to challenge accepted methods, dislike of change, belief that reason and logic are better than feelings and intuition (and vice versa) and over-emphasis on competition.

An example would be a trainee with an idea for a more efficient method of completing an assignment but who doesn't suggest it, believing that the trainer would have already thought of it, if it had any merit.

- **Emotional blocks.** Anything that seems to threaten our basic needs for security, self-esteem, success, order, control and so on. This can give rise to blocks such as fear of making mistakes or looking foolish, the need to succeed quickly (leading to impatience), inability to cope with situations that are not clear-cut and avoidance of situations where we feel anxious.

An example is where people become frustrated with tasks because there are too many conflicting options and they can't decide which to take.

- **Intellectual blocks.** Inadequate thinking skills for a particular situation, or the inability to use them effectively – for example, lack of knowledge about methods being used or the 'language' (perhaps technical jargon or maths), inability to think flexibly (perhaps switching from analysis to idea-generation), and inadequate thinking strategies such as generalising, interpreting, defining and so on.

An example would be someone having to analyse the implications of some data but not being able to understand the information clearly enough to complete the task.

- **Expressive blocks.** Inadequate 'language' skills to communicate or record ideas. This includes visual, mathematical and scientific 'languages'. It is not just about 'vocabulary'; it may also include 'unfamiliar with a particular application of the language' (such as trying to describe a mathematical problem verbally) and 'using incomplete knowledge to try to describe something'.

An example is the trainee who could easily write a good report but cannot give a successful 'live' presentation.

- **Environmental blocks.** Includes social and physical conditions – for example, distractions from the task, physical discomfort, the refusal or absence of help and the organisation's structure (perhaps a stifling management hierarchy).

An example would be people finding it difficult to concentrate on their work, perhaps because they are situated near a coffee machine, which makes it a noisy thoroughfare.

Once you have recognised that a particular block exists you can then plan to overcome it.

- I have written guidelines on overcoming these learning blocks. You'll find them on the *Training Journal* website at www.trainingjournal.com/philgreen.htm

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In next month's 'Train the Trainer' ...

In the June issue we will look at the learning cycle, the learning process and some factors that affect learning. An activity will help you to assess the way you learn. Additionally, there's an examination of the effectiveness and application of different learning methods. A reading list closes the loop of our own particular learning cycle.

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Train the Trainer

Friend of foe?

The kids became very restless last week. I met an old friend, ADDIE (The Instructional Systems Design model) in the corridor of an American publication (*Training*, April 2000). He was looking less sprightly than usual. Some other kids had been tormenting him for weeks, calling him names and chanting 'analysis paralysis'. As I got closer I could see a smear of blood on his lip and some light bruising beneath his eye. 'What happened to you?' I asked. 'Nothing to worry about,' he replied. 'Just some of the big boys throwing their weight about. They say I'm old hat, and that I've become too bureaucratic to be of any use to people.'

I looked at the long line of medals on ADDIE's chest and we chatted about the many successes associated with him. 'Funny thing is,' he went on, 'those who ganged up on me today are the same people who were my best friends yesterday.'

'Don't worry,' I said. 'You'll get over it and so will they. By this time next month, you'll all be pals again.' He smiled and went on his way with a spring in his step, carrying too much as usual.

Processes, theories and models for learning need not be mutually exclusive. I am suspicious that the apologists for the systems approach should be some of its former leading lights, who have now joined a bigger, more influential gang.

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This month, Phil Green gets right into the playground to see who's teamed up with whom. He invites you to knock on the door of some theories that have gained current popularity and places their merits before you – leaving you to make up your own minds (as he has) about what works.

Experiential learning

American psychologist Carl Rogers might be a good friend to ADDIE; he recognised learning as a natural human impulse, either meaningless or significant. Cognitive learning (for example, memorising numbers or facts) was separated from meaning – unlike experiential learning, which is about applying knowledge to satisfy real needs and wants. In Rogers' view the teacher can make experiential learning happen by the following means.

- Setting a positive climate for learning.
- Clarifying the purposes of the learner.
- Organising and making available learning resources.
- Balancing intellectual and emotional components of learning.
- Sharing feelings and thoughts with learners but not dominating.
- Offering subject matter that is relevant to the student's interests.
- Avoiding external threats where learning challenges existing attitudes or beliefs.

You cannot achieve these goals without analysis of purpose, people and place.

The learning cycle

ADDIE could surely find some support from David Kolb and his mates. A good trainer understands how people learn and uses that knowledge to help them develop. There are different ways of learning. People tend to learn better from some experiences than from others. The type of experience varies from person to person. If, as a trainer, you can recognise (through analysis) how each individual learns best and what types of difficulty each might have in learning from the assignments you set, you are in a better position to ensure they gain the full benefit from those experiences.

The learning process

Think about how a young child learns to respect heat.

1. The child touches the stove and feels pain: **an actual experience**.
2. The child associates this pain with the stove and thinks about the connection: **observation and reflection**.
3. The child learns the general rule that stoves burn if you touch them: **forming a rule**.

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4. After a while the child may cautiously put a hand near the stove to check that rule: **deliberate testing**.

These four distinct stages form what is known as the learning cycle – actual experience, observation and reflection, forming a rule and deliberate testing. Learning is represented as a cycle because it is a continuous process. With each new experience we observe and reflect on how it relates to our previous experiences, then modify our existing rules or create new ones as necessary. For example, the child with the rule about the hot stove may then touch a radiator, feel the heat, reflect on the similarity with the previous experience, then modify the rule about hot stoves to include radiators.

As we learn, we accumulate rules that relate to each new experience. We then adapt old rules rather than form new rules. This is known as 'going from the known to the unknown'.

Some factors affecting learning

Many things can affect how people learn. Last month we considered learning blocks (refer to www.trainingjournal.co.uk/philgreen/htm for further information on overcoming these). We also looked at feedback and its impact on self-esteem and motivation. Kolb[1] suggested three factors that have special importance in understanding how learners learn:

- the influence of past experience
- how completing the learning cycle helps
- individual learning styles (about which we'll say more later).

The influence of our past experience

Through life, we collect experiences that shape our understanding of the world. As we assimilate and adapt to these experiences, they influence our ideas and beliefs, and determine what we do and how we do it.

As a trainer, be aware that people will not always want to learn simply because they are told to or because there is an opportunity to learn. Giving them a good reason to learn and making it easier for them to learn helps to make your part more effective.

Completing the learning cycle

There are many different methods of learning and some are more effective in certain situations than others. For example, memorising may be the best way to learn a list of definitions, while it would be more effective to learn a manual skill through practise. You have probably been on the receiving end of many ways of being taught aspects of your work, some more effective than others.

Suppose you were driving a car and a passenger was giving you directions – 'turn next right … go to the end of the street … take the third exit at this roundabout' and so on. They were simple directions and soon took you to your destination. Then, on another day, you had to find the same address by yourself and you got lost. If you had gone through the difficult process of finding your own way on the first occasion you would have learnt the route more effectively and found it much easier to find your way back next time.

In the first situation you were told the rule (directions) and then tested it (following the directions), but you didn't have the experience of discovering for yourself which directions to take or the opportunity to reflect on where they were leading – that is, you didn't complete the learning cycle. By finding your own way (that is, starting with the experience and reflecting on the result) you would have arrived at your own rules (directions) and tested them – completing the learning cycle and learning more effectively.

In classrooms we routinely fail to complete the learning cycle. We tell learners the rule and maybe give them the opportunity to test it by doing an exercise. They may not apply the learning to an actual experience and reflect on it for some time. An alternative approach is to start with the work experience, then encourage the learner to reflect on it to form or modify rules and to check them out by further testing. Here, once again, I am taking tea with ADDIE, advocating 'performance-based instruction' rather than 'training'. It is a methodology that involves not only trainers and trainees, but also managers and colleagues.

Experiential learning

The effectiveness of different learning methods depends on what you need to learn. However, certain factors help or hinder learning in most situations, as Table 1 shows.

The left-hand column is characteristic of experiential learning. The right-hand column portrays the 'didactic' classroom method of learning. The principal difference is the point at which you start the learning cycle and the number of stages you complete. Classroom learning often emphasises the acquisition of knowledge. There is very little opportunity to test that knowledge while you are learning, to observe and reflect on its relevance, and to modify your ideas and behaviour accordingly. So problems can arise when, eventually, you come to put theory into practice.

Learning is most effective when you present a relevant experience and then, through observation and reflection, use it to broaden or refine existing ideas, methods and behaviour. By supporting trainees as they tackle new situations you prepare them to cope with change.

Table 1

Factors that help you to learn	Factors that leave your learning incomplete
Being given the opportunity to experience something new (for example, an assignment that stretches you in some way)	Being given a general rule and having to learn a list of situations to which it applies (relying on being told and then forgetting)
Being encouraged to complete the learning cycle – observing and reflecting on the experience, looking for similarities with previous experiences, then testing if the same rules apply	Not having the opportunity to see how the rule works in practice, by testing it in a real situation, and observing and reflecting on the experience
Being encouraged to modify your existing rules as a result of what you discover through new experiences	Not being encouraged to compare a new experience with what you have experienced in the past to establish the similarities and differences
Having the opportunity quickly to put your learning into practice	

Accelerated Learning

I'll bet Big AL is behind the bullying of poor ADDIE. Big AL (Accelerated Learning) is full of ideas about learning styles, how your brain works, and the nature and complexity of intelligence. AL's gang say Accelerated Learning is the antidote to generations of bad practice in classrooms. People go through life without using their abilities to full potential. AL says their development was held back because:

- people were not taught in a manner to suit their personal learning styles, and
- they could not believe in their own ability to succeed.

Research into the physiology of the brain has provided evidence which shows that people can learn confidently and rapidly as long as the subject is presented to them in a way that suits their style and preferences. In our school system teaching has been mainly by the 'shut up, sit down and listen' method. But there is no single 'best' way to learn. Everyone has his or her own preferred way of learning. Some like to see or be shown (visual learners), others like to hear or be told (auditory learners) and yet others need to get hands on (kinaesthetic learners). Most of us use a combination of learning styles to learn effectively. One thing we have learned about the brain is that information fed step by step engages less of it than giving the whole 'big picture' and inviting the learner to make sense of it first. When the whole brain is active, learning is faster, easier and lasts longer.

How many nursery rhymes can you recite? Can you recall the way in which you were taught them? What about your favourite songs? Did you consciously memorise them or were they internalised because of associations with words, places, situations, feelings and so on? More parts of the brain are engaged when we listen to words and music together just as words may be more memorable when combined with pictures. Accelerated Learning deliberately combines modes of information and ways of perceiving in order to engage the whole brain.

Another finding has been that long-term memory is closely connected with that part of the brain which governs our feelings.

We can usually recall moments of strong emotional significance – romance or bereavement for example. Music seems to have a special capacity to arouse memories of particular occasions. And so the theory goes that if we teach in a way that stimulates powerful emotions, then the memory will retain more information more deeply. Accelerated Learning embeds information in the long-term memory by bringing music and games into learning.

In April's 'Train the Trainer', we discussed how feelings of previous failure, pressure or stress inhibit learning. The supporters of Accelerated Learning reason that primitive survival instincts put the brain into a kind of neutral gear. The higher thinking regions slow down. The mind may go completely blank. Accelerated Learning uses relaxation techniques to create comfortable conditions for learning.

Multiple intelligences

Howard Gardner is AL's best friend. He has written about eight distinctive intelligences. Recent discussions in the Sunday supplements have raised the question of whether these are intelligence or talents. I see no point in arguing semantics. Let's call them attributes. We all have each of them to a greater or lesser degree. We can apply these attributes to learning and so get closer to our full potential.

Gardner reckons traditional teaching suits those who get high marks in language, logic and maths. Students are asked to learn stepwise from lectures and textbooks, but some kids learn better through vision and pictures. Accelerated Learning takes account of this and makes use of strong visual imagery.

Shared learning is an issue, too. In school you were sanctioned for copying, yet many people learn best not on their own, but with a partner or in a small group. In school you were made to sit still, whereas physical presence is important to many learners. ➤➤

They absorb and retain more when they can manipulate or role play their learning. Accelerated Learning is characteristically hectic, emotional whole-brain learning. It uses sound, pictures, games, movement, relaxation and imagery, and a high level of interaction.

Whenever AL's gang get together, they do a tribal war chant that goes like this:

20 per cent of what we read, we recall
30 per cent of what we hear, we recall
40 per cent of what we see, we recall
50 per cent of what we say, we recall
90 per cent of what we see, hear, say and do, we recall …

AMEN!

That is why the link is so strong between Accelerated Learning and NLP (NeuroLinguistic Programming), which we'll meet later in the 'Train the Trainer' series. Often, Accelerated Learners will vocalise their learning through song or chant, or will act it out through play. It may sound a little fanciful for adults, but all the evidence suggests that it works.

Observational Learning

I saw Bandura in the cloakroom. He was still holding up the prize he won at Speech Day for his Observational Learning ideas.

Learners may copy the behaviour of a model who displays characteristics that they find attractive or desirable. When the model's is rewarded, the observer is more likely to reproduce the behaviour that earned the reward. When the model is punished, the observer is less likely to imitate.

Bandura has drawn an important distinction for ADDIE's opponents – that one can acquire behaviour without performing it. The observer may be 'programmed' in a certain way but not display the behaviour until some time where there is a reason to do so.

Learning by observation involves four separate processes.

1. Attention: observers cannot learn unless they pay attention.
2. Retention: observers must not only recognise the observed behaviour but also remember it.
3. Production: observers must be physically and intellectually capable of producing the act.
4. Motivation: in general, observers will perform the act only if they have some motivation or reason to do so. Positive or negative consequences for the model or the learner are essential.

It is attention and retention that account for the learning (acquisition) of a model's behaviour. Production and motivation shape the performance. Our mental and physical characteristics, our personality, beliefs, values and so on shape our behaviour and environment. How we behave can affect our attitudes, beliefs and feelings about ourselves and others. We gather a view of the world from media, parents and books. Our environment affects our behaviour; what we observe can powerfully influence what we do. But our behaviour also contributes to our environment.

In the classroom or seminar, learners need the opportunity to observe and model the behaviour that leads to a positive outcome. It is because learning happens within important social and environmental contexts that trainers should encourage people to work together.

Finally, assessment must be undertaken in a suitable setting. You should not expect learned behaviour to be performed out of context. A trainer should provide the incentive, resources and supportive environment for the behaviour to happen. Otherwise, assessment may not be valid.

Well, the whistle has gone and the kids are all settled down again – each getting on with his or her work. And I'm off for a cup of tea! TJ

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In next month's 'Train the Trainer' …

In the July issue we'll turn the spotlight on how to deal with people in groups. Later, we'll return to the poor battered Systems Approach to Instructional Design and look at some highly innovative alternatives to training. To set you on the trail, here's a challenge to your creativity.

Problem: in a city hospital, people were sent for X-rays to investigate possible fractures. The radiographer often passed the films to junior doctors who sometimes missed vital indicators and sent home people with potentially debilitating fractures. The result was an unacceptable number of cases of litigation when patients were first sent home, then later recalled for essential treatment.

Your challenge: suggest a solution that corrects the performance problem. Here's a clue; no training is involved. Good luck. If you wish, you can email me with your solution. I'll print the best ones in next month's issue.

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Train the Trainer

Studying the students

It is a strange phenomenon that otherwise reasonable individuals can take on the strangest of characteristics and depart from their normal behaviour when placed within a group. It is often marvelled at that arguably the greatest political brains of the last century should have been capable of the Bay of Pigs fiasco.

Group behaviour is one of the most frequently raised problem areas among both teachers and trainers. There is no pat definition of what a group is, but it often comprises a blend of individuals whose collective character and mood can change from one moment to the next.

Group dynamics operate on two levels. On the surface you can see rational behaviour among members, or between members and the trainer. At a deeper level rests the fears and cheers of each individual. You can sense but not see conflict developing as members test their relationships, defend their interests, and compete for status, prestige and recognition. The individual's desire for independence is at odds with the feeling of dependence on the group.

Until the group has reached an acceptable level of integration, some group members will react in stereotypical ways. An experienced trainer should be aware of these dynamics and know how to deal with them.

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This month's 'Train the Trainer' is about that unpredictable and yet predictable animal 'the group'. Phil Green discusses how to recognise its vagaries and what you need to do in order to deal with them.

Dealing with people in groups

Trainers and managers talk a lot about so-called group dynamics. It is one thing to deal with situations you meet in textbooks or 'laboratories' (in which I include role-plays). It is a quite different matter to manage hard-bitten business people in seminar groups. There are some types of problem that can only be fully understood by direct experience.

As trainers we must draw on our personal experience of how people behave when they gather together within a setting similar to that in which we operate as trainers.

One problem with group dynamics is that it is difficult to reach agreement on what a group is. Perhaps we don't need a theoretical definition. What really counts is how you deal with one when you meet it. But let's see what you think. Read the four scenarios that follow. In each case, do they describe the conditions where a group has formed?

1. As strangers, you and I walk towards the railway station.
2. We meet again on the train and the conductor collects tickets from both of us.
3. We gather alongside some other managers who have not previously met in a classroom for a briefing and we read the agenda.
4. We managers have been together for some time during which we have defined roles and developed and shared norms.

You may be surprised to learn that by accepted (but different) definitions, each and any of these four conditions may describe a group.

Olmsted says that individuals who are in contact with each other, who react to one another and who have something essential in common are a group. Lindgren's much looser definition suggests a group has formed when there is any kind of relationship between two or more individuals. McDavid and Harari suggest that far more organisation is necessary to form a group. There must be defined role relationships and a focus on common functions. Members must conform to norms that govern their behaviour.

One way of drawing a line in the sand is to distinguish between ➤➤

natural and *ad hoc* groups. (*Ad hoc* is a Latin phrase that is often used to stand for 'occasional' or 'impromptu', but literally means 'for a specific and deliberate purpose'.)

Natural groups

We attach ourselves to natural groups in the interests of our mental and physical health and safety. I refer to family, peer groups and work groups. Broadly speaking, the most important group for humans is the family. Because it is the first to which we belong, it is known as a 'primary group'. The term 'primary group' is used to describe groups in which members make direct personal contact. A primary group often belongs to a secondary group – for example, you may work in a team (primary group) that belongs to an organisation (secondary group). Your child may attend a class (primary group) within a school (secondary group).

Under normal circumstances it is the family that shapes our attitude for life. It supplies a model of moral and ethical behaviour, and it gives us a sense of what is normal social conduct. By the interaction of family roles (parent, child, sibling, grandparent and so on) we first experience group dynamics as children. Whether the experience is harmonious or dissonant determines the behaviour of a developing individual in all other groups later in life.

We identify the behaviour patterns (norms) of a group and willingly conform to them as long as there is a payoff. We desire 'strokes' and recognition of our achievements. We seek to avoid isolation; in fact, the need to belong to the primary group is fundamental and the fear of rejection is a primitive one.

Perhaps the most influential and normative group to which we belong is the one we join in our teens. As adolescents we distance ourselves from our parents. We feel misunderstood and we no longer fit, so we flee the family nest and look for comfort in a peer group. Daumling has detected some distinctive features that appear only in adolescent groups.

- The group determines its own needs.
- No one from outside can impose common tasks.
- A key objective is to find an identity for members outside their family.
- Sexual attraction is a key element in the form and structure of the group.
- There is a definite purpose to build skill in dealing with adults and with the opposite sex.

After family and adolescent groups, it is the work group that has the greatest affect on its members. Our position within the work group determines our social status.

It is this group that we, as trainers, need to manage in our daily routines. The factors that shape our successful (or otherwise) integration within this group are as follows:

1. The style of the official leader.
2. The influence of the unofficial leader of the group.
3. 'Pecking order'.

Ad hoc groups

People frequently come together for a specific objective and then part when they have achieved it. Committees, congregations, clubs, learning sets and seminar groups fit into this category.

The seminar is an *ad hoc* group in which we have a particular interest, so are there any 'rules'? Well, the short answer is 'No', but suppose an inexperienced trainer came to you for advice on the size and nature of seminar groups, how would you answer? Try the questions and answers that follow.

- What is the main purpose of seminar group?
  The main purpose is to change the behaviour of delegates in a specific way by communicating to them information that they do not currently have.
- How many people would you include in a single seminar group?
  It is not a hard and fast rule, but a good number is between eight and 12 persons, and from a practical viewpoint 12 is most easily divided into sub-groups of two, three, four or six for collaborative activities.
- Is it wise to create groups in which members have the same rank or status?
  The most successful seminars comprise members of equal status. A manageable seminar group will be made up of employees of more or less equal status from the same company who work in the same area – for example, Sales or Admin.

An effective learning group functions as a whole and works together. Do not admit onlookers. If line managers insist on taking part, let them complete the same activities and assessments as everyone else. Resist allowing line managers to join the group to observe.

If a seminar holds people together for more than a day or two, then participants start to form a natural group that is no longer simply *ad hoc*. You will see these symptoms:

- a struggle for unofficial leadership
- a fight for places in the pecking order
- the forming of a 'group norm'
- people forming pairs
- the group assigning roles
- the emergence of 'Lord of Misrule' or the group's 'Village Idiot'.

Earlier, I suggested the optimum

size to be between eight and 12 members. Apart from the mathematical convenience of the number 12, I would suggest you regard it as a top limit. (See Table 1.)

Establishing authority

We have said the normal forming of a natural group involves a power struggle. You need to be well-prepared and tough enough to ensure the role of official group leader is yours by right. But if you surrender authority – and do expect to be put to the test – you should expect a rough ride. An effective classroom trainer establishes and maintains personal credibility because he or she:

- is prepared
- obtains information about the learners, their performance, styles and preferences in advance
- manages the learning environment sensibly
- displays effective communication and presentation skills
- uses questioning skills and techniques effectively
- responds properly to learners' needs for clarification or feedback
- provides positive reinforcement and motivational incentives
- evaluates learner performance
- reports and acts upon evaluation information.

You can often spot claims to group leadership early in the game. Watch out for the Smart Alec who turns up with a 'look at me' attitude. Consider this example …

Before the end of the first session a delegate helpfully suggests you change the size of the groups and perhaps take an early break. What is going on and how should you respond?

This is a definite test of your authority. The challenger is putting out feelers to see whether she or he has any support from other participants. You can usually detect an abundance of energy within whoever wins unofficial leadership of the group and the trick is to harness that energy. It is a mistake to try to manoeuvre that person into a situation where he/she is exposed for his/her lack of knowledge or skill. It is far better to establish a good relationship because, whether you like it or not, this person leads the opinion of the group.

If you are to be with a group for more than a couple of days, you should pre-empt the power struggle by taking control of the group dynamic process. Facilitate the election of a spokesman for the group right at the beginning of the course. The spokesman passes to the trainer all group requests – for example, changes in timetable or pace. This means you have only one negotiator in the group and you can turn away anyone else who comes to you with a request.

You will recognise the term 'pecking order'. It happens, not only with hens but also with other animals (including humans). A real or symbolic contest between two opponents determines who is allowed to 'peck' with whom. The end result is a hierarchy ranging from the strongest to the weakest animal. This order exists as long as no new member joins the group. If this should happen, there is unrest in the group until a new contest determines what the new member's place is.

As long as the group is sorting out a leader and working out who's who, it gets in the way of settling down to work. If participants know nothing about each other, it is difficult for them to know where they stand in relation to each other. That is why a trainer will always try to manage the process and be done with it as rapidly as possible. An obvious opportunity is some kind of round-the-table introduction.

Something else for the trainer to consider is the extent to which groups soon appear to feel and think alike. 'Behavioural norms' are developing, and although usually unspoken, they may go as far as determining how much work will be done, when and by whom.

Groups with six to eight members divide spontaneously into closely knit pairs or threesomes. This may be for security because they feel weak, or because they feel a strong empathy for their chosen partner(s).

Roles within groups

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TABLE 1: THE MAGIC '12'

- Groups of more than 12 people invariably split into subgroups, and that means more than one unofficial leader emerges.
- Sometimes you may need to capture performance on video – for example, in role-plays or simulations.
- Large groups give the opportunity for shrinking violets to appear to learn but avoid showing through practise that they are ready to adjust their behaviour!
- Learners need sufficient time to reflect and analyse their performance. The more people in the group, the longer it takes to analyse behaviour and give feedback.

THE ABILENE PARADOX

In the Abilene Paradox, Jerry Harvey describes his family's misguided excursion to Abilene: 'Four reasonably sensible people who – of our own volition – had just taken a 106-mile trip across a godforsaken desert in furnace-like heat and a dust storm to eat unpalatable food at a hole-in-the-wall cafeteria in Abilene, when none of us had wanted to go. To be concise, we'd done just the opposite of what we wanted to do.'

A fear of being separated from the group and other irrational thoughts can drive reasonable, intelligent people to do just about anything – except what they all privately agree they should do. Harvey's theme is that for individuals in a variety of contexts, how to reach agreement is more of a challenge than how to manage conflict. In the classroom, the first agreement to be reached is the willing submission of the group to the agenda of the curriculum and the organisation of the tutor. Take care because unless you have done some careful matching of content to needs and preferences, and unless you have judged the mood and motives of your audience, you may meet 'furnace – like heat and a dust storm'.

Roles within groups

It is fascinating to observe a group, given sufficient time, assigning the same familiar and recognisable roles to its members. The roles may be actively chosen or passively thrust upon one who accepts it under pressure or because no one else will. Besides the leader, there are two other active roles we regularly see at play within groups.

- Worker.
- Fighter.

Passive roles include the following:

- Favourite.
- Idiot.
- Conformist.
- Outsider.
- Scapegoat.

Workers

One person may assume more than one role. Workers are unlikely to be favourites because they are an uncomfortable reminder of what all the other members of the group ought to achieve if only they applied themselves, too.

'Worker' is usually an active role. It is taken on by one who is more intelligent or a higher performer than the others and not prepared to go at the pace of the slowest. Some in the role of worker are driven by an obsession to be best at everything (see last month's 'Train the Trainer' on motivation and self-esteem).

Fighters

At the start, highly respected by the group for speaking their minds, fighters decide the seminar is not for them and take every chance to challenge or antagonise the trainer. If the trainer establishes credibility and authority with the rest of the group, fighters must either submit or accept the role of outsider.

Favourites

Favourites are usually those who communicate best. They have the greatest empathy and understanding of the group. Others confide in the favourite, who soon seems to know everything about the group. The favourite seldom takes on the role of leader, and is more likely to be seen guiding and counselling than dominating.

Idiots

Idiots may be those who struggle to make great effort but accomplish little. Their defence mechanism is to play up to the group. Idiots may loudly entertain or volunteer to do helpful little jobs in order to be seen as 'the nice guys'.

Conformists

Conformists keep their heads below the parapet and find it hard to defend a point of view. These people usually wait in the wings as the struggle for leadership resolves, then join the unofficial leader. Conformists avoid confrontation with the trainer or other group members.

Outsiders

There are three types: the 'Innocent Abroad', 'Mr Nasty' and 'Mr Superior'.

'Innocents Abroad' are those who may be manoeuvred into the position of outsider against their will. These outsiders may be introvert, may join the group later than the others and cross boundaries they did not even know existed. A sensitive trainer should recognise the pain of these outsiders and tactfully help them to become accepted back into the group. Some people – such as 'Mr Nasty' types – become outsiders simply because they are odious characters who create unrest within the group. Once exposed they are ostracised (usually for the duration of the course), and you are unlikely to succeed in bringing these outsiders back into the group.

'Mr Superior' types are high on intelligence but low on social and emotional skills. You may have met the trainee who is always one step ahead and extremely arrogant. This person has no desire to form part of the group. The 'Mr Superior' type of outsider can create great tension, interfere with motivation and learning, and spoil the atmosphere in a group. It is often best to take them to one side and confront the negative behaviour.

Scapegoats

Where the group feels unstimulated or else overpowered by the trainer, it may punish the weakest member. No one deserves to be a scapegoat. Group members try to identify with one another, and suppress negative impulses like envy and rivalry. But when they generate surplus energy or need to let off steam, they may channel their energies into aggression. The spirit and structure of the group comes under threat. The weakest member of the group becomes an outlet for aggression. Sometimes the pressure is heavy and sustained. This can happen in two extremes – when the group is insufficiently challenged or when the trainer adopts a style that is too authoritarian.

REFERENCES

In issue 5 of 'Train the Trainer' (May 2000), I drew heavily upon the work of James Adams for the content of the Learning blocks panel. I neglected to give the credit for this work to its author whom I accredit here:

Adams, J.L., *Conceptual Blockbusting: A Guide to Better Ideas*, Third Edition Addison-Wesley, 1990.

In this month's article, I refer to Daumling, Olmsted and Lindgren. These references come from notes at a lecture in education at Manchester University in 1977. I know of no other reference, and searches for their published works have so far proven unproductive. I warmly thank all those academics and practitioners who have shaped and influenced my attitudes and provided me with the tools and techniques I use in my professional life. If in the course of this series I have omitted to give anyone the credit they are due for their work I apologise, and hope they will contact me so I can correct the omission. It happens in a lifetime of meeting useful concepts and ideas that sometimes the source is forgotten.

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In next month's 'Train the Trainer'...

Last month, I set the poser of the city hospital and invited readers to suggest non-training solutions. The simplest solution was from Mike Sleight who would have self-adhesive blue spots on the outside of the envelopes. This allows people to pass on their experience. The seeing eye of the people doing the processing would be able to inform the less experienced – alerting, say, a casualty doctor to take greater care with particular cases, or refer to a more experienced colleague.

In next month's 'Train the Trainer' we'll return to the theme of design for learning. We'll look at how to set about planning the detail of a course, and how to keep the content closely aligned with performance. We'll also look at some more examples of performance engineering solutions like the one just described.

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Train the Trainer

Howzat?

From the start of this series we have argued in favour of a method of instruction that can be measured by an outcome. That outcome may be measured in terms of accuracy, a task performed in a specific time or a particular number of correct responses. Each learning objective has its own separate criterion for success. For example, the criterion for the objective of bowling for a cricket team might be: 'Under match conditions, the bowler will capture wickets at the rate of one per 30 balls and at the cost of no more than 20 runs per wicket.'

Of course, this is close to international test match standards, and my mind wandered in this direction during an interval for bad light at Lords cricket ground recently. (Untypically, the English team beat the West Indies.) Think for a moment about the process of learning to play a sport. There are clearly some things that you can learn in a classroom – field placings, rules of the game, the science of preparing a wicket, models and characteristics that distinguish – say, pace bowling from spin. However, there are also psychological barriers ('We always lose to them') and, of course, ultimately a learner makes the grade by spending lots of time in the field with ball in hand. The design for learning must include a range of different forms of support including tutoring, research, coaching and practice.

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This month, Phil Green deals with design for learning in some detail. The process involves a number of inter-dependent activities, all of which are covered below.

Design for learning

As we have seen in earlier 'Train the Trainer' items on analysis, the choice of which elements to include and how to use them is shaped by careful analysis of needs, of environment and of the attributes of the target group. The purpose of this article is to explore how to begin designing learning material. At the end of the series you will have a useful set of guidelines that draw on the best practice we have met in the world of professional training.

Preparing the outline design

How do you take the vital step between analysis and design? Analysis gives you a picture of what needs to be fixed. But how do you then proceed from the goal that is in your head to a proper solution? How do you present learners with a range of activities that provide them with the knowledge and skills they lack? How do you design assessments that allow learners to measure their learning?

Objectives are the key. It is the framing of objectives that makes the difference between effective and ineffective training. Even some experienced trainers are confused about the purpose and positioning of objectives. They have had the message drummed into their heads whenever they have read about or attended a course on training. There is a sense of guilt about objectives; if your line manager is to sign off your course notes or lesson plans, you must make certain you remember to put some objectives in there somewhere! And then there is the question 'How will my manager judge that they are good objectives when s/he sees them?' Best make them SMART (Specific, Measurable, Achievable, Relevant or Realistic and Timed) objectives.

Here, we'll endeavour to give you the answer to the question 'Where do objectives come from, and how do you really know a good one when you see it?'

Setting the end objective

The first step in design is to establish the end objective. Don't try to start with a training objective. The proper place to begin is by referring to the analysis undertaken at the start. We have ➤➤

spoken often during this 'Train the Trainer' series about taking a performance-based approach to instruction. Let's think about that for a moment. Remember that in a proper analysis, we will have raised questions like 'What seems to be the problem?' 'Who's involved?', 'What is the current performance?' and 'What is the required performance?' We referred to the discrepancy between the current and the required performance as 'The performance gap'. It is by making a clear statement of what the subjects are required to do that we arrive at the ultimate outcome of any training (and of the whole cocktail of solutions that we might recommend to bring the business to that desired outcome).

Once you have that clear end objective, you can start to reduce it to the sub-tasks that the user must perform. You can do this using outcome analysis, beginning at the highest level of the performance objective and then moving steadily downwards, examining the performance in finer and finer detail.

Why is outcome analysis important?

Outcome analysis is essential because it helps you to do two things.

1. At a higher level it breaks down the performance into a number of more easily digestible chunks. These chunks become sessions, modules or units.
2. At a lower level it identifies each separate component of knowledge or single performance. It is much easier to design training activities centred on small components.

This process also helps you to plan and cost the development of a training programme. Now remember that the performance-based instruction philosophy requires you to have taken a very wide view already in analysing the outcomes, the people who are involved and the whole host of environmental factors that might get in the way of their

Figure 1

achievement. (We have previously looked at rewards, incentives, tools and equipment for example.) The currency of the trainer is knowledge, skills and attitudes, so I'd like to introduce you to Pyramid Analysis, which is extremely useful and rather like chess – that is, it's quite easy to learn the moves but it takes a good deal of practice and experience to play to win.

You'll need a roll of brown paper (or a couple of pages from flip chart pads joined landscape), a variety of Post-it® Notes and a good-sized wall (see *Figure 1*). Write the end objective on a large Post-it® and place it in the centre of the brown paper at the top. Typically this top Post-it® might read 'Sell more stakeholder pensions' or 'Reduce staff turnover from 25 per cent to 20 per cent by the end of 2001'. Generally, this should be done collaboratively with someone who is already performing as closely as possible to the standard required of others in the future. Do not try to continue unless you are both quite happy that the top Post-it® broadly describes the required outcome.

The analyst/designer then asks a simple question: 'What does this person need to do in order to meet these targets?' You repeatedly ask the same question: 'What else?', 'What else?' and 'What else?' It's a very simple technique but it has a very sophisticated outcome. The content of an entire course can be mapped in this way on a single sheet of paper. At the end it will resemble a hierarchy of tasks that may look like a pyramid. At the top are the high-level objectives, and beneath each of these is a series of other objectives that you must achieve if you are to reach the outcomes higher up the pyramid. There are some guidelines to follow when you do this type of pyramid analysis.

- Continue the analysis until you get to an appropriate level. The performance and the existing abilities of the target group will determine this. Limit the analysis to tasks that are going to be new to the target group.

- Be flexible in developing the analysis. Experts will rarely give you a breakdown of the tasks in exactly the right order. And often this will not describe the task in a measurable form, so you will have to help them.

- It will be extremely difficult for you to write objectives later if you neglect to attach a verb to each task on the pyramid analysis.

- Test your analysis with other people. The results of analysis need to be tested with as many people as possible, to make sure that they agree with what you have found.

Working out the modular structure

The first thing you can do with your pyramid is to use it to work out what modules will be in your course.

- What type of learning is in the module? It is useful at this stage to consider what type of learning each chunk involves – in other words, is the chunk knowledge-based or skills-based? These suggest quite different types of learning activity and of assessment. Knowledge-based modules are probably better covered by a tutorial approach, whereas skills-based modules may be better suited to a role play, workplace project or simulation. If a module seems to contain both types you should consider whether to split it up into separate modules.

- How many modules? Aim to have no more than nine. Research shows (Miller, 1956) that when we are presented with information our brains place it first into so-called short-term memory. There may be space for between seven plus or minus two items. We process this information and decide whether to ignore it or move it into long-term memory. If we are presented with more than nine items our brains race around moving things in and out of short-term memory, which makes decision-making very difficult.

- How long should modules be? Learners can usually only concentrate fully on a piece of learning for about 15 minutes at a time. After that their concentration wanders and the effectiveness of the learning falls rapidly. It is also recognised that people learn most effectively at the beginning and end of a study period. Having a larger number of small study periods is therefore more effective than a small number of longer periods. This also raises motivation, as it gives the learner a sense of making rapid progress.

Preparing an outline design specification

The outline design specification is a detailed document that contains the basic requirements for all aspects of a training programme, no matter what the method of delivery. It will typically cover the aspects below.

The overall training objective

This must be clearly written in behavioural terms, stating the:

- conditions given for the training, such as the use of workbooks or other reference material (perhaps even the use of a prepared wicket and a bucket of cricket balls!), where the programme will be used and so on (this information will help you to plan and design appropriate learning activities)

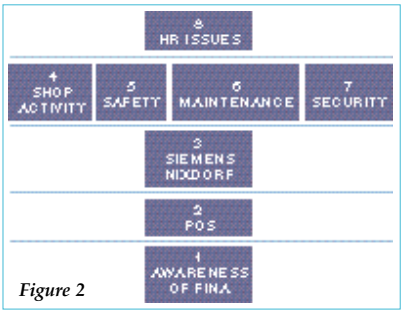

Figure 2

- performance, as an observable action

- measures of success, the type of assessment that will be made, such as a multiple-choice test of 20 questions, a workplace assessment and so on.

Course map

A course map is a useful graphical representation of a course (see Figure 2 for an example).

Module objectives

The overall objective should be broken down into its enabling objectives, which will become the objectives for each module. They should be stated in the same way as for the end objective.

Module content

This should summarise the results of the pyramid analysis for the module, stating every aspect of performance and measure of success for each enabling task.

Proposed treatment for each module

This should state how the module will be presented – that is, as a tutorial or role-play, the use of quizzes or tests, workplace assignments and so on.

Types of assessment to be used

When staff return from courses, it is not always obvious whether they learned what they were meant to learn. How can you be sure they are capable of performing the tasks assigned to them? How do you document it? If you base assessments on real job requirements, you can safely judge the readiness of an employee to perform to standard. Assessments should measure whether someone has the specific skills and understanding they need to transfer to a particular task. How would you feel about the flying skills of a pilot who had attained a pass mark of 85 per cent? I imagine your attention might drift to the 15 per cent in which s/he had failed to make the grade.

Good tests of performance will set up for employees the same stimulus and input of data they will meet in real life. They will rehearse dealing with the situations and problems they face at work. As we design activities and skill checks we keep in mind the question 'What will this employee see, hear, touch in the working environment?' We do not ask, 'What should you do if an alarm sounds?' Instead, we set the environment and the context for dealing with an emergency, describe or simulate what the system prompts read, what the visual and audio clues are, and then ask 'What do you do next?'.

Where you are engaged in systems training, work with IT colleagues to create support exercises on live systems in training mode if these can be arranged without risk to the real data. Look for opportunities to provide structured and guided practice, with 'Performance' checks (not just knowledge checks) built into the training.

These will be covered in greater detail next month.

Summary

Design is the second stage in a thorough systematic approach to training. As you move through the process, remember that the key to success is proper analysis of the gap between the existing and desired performance. Keep an open mind. Do not consider the design, content or method of any solution until you are confident it is the best. Work closely with your customer to understand any analysis already undertaken to obtain relevant ➤➤

information that may have been missed, until you are both quite satisfied that the solution perfectly matches the needs and preferences of the target group.

Effective trainers think first about the who, what, why, where and how of learning, rather than becoming hung up on issues of logistics or technology. Their focus is on what learners will do and how to get them to do it.

The unique advantages of PBI

The health of any business depends on the successful performance of people. Staff at all levels need to be comfortable with sophisticated systems and processes such as how you communicate, how you deal with colleagues, how you manage performance, how you develop new business, satisfy customers and so on. Managers depend on you to work with them to ensure staff have the skills to use these systems and processes, develop and apply controls, and understand how these all fit in to their jobs. These factors are critical to ensuring an organisation has the operational skills to meet its customers' needs and gain maximum value from any investment in people, processes, equipment or training.

We have promoted PBI as the means by which you can develop training for people at all levels who need to apply new knowledge, skills and modified attitudes in order to meet their business objectives. Given the scope to apply the approach, you can be bold enough to offer your managers a guarantee that employees in your organisation will have the capacity to succeed.

The PBI approach works because the focus is on performance, not only on training. It gives users the skills to do their jobs rather than just knowledge about processes and procedures. It is a way of preparing people to succeed at their jobs. They use to their full potential the systems and resources that the business provides, and your organisation achieves its goals.

HOW IS PBI DIFFERENT?

This table is adapted from the work of Robert Mager and highlights the fundamental differences between PBI and content-driven courses.

Performance-based instruction	Content-driven course
Objectives emerge from analysis of real-world needs and describe intended results.	Objectives are typically absent or used to describe the content to be covered.
Content of the instruction is derived from the objectives to be accomplished.	Content of the instruction is usually determined by a subject matter expert.
Trainees study only that which they do not know.	All trainees study the same content.
Each trainee is given an opportunity to practise each objective.	Trainees are given few opportunities to practise the entire objective.
Instruction includes only what is needed to accomplish the objectives.	Instruction may include all manner of content that is irrelevant to the particular learner's needs.
The primary instructor role is that of coaching.	The primary instructor role is that of presenting.
Test (skill checks) are used for diagnosing difficulties, confirming mastery and as opportunities to let trainees feel good about their progress.	When used at all, tests are a basis for grading – that is, to rank each student by comparison with the performance of other course delegates.
Trainees study and practise until they have reached mastery of the objectives.	Trainees study until the fixed course time has ended.
On reaching mastery, trainees receive a Certificate of Achievement.	On course completion, trainees receive a Certificate of Attendance.

REFERENCES

1. Mager, Robert R F *Goal analysis*: *How to clarify your goals so you can actually achieve them*, Centre for Effective Performance 1991.
2. Mager, Robert R and Pipe, P *Analyzing performance problems*, Lake Publishing Company, 1984. (ISBN 1-879618-17-6)
3. George A. Miller *The magical number seven, plus or minus two: some limits on our capacity for processing information,* The Psychological Review, 1956, vol.63, pp.81-97

In next month's 'Train the Trainer' ...

Next month we'll return to the subject of how to create tests and assessments, and look at how to write lesson plans with a proper sequence of learning at course, module and lesson level.

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Train the Trainer

Testing, testing!

How do you design a course and create a proper sequence of learning at course, module and lesson level? For newly appointed trainers this can be something of a mystery, although it's not difficult. Start with the objective, then design the tests and assessments that indicate how close someone is to achieving it.

Testing and assessment form the focus of this month's supplement. With these in place, writing and structuring the content then becomes a relatively simple task (and we'll show you some examples of how to do that in October's 'Train the Trainer').

In learning, the purpose of a test is to show what has been accomplished. It is impossible in a short article like this to cover everything you might need to know about how to design a test, so the aim is to give you some guidelines for design and some criteria for judging other people's tests.

Tests *never* come from thin air! They are not the product of a creative imagination inside the head of a training designer. They are a rehearsal for real life. If you have set objectives in which performance, condition, standard and assessment are all clear, then how and what you test will be apparent.

One of the difficulties in working with subject matter experts is their tendency to sit in on a course or read draft material and comment that the questions are too easy! This is subjective feedback. The design or wording of a test alone cannot tell you how easy or difficult it is. Give the same test to solicitors, clerical workers and road sweepers and you can expect different views on how difficult that test is. Ultimately, it is the learner who rules on whether a test is reliable and effective.

For this issue, I'd like to acknowledge the help of two very good friends who have contributed their knowledge and experience – Mike Sleight for his nice and simple template for setting objectives and Bryan Hopkins for his wonderfully clear guidance on best practice in question design.

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Phil Green gives practical guidelines for structuring tests, including writing appropriate questions, then offers advice for giving useful feedback.

Designing measurement and assessment tests

A test result indicates whether the learner has acquired some knowledge that contributes towards the end objective. The result also measures what the trainer has achieved. We have placed much emphasis in past 'Train the Trainer' articles on setting operational learning tasks. This means answering the question: 'What can someone do at the end of learning that s/he couldn't do at the start of the process?' To measure this, we need to test.

The structure of tests

In general an assessment or test item gives you information, poses a question and requires an answer.

Take a look at Table 1, where the example given is a closed problem. The learner selects an answer from a number of (multiple) choices. The answer is therefore given to both learner and tester.

Omitting the answer gives you a half-open problem in which the tester has the solution, but the learner does not. No list of multiple options is given. This type of problem must be well designed. Slack wording may lead learners to wrong answers, then frustrate them because they have been marked down.

If you remove the question element, what remains is an open problem. Learners infer from the ➤➤

Table 1: Structure of tests – an example

We have looked at several methods of repaying a mortgage. You need to suggest the most suitable for Mr Green in the case study we have provided.	Information element
Which type of mortgage will you recommend?	Question element
Endowment mortgage? Pension mortgage? Repayment mortgage?	Answer element

information how to answer the question. You cannot be certain how they will answer. Neither the learner nor the tester has a given answer. Case studies fall into this category.

What makes a good test?

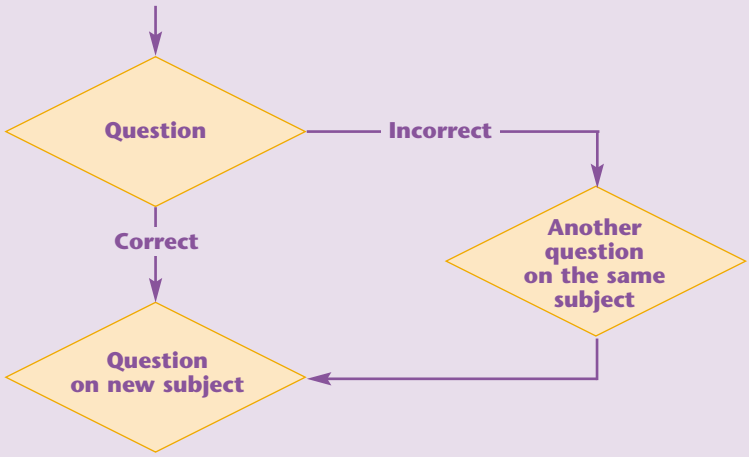
The features and characteristics of a good test are as follows:

- **Questions are based on objectives.** When they are used to test transfer of knowledge and understanding, the questions must relate to an identified objective. Do not include questions just because they are good.
- **The learner always receives some feedback.** You must always give learners feedback to their responses. If there are particular reasons why they should not know whether their answers were right or wrong, give them a 'thank you' message.
- **The learner is in control.** Because tests are important to learners, you must take whatever steps are necessary to reduce learners' anxieties. One source of anxiety is the level of control they have over the questioning. You can overcome this by giving learners the chance to change their answers and letting them review questions they have selected.
- **Tests should be unambiguous.** Tests should make clear how the learner should tackle the problem and under what conditions.
- **Tests should be valid.** Tests should be confined to the content within the lesson.

Types of test

A trainer can look into the eyes of a learner, see distress or confusion and adapt the questions so that confidence is restored. But the trainer is not the only means by which a lesson or assessment can receive mediation. In distance learning, especially when computers are used, there are a number of ways in which tests of knowledge can be presented to increase effectiveness.

Figure 1: Adaptive testing



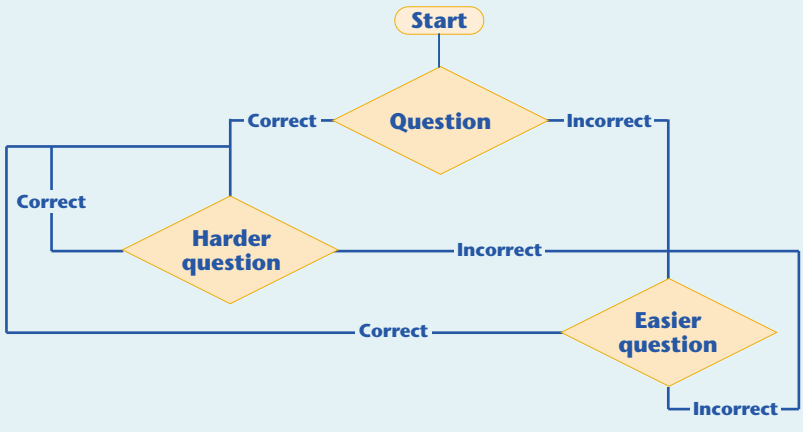
Adaptive tests are programmed to present different questions to different learners. The simplest form of adaptive test is illustrated in Figure 1. If learners answer a question correctly they move on to a question on the next subject. If they answer a question incorrectly, they are asked a second question on the same subject.

A more sophisticated form of adaptive testing is based around an area of research known as **Latent Trait Theory**.[1] Tests using this method have questions banded by level of difficulty. Figure 2 shows the principle of such a test. To start the test, learners are asked a question, which is drawn at random. If they answer it correctly they are asked a harder question. If they answer this question correctly, they are asked an even harder question and so on. If, however, they answer the question incorrectly they are asked an easier question. If they answer that correctly, they subsequently receive a harder one and so on.

Another type of testing is **Admissible Probability Measures Testing** – a form of multiple-choice testing, but in each question there are always three possible answers, A, B and C. Learners mark their response on a template as shown in Figure 3. In this template, 'A' represents the correct answer. If learners are confident that 'A' is correct, they mark the triangle at 'A'. If they are confident that 'B' is correct, they mark that part. However, if they only think that 'A' might be correct, they can mark the triangle at a point along the line from 'A' to 'B'.

The system can therefore classify a learner as well informed, partially informed or misinformed.

Figure 2: Latent trait adaptive testing



The purpose of questions

Questions present users with an immediate decision about a specific problem. You can use questions to:

- let learners check their understanding of the presentation
- test that they do know the content, and direct them through other information as necessary
- stimulate them to think about a subject before exploring it in more detail
- predict how someone will behave in certain circumstances.

The features of a good question

Whatever types of question you use, there are some general guidelines to follow.

- **Make it cover a real objective:** a good question tests an objective that has been identified. Do not include questions because they are fun to administer or easy to write.
- **Check for comprehension, not recall:** avoid asking questions that merely repeat information the learner has just read. Paraphrase the information presented – making the learner apply the information presented to a new application, or making the learner apply the information presented to a more general or specific example are three ways to avoid repetition.
- **Get the reading level right:** in written learning material or assessments, make sure the wording is appropriate to the reading level of the target group. After all, questions are intended to test knowledge of the subject rather than reading ability.
- **Avoid negative words:** questions that ask the learner to identify the incorrect answers are difficult to understand. They are like word puzzles or conundrums, testing the learner's comprehension of English rather than of the subject.
- **Avoid abbreviations:** don't use abbreviations in questions (unless, of course, you are checking an understanding of an abbreviation).
- **Keep questions all on one page or screen:** when you are using a computer, slides or a workbook, make sure the wording of questions and all feedback can fit on to one page or screen. If you need to allow scrolling of the screen or turning to a new page, you must redesign the question.

Types of question

The text that follows looks at some of the different types of question.

Multiple choice

A multiple-choice question is any question that asks the learner to select the correct answer (technically referred to as the key) from a list of possible answers. The great majority of questions used in distance learning are multiple choice. They are invariably found in computer-based tests.

When designing multiple-choice questions here are a few things to bear in mind:

Always number or letter the list

Learners find it easier mentally to sort lists that have easy references, such as numbers (1, 2, 3 and so on) or letters (a, b, c and so on).

Relate the question to an objective

All questions should be related to an objective identified and presented as part of the training.

Provide four or five possible answers

A multiple-choice question can offer, in theory, anything from two possible answers upwards. Of course, with only two answers learners have a 50 per cent chance of guessing the right one, while a large number of answers makes it increasingly impossible to guess correctly, but the question becomes unwieldy both to design and to read. The best compromise is to offer no more than four or five answers.

Make all the choices believable

The hardest part about writing multiple-choice questions is thinking of the wrong answers (usually known as distracters). You should resist the temptation to include a joke answer, which merely increases the user's chance of guessing the right answer from those left.

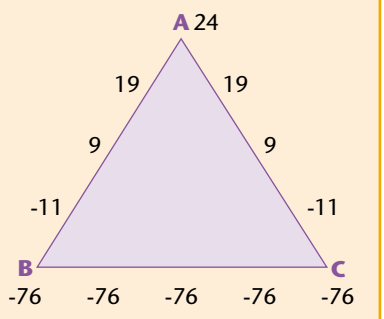
Avoid using 'none' or 'all' as an option

Take a look at the following question.

Which of the following do you pay when buying a house?
1. Estate agent's fees.
2. Capital Gains Tax.
3. Search fees.
4. All of these.

As soon as the learner realises you do not pay estate agent's fees, the 'all' option is not a possible correct answer. The question then becomes a simple alternative response type, with an increased chance of guessing the right answer.

Figure 3: Admissible Probability Measures



Similarly, avoid using the words 'never' and 'always' in a question. Absolutes are very hard to find and learners can think of exceptions, however obscure, why they have good reason to reject the 'never' and 'always' options.

Put answers in alphabetical or numerical order (where appropriate)

When answers are numbers or single words, it is good practice to put them in numerical or alphabetical order. This helps you to achieve neutrality. Tests have shown that we can easily submit to our own internal rhythms so that a pattern emerges and we automatically place the correct answer in locations that ➤➤

fit our pattern. For example, we put the correct answer in position a, b, a, c, d, b, a, then subconsciously repeat the pattern.

The same process works when learners subtly and subconsciously decode these patterns and successfully predict the location of the next correct answer. Using numerical or alphabetical order eliminates this risk.

Multiple correct

It is perfectly acceptable to give learners questions where there are two or more correct answers in a list. This does, of course, mean a correspondingly higher number of distracters. The main issue with using questions like these in a test relates to awarding scores. You need to decide on a scoring scheme that rewards partially correct answers as well.

Additionally, you should be careful about including multiple correct questions within a series of single correct questions. Learners do not always read the instructions and may assume that only one answer is correct!

References

1. Lazarsfield PF, and Henry NW, *Latent structure analysis*, Houghton Mifflin, 1968.

Recommended reading

In this article and throughout previous issues of 'Train the Trainer' I have made several references to the work of Robert F. Mager and Peter Pipe, and to the late Tom Gilbert, the founding father of the concept of performance engineering. For a fuller account of their work, I highly recommend the following titles.

Gilbert, T, *Human competence: Engineering worthy performance*, McGraw-Hill, 1978.

Mager, R, *Measuring Instructional Results: The New Mager Six Pack*, Centre for Effective Performance, 1997 (ISBN 1-879618-15-X).

Mager, R and Pipe, P, *Analyzing performance problems*, Lake Publishing Company, 1984 (ISBN 1-879618-17-6).

Matching

Matching questions are a refinement of multiple-choice questions, effectively combining a number of multiple-choice questions together. These questions generally comprise two lists, the first of which contains what are known as the 'premises' and the second, the 'responses'. As with multiple choice questions, the lists can be made up of text, graphics or audio items. Take a look at the example below.

Who is paid what during a house buying transaction? Match the final payee to the charge.

1. Land registry fee
2. Legal fee
3. Stamp duty
4. Mortgage indemnity guarantee

A. Estate agent
B. Solicitor
C. Building Society
D. Bank
E. Local authority
F. The government

Matching questions can be really useful, as they can test a lot of understanding in a single question. However, they can be rather complex and need careful explanation to the learner. Many of the earlier guidelines for writing good multiple-choice questions apply to matching questions.

Feedback

I've left feedback to last because it is one of the most critical components of a test. Too often, the user is presented with 'Correct' or 'Incorrect' as a response to their answers, which does very little to help motivate the learner. All questions must provide meaningful feedback. Feedback is especially important during practise sessions where it should immediately follow the learner's response. In a testing environment, it may be appropriate to leave the feedback until all questions have been answered. Either way, the feedback that you give should always be:

- positive, not criticising the person for having made a wrong decision
- corrective if a distracter is selected (but avoid making answers to distracters so interesting that learners choose the wrong answer deliberately).

Learning is aided by providing error-contingent feedback. This is where the feedback you provide is different for each distracter, rather than: 'No, that is not correct.' Error-contingent feedback can be developed to the extent of providing remediation exercises. This is where you re-package and re-present information that the learner has already seen. You can do this by changing a graphic presentation to text or vice versa, altering the emphasis or by providing a different type of example.

Finally, we are witnessing a wave of enthusiasm for computerised student management systems to collect information about the learner's progress through the course and to score tests. If you are using such a system, you need to think carefully about the kind of information that is tracked, stored and reported on. It may be tempting to believe this can happen automatically, but the learning manager must specify what data is important. It is all too easy to go overboard and gather so much data that it becomes difficult to handle and ends up being of little practical use. TtT

In next month's 'Train the Trainer' ...

In the October issue, we'll turn our attention to writing and structuring the content and look at how we select the most appropriate learning method for each instructional goal.

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Train the Trainer

Editorial

A common complaint when employees return from training events is that you cannot always be sure what they learned or how it relates to their needs. In the March edition of 'Train the Trainer', we first met Benjamin Bloom's method of sorting performance into three domains: the cognitive, the psychomotor and the affective. Then in August we spent some time thinking about objectives. To recap, the cognitive domain ranges from simple recall of information to complex problem solving. The psychomotor domain includes the skills behind physical activities such as opening a container or moving a box. The affective domain includes attitudes, beliefs, values and feelings such as enjoying or appreciating.

It is fairly easy to set performance objectives for the psychomotor domain – for example, 'the trainee will put on safety goggles and gloves before opening a batch of chemicals'. Writing performance objectives for the cognitive or affective domain is not quite so straightforward.

I have often seen inexperienced trainers produce objectives that are vague, ambiguous and difficult to measure. The events they design are rooted in knowledge, but fail to deal with how that knowledge is applied.

Clear objectives are essential, so I am unrepentant about urging you to put in some more practise at writing them. As a seasoned campaigner who works with trainers in a variety of organisations, I can tell you that the most vulnerable are those who believe their skill with objectives is good enough to get by! Once the learning objectives are in place, the next step is to design a programme of activities – the course.

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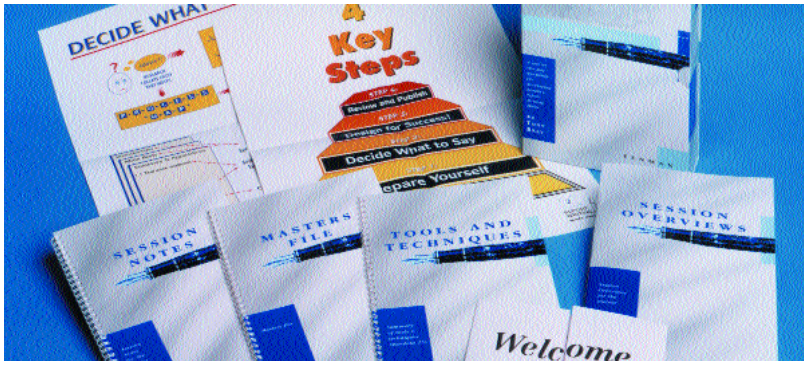
Phil Green looks at how to write and structure the contents of a course, and how to establish the most appropriate method for each instructional goal.

Where, when and how?



Right from the first issue of the 'Train the Trainer' supplement, we have favoured a performance approach to instruction. Now we have arrived at the point of designing instruction, let's revisit the steps that have brought us here and preview those we are yet to take.

Step 1: Analyse a performance gap.
Step 2: Draft objectives and design tests of skill and knowledge.
Step 3: Conduct goal, task and target group analysis for your course.
Step 4: Select methods and media for your course.
Step 5: Define the roles you might perform (trainer, presenter, facilitator, coach and so on).
Step 6: Draft a lesson plan for your course.
Step 7: Plan course logistics (procedures, preparation, post-course support).
Step 8: Design evaluation forms for your course.

Well-organised trainers capture their thoughts, ideas and intentions in lesson plans. A lesson plan is a road map for a course. In essence, it shows the various things that will happen during the course (the activities) and in what order they will occur (the structure). The goal for any lesson (course) is for learners to master specified objectives within the time and conditions available. You may draw upon a whole range of resources, some of which are currently in existence and some of which must be designed. As you work through each step in the plan, you will be making decisions on the methods and media that you will use for the various activities that comprise the lesson.

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Selecting methods and media

When we talk about methods, we mean the types of activity, events or interactions that constitute a module or course. Media, as the name suggests, describes the learning aids such as videotape, overheads, handouts and any other materials that are used to support learning. There is a great panoply of methods and media open to the trainer. Table 1 lists some examples.

Table 1: Methods and media

Methods	Media Lecture
Lecture	Pre-recorded video (including CDI and DVD)
Role play	Audio tapes
Team working	Games and simulations
Individualised instruction/ coaching	Case studies
Demonstrations	
Discussion groups	
Project work	
Site visits	

Often it is not what is best for learners, but a combination of the trainer's own confidence and the availability of resources that determine the selection. So how do you decide the best strategy? If you have done a proper job of writing performance objectives, the verb will suggest the most obvious method and media. Let's return to Bloom's work (which we referred to in the Editorial). He draws a distinction between low and high levels of mental performance. You can build 'low levels' (recall) through passive learning methods like 'chalk and talk'. However, learners must become involved in some sort of action if they are to reach higher levels of mental agility (analysis and evaluation). Strategies for imparting knowledge might include lectures, questions and answers, workbooks and guided reading, audio/visual, demonstration and observation.

Low levels of mental performance are usually assessed through some sort of quiz – oral or written. Testing higher order skills such as problem solving and judgement requires a different approach. You cannot use a quiz to judge someone's ability to argue or criticise! Assessment must connect with the conditions and standards of the objective. For example, when your goal is to instruct someone in how to analyse a set of circumstances, then you will almost certainly be drawn towards 'On-the-job training', 'Practice through activity' or 'Learn by doing' strategies.

A well-conceived programme of learning will start with low-level knowledge and build up to higher order skills. Take, for example, a course for mortgage advisers. The learning objectives might include the following.

Low level	● Describe the characteristics and features of an account and compare it with the product of particular competitors.
	● Apply the rules and procedures to be followed in order to set up an account for various customers with distinctive needs.
High level	● Resolve the issues and difficulties that particular clients have with these accounts.

Examine the verbs in the objectives you write for your courses, then refer to Table 2. In the left-hand column are the groups of actions connected with 'thinking processes' (Bloom's cognitive domain). The right-hand column suggests suitable learning strategies dependent upon where you have placed your verbs (see the examples in the middle column). If all the verbs in your learning objectives fall in the knowledge and comprehension category, then you'd better check that you are really meeting all the performance objectives that your learner needs to attain.

The suggestions in Table 2 are not meant to be prescriptive, nor are they exhaustive. In our earlier example, mortgage advisers must learn to present the most suitable product to an enquiring customer. Their programme might be a rich mix of learning activities in the classroom (through tutorials and role play) and on the job with actual customers. The instructional strategies might include a workbook to guide the process of finding out about product features from various sources of information. It might be practical to do a presentation or guide a discussion, with a quiz at the end. You might have learners observe an experienced adviser in action (live or on video) in order to get a good view of the whole process of matching customer needs to product features. You might then follow this with practice sessions so the learner can have a go at actually performing the job under the guidance and coaching of a high performer.

Table 2: Bloom's cognitive taxonomy

	Cognitive domain	I need the learner to:	Examples of suitable methods and media
LOW LEVEL	Knowledge	Recall information. Appropriate verbs: memorise, name, order, recognise, relate, recall, repeat, reproduce, state.	• Lecture • Reading • Audio/visual
	Comprehension	Interpret information in his or her own words. Appropriate verbs: classify, describe, discuss, explain, express, identify, indicate, locate.	• Discussion • Observation • Case studies
	Application	Use knowledge in a novel situation. Appropriate verbs: apply, choose, demonstrate, dramatise, employ, illustrate.	• Role play • Observation • Case studies
	Analysis	Break down knowledge into parts and show inter-relationships. Appropriate verbs: analyse, appraise, calculate, categorise, compare, contrast, criticise.	• On-the-job-training (OJT) • Practice by doing • Simulations of job settings
	Synthesis	Bring together parts of knowledge to form a whole/solve problem. Appropriate verbs: arrange, assemble, collect, compose, construct, create, design.	• Real-life situations • Games/Role playing • Simulation of job settings
HIGH LEVEL	Evaluation	Make judgements on the basis of criteria. Appropriate verbs: argue, assess, attach, choose, compare, defend, estimate, judge, predict, rate.	• Trial and error • Mentoring • Coaching

The lesson plan

We have defined the lesson plan as a map to chart the key points of a course. There is no perfect model. It has to serve more than one purpose: to guide the trainer in what to prepare and what to do in the learning environment, and to inform the training manager (or customer) as to what will be covered by your course. As a preliminary to writing the detailed lesson plan, there are a number of issues you should consider, as outlined below.

Issue 1: Title

What is the title of your course or programme? Titles are very revealing. If you have difficulty in coming up with one, or if it is vague and woolly, then that says something about the clarity of your understanding of the performance problems your course will attempt to resolve.

Issue 2: Purpose

Be clear about the overall goal for your training. Do you have to conform to an industry or company standard? Reflect on the high level goals and performance indicators of your business – if they have not directly driven the need to supply this training, then what particular business objectives will this lesson support?

Issue 3: Objectives

We have already said a great deal about the importance of objectives. Remember that here we are talking not about activities that will be used in the lesson but about the learning outcomes of those activities. Keep in mind the learner's level of ability.

Issue 4: Resources

Draw up a list of resources and make it as prescriptive as you can. You should go to the level of detail of reference material, handouts and even paper, markers and paper clips. Anyone else using your plan will know at a glance what materials are required.

Issue 5: Benefit

You need to plan how to introduce the topic and develop interest and involvement among learners. This is a sales gambit, and successful sales people always prepare a powerful opening benefit statement. Likewise you need to 'sell' the benefits to reluctant or anxious learners.

Issue 6: Procedures

Now you need to write the stepwise procedures that will be performed to reach the objectives. You don't have to detail every word that will be said, but you should list the relevant actions the trainer needs to perform – for example, ask about …, distribute … and set up … . Some key points to consider are:

- get off to an interesting start
- remember to present facts, examples and arguments that will best get the objective achieved
- present a logical flow of argument
- give supporting examples and evidence
- summarise from time to time
- test transfer of knowledge throughout the course
- for skills training, model the desired outcome – that is, show how it should look when the task is performed to standard
- use language that fits your knowledge of the audience
- eliminate 'nice to know' material.

Issue 7: Practice

Allow ample time for practice and feedback alone, in pairs or in groups.

Issue 8: Closure

How will you bring the lesson to a close?

- Return to your opening benefit statement, and reinforce the value and application of this learning.
- Review the main points.
- Re-emphasise the overall message. Call for action.

Issue 9: Assessment

Learning is not an event; it is a journey from one state to another. The starting point is current knowledge, skills and performance. The end point is desired knowledge, skills and performance. The end assessment must reflect this transition. Assessment must be specific and an integral part of the original objectives.

Issue 10: Special needs

Be aware of learners with special needs such as physical difficulties or learning disabilities. Also be aware of fast learners! You may need to prepare alternative activities to break things down for slow learners or to speed things up for others. Here let me mention the work undertaken by Ron and Susan Zemke, who are prominent in the field of human performance technology in the USA. They have put together some excellent guidance regarding the characteristics of adult learners. It has great relevance to your approach to learning. Their advice is summarised under three headings: 'Motivation to learn', 'Curriculum design' and 'In the classroom' (for details refer to 'Reading and weblinks' on page iv).

Issue 11: Connections

In August's 'Train the Trainer', we spoke about course maps. You should create one (if the course is part of a wider curriculum) to show how the lesson fits in with other subjects.

Every trainer has his or her own particular method for creating lesson plans. I like to use icons that represent each type of activity. In this way, I can immediately tell how much variety I have built into a lesson. Others prefer a less artistic approach. I've even seen lesson plans in the form of mind maps. If you are new to the business of training then you might want to start with something straightforward and simple. I have given an example in Table 3 (next page). TJ

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Table 3: Example of a simple lesson plan for a session on leadership

TIMING	CONTENT	METHOD	RESOURCES
9 am Welcome and Introduction	Introduce yourself, and provide a brief overview of the course. Deal with any domestic and health and safety information.	Trainer input	OHP and handout: 'Course objectives'
9.10 am Activity	Invite participants to introduce themselves to each other.	Plenary	
9.15 am Ice-breaker	Form group into four teams. Hand out instructions.	Team exercise	Handout: 'Who am I?'
9.30 am Presentation	Introduce the module, explain the objectives and the benefits.	Trainer input	OHP and handout: 'Module 1 objectives'
9.45 am Activity	Invite participants to identify the key attributes of a successful leader.	Plenary	Flipchart
10 am Activity	Introduce and run video. Then summarise the five leadership styles.	Trainer input	Video: 'Leadership styles'
10.30 am	COMFORT BREAK		
10.45 am Exercise	Distribute copies of 'Leadership style inventory'. Issue instructions for completing the instrument. Invite each participant to share the results.	Individual exercise Plenary	Handout: 'Leadership style inventory'
11.45 am Activity	Form group into pairs. Hand out copies of recent newspapers and magazines. Instruct participants to identify at least two leaders and the style of leadership they display. Lead a discussion on the strengths and weaknesses of each of the five styles.	Pair exercise Plenary	Recent magazines and newspapers
12.20 pm Summary	Reinforce the main discussion points. Summarise the role of leadership, the five styles, and the strengths and weaknesses of each style.	Trainer input	
12.30 pm	LUNCH		
1.30 pm Activity	Instruct participants to identify five work roles and explain which leadership style best suits each role. Share results with the group.	Individual exercise	Writing pads/pens
2 pm Activity	Form group into pairs. Instruct each pair to assume a leadership style that is not their own. [illegible] turns, each participant will [illegible] their partner using the [illegible] Invite each	Pair exercises – role-play	Handout: 'Characteristics of leaders' Handout: 'Role-play instructions'

Reading and weblinks

Principles of Instruction Design	Gagne & Briggs	ISBN 0030347572
Producing Instructional Systems	A.J. Romiszowski	ISBN 185091012X
Study: A Guide to Effective Study, Revision & Examination Techniques	Robert Barrass	ISBN 0412256908
Taxonomy of Educational Objectives (cognitive domain)	Benjamin S. Bloom, Bertram B. Mesia, and David R. Krathwohl	ISBN 0582280109
Taxonomy of Educational Objectives (affective domain)	Benjamin S. Bloom, Bertram B. Mesia, and David R. Krathwohl	ISBN 058228239X
Making Instruction Work	R.F. Mager	ISBN 0749405929
What Every Manager Should Know About Training: Or I've Got a Training Problem & Other Odd Ideas	R.F. Mager	ISBN 1879618087
Developing Attitude TowardLearning: Or Smats 'n' Smuts	R.F. Mager	ISBN 1879618052
30 Things We Know For Sure About Adult Learning	Ron and Susan Zemke	www.hcc.hawaii.edu/intranet/committees/ FacDevCom/guidebk/teachtip/adults-3.htmhttp://www.nwlink.com/~donclark/hrd/strategy.html

In next month's 'Train the Trainer' ...

We have been talking about writing and structuring the content of courses, and have placed much emphasis on clear objectives as the key to success. Next month we will square the circle by looking at evaluation.

'Train the Trainer' is a supplement to *Training Journal*, a Fenman publication. Clive House, The Business Park, Ely, Cambridgeshire CB7 4EH. Publisher and managing editor Martin Delahoussaye (tel) 01353 665533

TIMING	CONTENT	METHOD	RESOURCES
9 am **Welcome and Introduction**	Introduce yourself, and provide a brief overview of the course. Deal with any domestic, and health and safety information.	Trainer input	OHP and handout: 'Course objectives'
9.10 am **Activity**	Invite participants to introduce themselves to each other.	Plenary	
9.15 am **Ice-breaker**	Form group into four teams. Hand out instructions.	Team exercise	Handout: 'Who am I?'
9.30 am **Presentation**	Introduce the module, explain the objectives and the benefits.	Trainer input	OHP and handout: 'Module 1 objectives'
9.45 am **Activity**	Invite participants to identify the key attributes of a successful leader.	Plenary	Flipchart
10 am **Activity**	Introduce and run video. Then summarise the five leadership styles.	Trainer input	Video: 'Leadership styles'
10.30 am	**COMFORT BREAK**		
10.45 am **Exercise**	Distribute copies of 'Leadership style inventory'. Issue instructions for completing the instrument. Invite each participant to share the results.	Individual exercise Plenary	Handout: 'Leadership style inventory'
11.45 am **Activity**	Form group into pairs. Hand out copies of recent newspapers and magazines. Instruct participants to identify at least two leaders and the style of leadership they display. Lead a discussion on the strengths and weaknesses of each of the five styles.	Pair exercise Plenary	Recent magazines and newspapers
12.20 pm **Summar y**	Reinforce the main discussion points. Summarise the role of leadership, the five styles, and the strengths and weaknesses of each style.	Trainer input	
12.30 pm	**LUNCH**		
1.30 pm **Activity**	Instruct participants to identify five work roles and explain which leadership style best suits each role. Share results with the group.	Individual exercise	Writing pads/pens
2 pm **Activity**	Form group into pairs. Instruct each pair to assume a leadership style that is not their own.	Pair exercises – role-play	Handout: 'Characteristics of

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vided. Invite each

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Train the Trainer

Why evaluate?

Some delegates go to a training course at a nice hotel in Hastings. When they return to work, their line manager asks: 'How was lunch?' The answer comes back: 'The food was poison; and such small portions, too.'

If this raises a smile, perhaps the real joke is not in the answer but in the question. In many organisations people regard training as a kind of holiday, removed from the pressures of the daily routine. Value is measured in much the same terms as you might judge the success of a holiday – great hotel, wonderful food, wish you were here. Of course, the more enlightened and sophisticated trainer knows better. Muttering sagely about levels 2 and 3 evaluation, he pours scorn on those who still rely on 'reactionnaires'.

So what should we evaluate and why? It seems there are far more questions than answers: 'What are we trying to find out and for whose benefit?', 'What does training cost and is it worth it?', 'Who says and where is the evidence?', 'Is it the performance of trainees or trainers we need to scrutinise, or is it the training department?', 'Do we need to judge the effectiveness of a particular training course or materials, or even training in general?' Then what are we trying to achieve – modify behaviour, adjust attitudes, improve job performance, eliminate errors, increase sales, raise quality? Perhaps it is efficiency that counts? Can we reduce the time that training absorbs? Can we make better use of on-the-job training or job aids instead?

Evaluation is a poser for those with an interest in training, made all the more difficult for those who leave it to the end as if it were some kind of optional addition to the main menu.

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Phil Green takes you on a voyage through some of the reasons for undertaking (and perhaps for avoiding) evaluation. He finishes with an excursion to one or two common models that provide a framework for doing it.

The results of training

The question 'Why ever evaluate training?' invites other questions in turn: 'Who wants to know what?', 'Who's going to find out?', 'How will the findings be used?' Training managers have a customer–supplier relationship with course delegates. They may wish to prove cost-effectiveness and ensure that trainees react positively to the product they supply. They may prefer not to know how much or how little that roadshow, away-day or video has added.

But put yourself in the shoes of the corporate operations director. You are due to introduce a new multi-million pound IT system. If the implementation goes belly-up, your job will be on the line. The new system radically alters how your employees gain information and do their jobs. Of course, training can't hurt. People have to overcome their resistance and get to know how to perform new and different procedures. But past experience has taught you two things.

1. Every new system creates problems at roll-out.
2. Sooner or later, even untrained staff work out for themselves how to do jobs. You might accept some short-term errors, but your colleagues may not tolerate the financial and political flak while people learn through trial and error, and time is short.

So, will you buy training? If so, how much and at what cost? You'll weigh up the risks to your personal status, your career ambitions and various other factors. You could call in that nice team of consultants you met last week and get them to do a proper, formal evaluation. But what if the money you spent on training is shown to have been wasted? Why not play safe and make some calls, asking a few token questions? Training is an insurance policy – protection rather than intervention. As long as no one can say the absence of training got in the way of the success of the implementation.

What else discourages training professionals from conducting a proper evaluation? Trainees go their separate ways at the end of a course, which makes it difficult to follow-up and track their accomplishments; it's hard to identify small changes in skill and job behaviour; and it is hard to assess the value of adjusting attitudes.

Most difficult of all is the quest for proof that accomplishments are due to the influence of training. If your goal is to increase sales, how do you disentangle the beneficial effect of training from all the other factors that contribute – ➤➤

Table 1: Why turn to training?

- Training builds skills.
- Training builds teams.
- It can result in certification, accreditation and licensing.
- It creates a community based on some shared experience.
- It focus energy on issues.
- It identifies the best talent.
- It inducts new staff.
- It imparts knowledge and information.
- It legitimises issues.
- It raises the profile of work and issues.
- It promotes change.
- It reduces risk.
- It rewards performance.
- It supports other initiatives.

management, commission rates, lead generation, product development and so on. On the other hand, why should you try? R&D departments don't have to prove the return on investment of every single penny spent, so why should training?

What types of result does a business demand of training? We have stressed that training is a management tool, the purposes of which are many and varied. You might care to draw up a quick list of reasons why your organisation turns to training. My own list of purposes is shown in Table 1.

For the organisation that foots the bill, you might expect all of these purposes to be about business improvement. Building skill and knowledge may be part of a strategy to reduce waste caused by errors and defects – a performance problem. The financial value of reductions in errors, defects and waste provides the measure of the value added by training. (We'll come back to that later, when we look at popular models of evaluation.)

Well it can't do any harm, can it?

The good news is that investment in training and learning does seem to predict corporate financial performance. In the mid-1990s, an American study[1] compared corporations. One group invested an average of US$900 per employee on learning; the other invested just US$275. The results showed that high investors in training had 57 per cent higher sales and 37 per cent higher gross profits per employee than lower investors. There was also a more positive effect on behaviour and attitudes.

Still there is no neat answer to the question: 'What and how should we evaluate?' Training is often about prevention rather than cure. If you invest in a course whose aim is to prevent accidents, how can you ask: 'What business results did we achieve?' If you buy a package to protect staff from exposure to attempts of fraud or money laundering, how can you truly measure the value that training has added? The paradox is that the only way to prove the value of such pre-emptive training is to stop doing it for a while, then assess the carnage!

What gets measured is what gets done

Leading computer manufacturers measure success by how often their systems crash. Distributors of products and services track customer delight. A low-fare airline focuses on the cost of making a seat available for sale – marketing, maintenance, fuel. It measures volumes of business from existing customers and personal recommendations. If you were responsible for training in this organisation, you'd probably want to show how you had contributed to these factors, too.

Every organisation has its essential indicators of success against the background of its ultimate goal. Even the world of education, with its increasing commercial awareness, has to be clear about the values that make it stand out against its competitors. John Quelch, Dean of London Business School, says: 'We're not in the education business. We're in the transformation business. We expect everyone who participates in a programme – whether for three days or for two years – to be transformed by the experience.' And so one year after students leave, and every five years from then on, a questionnaire asks them whether they recall the programme's content, whether they have they kept in touch, and how big an impact the programme had on their careers and their quality of lives. You see, evaluation can be a very long-term affair.

Clearly, you would not measure the same effects in each of the organisations mentioned above. When evaluating you should ask three questions: 'What matters?', 'What gets measured?' and 'What gets done?' The results required of training are as diverse as the purposes for doing it.

Why organisations invest in training

With all this variety and complexity, you might be attracted by the idea that there are really only four reasons why any organisation invests in training.

1. 'To spend' is about the allocation of an annual training budget. The training department makes a saving by preferring one method, or one supplier, to another; success is then measured in terms of cost saving rather than performance improvement. These organisations allocate and probably pay for resources before they can embark on a programme. It is vital to express the intended outcomes before the training, not after. In a John Le Carré novel, a character remarks: 'You know, a desk is a very dangerous place from which to watch the world.'[2] This is every bit as true for trainers as it is for spies!

2. 'To mend' is simply to fix specific problems such as loss, waste and inefficiency.

3. 'To bend' is to ease the changes that a business is going through. How is it changing shape? What new markets is it exploring? What new buildings, systems or staff is it considering?

4. 'To defend' is about forestalling problems like preventing accidents and injuries, fines or sanctions.

So what does this mean for you, the trainer? Well simply this: if your business is done from behind a desk you can forget about

evaluation; go out and talk with the people at the coal face, and there you'll find the answers to who should measure what and when.

How to do it

We could devote an entire series of articles to the most popular models for undertaking evaluation. Sooner or later we would be bound to mention the Kirkpatrick model.[3] Over the past 49 years many words have been written on this topic and there can be very little to add, so I'll be brief. In Figure 1 you can see five points at which to make an assessment.

1. Before training.
2. During training.
3. After training or before entry (re-entry).
4. In the workplace.
5. Upon exiting the workplace.

The other four elements of Kirkpatrick's original framework (also shown in Figure 1, and explained in more detail below) are reaction, learning, behaviour and results. (Others who came after Kirkpatrick – in particular Cronbach (1969) and Goldstein (1993) – suggested an additional element, 'ultimate value'.)

Reaction
This may best be defined as how well the trainees liked a particular training programme. Reactions are typically measured at the end of training – at point 3 in Figure 1. However, that is a summative or end-of-course assessment and reactions are also measured during the training, even if only informally in terms of the instructor's perceptions.

Reaction is a soft measure, but none the less important, especially to those who take part! Many factors – content and method, other trainees, training context, location, success on assessment – have an impact on how well training is received. Reactions may swing during a programme, so you must decide when and how often to take soundings.

Learning
You may measure what trainees know or can do at the end of training, but in order to show progress, you must establish the trainees' level of knowledge or skills at points 1, 2 and 3 in Figure 1 – before as well as during and after training.

Behaviour
Any useful changes in behaviour must take place on the job. Changes that begin during training may or may not transfer to the workplace, so it makes sense to assess behaviour at the end of training (point 3) and back at work (point 4).

Results
Kirkpatrick gave examples such as '… reduction of costs; reduction of turnover and absenteeism; reduction of grievances; increase in quality, quantity or production; or improved morale which, it is hoped, will lead to some of the previously stated results'.[4] These effects are measurable in the workplace, as you will see at point 4 in Figure 1.

Performance: a crucial factor

There is a fundamental difference in Kirkpatrick's fourth element. The first three centre on the trainees and the fourth shifts the focus to organisational benefits.

Management probably has little interest in reaction, except in so far as it keeps team motivation high. Whether the training has raised job performance is the most crucial factor.

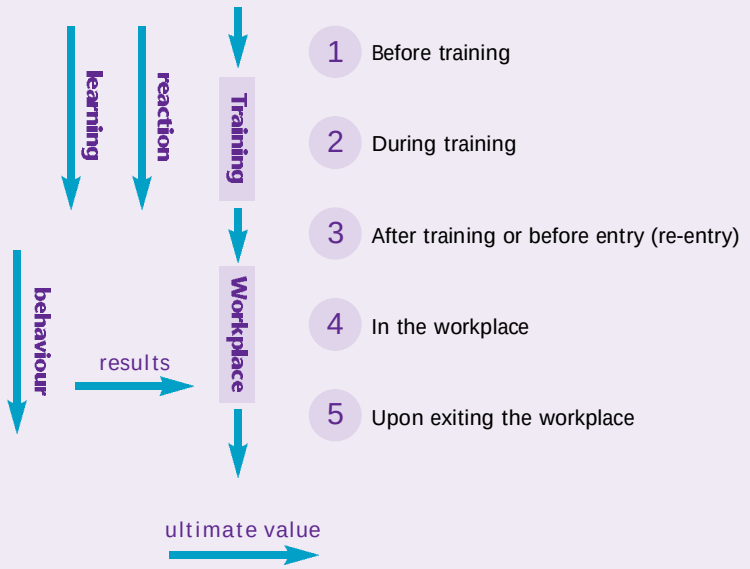
Learning is not the same as performance. But as we have mentioned, it's generally impossible to prove that performance is due to learning and not to other effects. We tend to measure learning just once at the end of a course. But there is powerful evidence that some knowledge and skills decay rapidly over time. The Ebbinghaus Curve suggests that as much as 90 per cent of new learning is forgotten after 30 days, and 100 years of observation has done nothing to discredit that assertion.[5]

The ultimate value of training

In due course, change in a learner's job behaviour should benefit the organisation and is generally judged by its financial effect. But evaluating Return on Investment (ROI) can itself be a costly process. It would not make much sense to let the cost of evaluation exceed the financial return from the training.

Evaluation should not be confused with validation. Internal validation is a series of tests and assessments to ascertain whether a training programme has achieved the behavioural objectives specified. External validation is a series of tests ➤➤

Figure 1: The structure of training evaluation



and assessments intended to determine whether behavioural results of an internally recognised programme are practically based on an initial training needs analysis linked to the organisation's criteria of effectiveness.

Evaluation is undertaken against the same backdrop of needs and objectives that shaped the design of the training programme. A training manager may procure further training on the basis of a trainee's scores in a training programme. A training administrator may want to look at practical issues such as whether the trainers, the equipment and trainees have kept to schedule, and whether unforeseen problems occurred. Costs must form part of any attempt to measure ROI. Planning and analysis, design and development, equipment, pilot testing, tutors salaries, trainee costs, evaluation costs, buildings and so on all enter into the equation.

As we have seen, Kirkpatrick's framework suggests when you should collect data. We tend to test for reaction during or at the end of training, but why not test again when the trainees have been back at their jobs for a while? Not only will the rosy glow of the moment have faded, but also, if someone other than the trainer is collecting the feedback, a more thoughtful and objective response might emerge.

If you compare the feedback you gather during training (point 2 in Figure 1) with feedback in the workplace, you might gain insight into how closely the training environment matches or resembles the workplace environment. This, in turn, suggests how likely it is that so-called 'transfer of training' will take place.

Table 2: The CIRO framework for evaluation

C = Context evaluation
Obtaining and using information about the current operational context in order to determine the gap that training might help to bridge.

I = Input evaluation
Obtaining and using information about possible training resources in order to choose between alternative 'inputs' to training.

R = Reaction evaluation
Obtaining and using information about trainees' expressed current or subsequent reactions in order to improve training.

O = Outcome evaluation
Obtaining and using information about the outcomes of training in order to improve subsequent training.

Table 3: The Bell system approach to evaluation

A: Reaction outcomes Similar to Kirkpatrick

B: Capability outcomes What will trainees know, think, do or produce by the end of training?

C: Application outcomes How will trainees knowing, thinking, doing or production show itself in the real world?

D: Worth outcomes What is the balance between the costs and beneficial effects of training?

Other models

Over the past 40 years many other models of evaluation have hit the streets. Most are Kirkpatrick derivatives. Table 2 shows how the CIRO framework works.[6] The Bell system approach has four levels, as outlined in Table 3. Powerful corporations with massive training budgets have their own versions of the evaluation model.

Conclusion

We have taken a trawl through the seas of evaluation. We have stopped at ports called 'too hard', 'too risky', 'too little', 'too much' or 'too late'. We have considered the moments at which to take soundings. We have given thought to who the various customers for evaluation are and how their needs differ. We have seen how the reasons for evaluating training are closely tied in with the purposes for the training being evaluated. So to summarise, below are the evaluation needs you should consider.

- The purposes of the training (in which context you should refer to the purposes of your organisation).
- The purposes of the evaluation.
- The audiences for the results of the evaluation.
- The moments at which we will take measurements.
- The timeline.
- The overall framework.
- The conundrum that you cannot isolate the training effect from other effects.

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3. Kirkpatrick, Donald L. *Evaluating Training Programs; The Four Levels*, ASTD, Berret-Koehler, 1998.
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Additional reading

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In next month's 'Train the Trainer' ...

In December we'll pick up some of the issues that trainers we know meet day by day. We'll face some of the obstacles that make it more of a challenge to follow the 'primrose path' we have planted in this series.

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Train the Trainer

The last farewell

Before I start the final part of 'Train the Trainer', I'd like to thank my friend Martin Delahoussaye for his skilful contribution in keeping the content from wandering off the point. I hope the USA is ready for him!

This is issue 12 of 'TTT', and if you've read them all, you may be feeling that there are more questions than answers. As Bobbie said when I visited her last week, 'It's all very well in theory, and it's helped me with my IPD, but in real life things don't always go according to the script.'

'Who is Bobbie' I hear you ask? She is the newly appointed training manager of a manufacturing company and, having closely followed the 'TTT' series, she took the opportunity to comment on the content of the supplement.

We sat together in the splendid surrounds of a war-time Nissen hut, the Queen's Award for Industry (1962) nailed to the wall beside some wonderfully curled and faded letters from grateful charities dated 1968 and 1974. Reflecting the sentiments of Louis XIV with his historic *'L'état c'est moi'*, Bobbie declared: 'I *am* the training department!' She talked and I listened …

In her State of the Union, she tackled me first about the January supplement: 'What is effective training?' I delivered my answer (which you can see opposite), but she proceeded with queries and analysis relating to February and March ('How do you approach analysis?'), April ('Design, development and method) … and so on throughout each of the supplements.

Having given my responses, I took one last look around and got ready to leave. But I noticed that something had changed since the last time I had been in the Nissen hut. Behind the typist's chair with the torn red leatherette covering was a new bookshelf. I noted down the titles, and have reproduced them on page iv. In your pursuit of training excellence, I hope you find them useful. Farewell for now …

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Phil Green takes a final opportunity to reflect on the content of his supplements throughout the year as he aims to alleviate the concerns of any newly appointed training manager – whose spokesperson on this occasion is the formidable Bobbie.

Bobbie's 'State of the Union'

JANUARY
'What is effective training?'

Bobbie: In January, you wrote about the changing nature of work. You quoted Peter Drucker: 'What business are you in?' and 'How's business?'. I can give you my response to that. This manufacturing company has not changed since 1952. We're still using the same processes, the same machinery and some of the same people. We don't have computers on desktops and there wasn't a training department before October of last year, when I joined. The business we are in is 'survival', and we're only just 'hanging in there'. You also spoke about 'andragogy'. What's that all about?

Phil: Let me take you back to the question on the last page of January's supplement. 'How do (or will) you know you are doing a good job as a trainer?' Someone in this organisation has been sufficiently aroused to create the role of 'trainer' for the first time in 50 years. You don't seem to be very clear about what the business needs you to deliver. I suggest you have a chat with the boss before he takes his needs to someone else. You asked about andragogy – usually defined as the way adults learn. The word has come to be used as an antonym for pedagogy and refers to learner-centred education for people of all ages. It dwells on five issues in formal learning.

- Letting learners know why something is important to learn.
- Showing them how to direct themselves through information.
- Relating the topic to their experiences.
- Recognising that people will not learn until they are ready and motivated.
- Helping them to overcome inhibitions, behaviours and beliefs about learning.

Even Malcolm Knowles,[1] whose work is associated with the term, agrees that all but the last of these key issues apply equally to adults and children. Children have fewer inhibitions and pre-established beliefs than adults and thus have less to unlearn.

Learning should let adults acquire new knowledge and abilities, and thus allow them to move from novice to expert. Learning should also build their brains so they have the capacity to learn even more. It may suit trainers to do the same things in the same way over and over again. Our present experience and background is the starting point for new ideas, but the needs of the learner may be the last ➤➤

consideration. Content may not lend itself easily to presentation in a different way. It may suit the organisation to continue fire fighting rather than thinking about improving processes and learning how to avoid crises in future.

Organisations expect people to learn despite the obstacles put in their way. Learners must have respect, relevancy, immediacy, safety, praxis (action with reflection), engagement and active participation.

FEBRUARY/MARCH: *'How do you approach analysis?'*

Bobbie: All right. But in February and March you gave us that Performance Engineering Model. You talked about using performance analysis and training needs analysis to lead to a cocktail of solutions. To tell you the truth, I can't get near people on the shop floor. It's always too frantic on a shift and anyhow it's too noisy to hold a conversation with anyone.

Phil: Remember the five Ws: 'Who?', 'What?', 'Why?', 'When?' and 'Where?'. In an ideal world, you'll go on to the shop floor and observe, ask questions, shadow people and challenge your long-held views of the way things are. In the real world that you inhabit, you may have to begin with coinciding with lots of tea breaks and getting in the pub at the end of a shift. As an absolute minimum you should at least reflect on the likely answers to the five questions. I know you face some difficulties and there are bridges to build. If you tell yourself now that there is no chance of following the systems approach to identify performance gaps, then your instructional strategy is going to be hit and miss. In May, I introduced you to the idea of a self-fulfilling prophecy. Here you are telling me you haven't time, space, support or budget for analysis. A self-fulfilling prophecy, do you think?

APRIL *'Design, development and method'*

Bobbie: We use job aids all over the place. People have been here for generations, and have created and gathered their own. And don't talk to me about operational practices and procedures. Have you seen our manual? It was last used in 1977 – and that was to support the Union flag for the Silver Jubilee. As for resistance to change, I think you can describe us as stable to a fault.

Phil: I'm really not arguing for revolution. Training is a tool to help Management achieve its objectives. It is not there to define or refine them, although this may happen as a useful by-product of analysis.

If your procedures are unclear, or if they are not documented, then as you design training and performance support, you may quite validly produce quick reference and technical documentation material too. You have to be pragmatic and take account of the culture and resources of the business you are in.

As for job aids, if people are producing their own, doesn't that indicate a need? You would hope that technical and operational managers would document procedures. But maybe the best support you can give is to gather them up, dust them off and make the best of them more widely available.

Table 1: Questions to ask yourself before designing or running a training session

- What kind of people make up the target group?
- What do they need?
- What environment do they work in?
- What are their problems at work?
- What can I do to help them solve these problems?
- What mental and practical learning tasks must I set in order to satisfy the needs of these people and of my employer?
- How should I put the course together?
- What teaching methods and media should I use to complete the learning tasks that have been identified?

MAY *'Motivating the learner to learn'*

Bobbie: I was thinking about that four-point theory about how trainers with positive expectations get the most out of trainees. Hardly rocket science is it? But basic needs in this part of the world amount to pay day, the boozer and bed. For most, the learning process ended at 14 when they left school.

Phil: Of all the objections you have raised so far, it is this one that worries me the most. I'm glad that you can see the significance of building a positive expectation in order to get the best out of people. But haven't you just expressed a very limiting picture of the interests and abilities of those you work with?

When I was a boy at grammar school I was a nuisance to my teachers. I had little interest in what was on offer. The options available and the manner in which they were taught led me into regular and sometimes painful confrontations with authority. Later, in my roles as teacher, head teacher, corporate training consultant and parent, I met many with problems in learning similar to those of my own adolescent days.

As my own children and their friends have been processed through the education system, I have watched the same conditions develop. They enter school keen to learn, but later become anxious, troubled and discouraged. Teachers in further education and trainers in the workplace lower people's expectations through negative reinforcement and lack of professional commitment. I am convinced that many bright people learn despite the system, and not because of it.

You might think the link between knowing, learning and teaching is obvious. It is a system that ignores natural interests and so stifles the learner's motivation. Motivation, relevance, encouragement and respect for learners form the crux of the matter for all learning. Think about how these might affect the range of opportunities you are offering your people and your inner beliefs about all they can achieve.

Please read May's 'TTT' again and compare your approach with Ben Zander's.[2] Remember that with a clear goal, positive reinforcement, high expectations and strong self-belief, everyone gets an A.

JUNE
'Experiential learning'

Bobbie: I laughed to myself when you wrote about factors affecting learning, especially when it came to the influence of our past experience and completing the learning cycle. Most of our people, even up to senior management, have been schooled in 'hard knocks'. That's their version of experiential learning. As for Accelerated Learning, if I put Mozart over the tannoy instead of Wogan, it would blow their multiple intelligences sky high.
Phil: I'm glad you found it amusing; it obviously has stimulated at least one of your own multiple intelligences. I too am a fan of the 'University of Life, Faculty of Hard Knocks'. Isn't that just an agreement that learning is not just something that happens in classrooms?

Often in the classroom I ask that participants each tell me something they have learnt recently. Some years ago I made this same request to a group of students, many living away from their parents for the first time. At first they spoke of learning various facts such as grammatical rules or events in literature. Suddenly, one woman told me she had learned that a Brillo pad will scratch a plastic bathtub. Another told me he had learnt the location of the best Chinese takeaway in his district. As people in a real world, they had to deal with their environment, set up a new home, cook for themselves and understand what was expected of them in their jobs (or job-search). The practicalities of Life made them build relevant knowledge and think for themselves. As 'students' they were simply copying what they were told. As 'people' they were trying things out and attempting to make rules about what might hold true in the future. The woman who learns to parse a sentence may forget, but the woman who scratches her bath is unlikely to repeat the mistake.

JULY
'Dealing with people in groups'

Bobbie: You said between eight and 12 people is a good number for groups in a classroom for learning. I'd be lucky to get two off the shop floor at any one time. Sometimes there are more managers than delegates in the classroom and they only turn up to check on me. By the way, I did recognise some of those group identities you listed. Most of our groups I could categorise as 'idiot', 'worker' or 'fighter'.
Phil: Remember, the classroom is your domain and an effective learning group works as a unit, whether it's inside or outside the classroom. If managers insist on taking part do not let them simply observe. Either use them for their expertise to take Q&A sessions or to demonstrate high performance. Otherwise let them complete the same activities and assessments as everyone else.

AUGUST
'Design for learning'

Bobbie: When you described the process of preparing an outline design and setting the end objective, you asked: 'Why is outcome analysis important?' Then you seemed to make great play of setting objectives and working out a modular structure. Everyone here has heard about SMART objectives. Our managers have seen the video, read the book and now wear the tee-shirt, so what's the big deal?
Phil: SMART is a very helpful acronym because it reminds us to check for measurability when we set objectives. Taken on its own, SMART does not necessarily help us to make absolutely certain that we have put together the right objective. In her book *Adults learning*, Jennifer Rogers[3] tells us that to create an effective adult learning scheme the learner must come first, not the subject.

If the learning situation does not suit their needs and interests, adults will always walk away from it, either literally or simply by withdrawing their participation. We are warned by Merriam and Caffarella[4] that in formalised systems the majority of adult learning is still designed and directed by the trainer.

Managers are depending on you to ensure staff have the skills to use systems and processes, develop and apply controls and understand how these all fit in to their jobs. It is only by carefully analysing the needs of learners in the context of the processes of a job, management and the environment in which the job is performed that you can be confident you are helping to make the business the most successful it can be. Answer the questions shown in Table 1 before you design or run a training session.

SEPTEMBER
'Designing measurement and assessment tests'

Bobbie: In September you made some comments about what makes a good test. If questions are based on objectives, does that mean every objective has to be linked with test?
Phil: No, I'm not saying that at all. It really comes back to your definitions of 'test' and of 'objective'. Questions that prove transfer of knowledge and understanding must relate to an identified objective. And learners must always receive some feedback so they, as well as you, know if they have made the grade. But some objectives may relate to the style, usability and functionality of a learning programme. In that case the 'test' may be that the learner persevered and completed the task without confusion or irritation.

OCTOBER/NOVEMBER
'Designing the course (when where and how), and the results of training'

Bobbie: In October you gave us examples of lesson plans and I am really pleased with one I have tackled recently it. Let me tell you about it.

As you know we make pumps, and over a period of time we've recruited nine salesmen, mostly from an operational background. Sales were excellent until last year when performance dropped dramatically. Our MD thought there were two reasons for this: recession has made customers more cautious; and competitors➤➤

have come into the market with cheaper, inferior models, which have sold well. There are other problems, too. For example if a model sells out, we cannot replace it; the tooling for a job makes it too expensive to manufacture one-offs, no matter how successful they are.

I am not a psychologist, but I believe there is a psychological dimension to the problem too. Although we have a range of almost 20 models only about six are regularly sold and these best-sellers attract the highest commission. We keep the other 14 models in stock but the sales team grumble because we cannot supply the models they like best because they have sold out.

The sales director and I invited the sales team to help in the selection of the models to be manufactured and sold in the year ahead. Despite initial enthusiasm when the new models came out, they decided they did not like them after all. Our unsold stock rose to 60 per cent of our annual turnover. The HR and Sales directors soon came to regret their policy of recruiting nice people from the line instead of sales professionals. When sales dived again, panic and frustration set in. I have now designed and run a training course aimed at improving sales, and although I am happy with it the proof of its success is going to depend on the results it produces. So what about evaluation?

Phil: Well done Bobbie! You have expressed the crucial problem, lack of sales, and you have taken a landscape view of the reasons why it has happened. Through your probing and identification of problems in recruitment policy and procedures, combined with a sound knowledge of your own organisation, your competition and the external economy, you have managed to get alongside the MD, HR and Sales directors to work together to implement a cocktail of solutions.

It seems to me you have worked through these problems using the 'Performance Tuner's model' I outlined in February's 'TTT'. You've also undertaken some proper business analysis before you designed your programme. Your plan is therefore tied to your company's specific business need and this should aid your evaluation at the end of the day. What gets measured in this case is improvement in sales volume and product mix, and reduction in stock levels. There will be other indicators, too – the morale of the sales and production teams, the optimism of senior management, bonuses and incentives.

Epilogue

Well, my comments and suggestions to Bobbie (and, indeed, to all of you), have hopefully solved some of the issues that have been raised throughout the last 12 months. Thanks for staying with me on this year-long journey. I hope you feel the road we have travelled has been worthwhile.

References

1. Malcolm Knowles, *The adult learner: a neglected species* (4th edition), Gulf Publishing, 1990.
2. Ben Zander, conductor, Boston Philharmonic Orchestra, www.fastcompany.com/online/20/zander.html
3. Jennifer Rogers, *Adults learning*, Open University Press, 1989.
4. Sharan B Merriam and Rosemary Caffarella, *Learning in adulthood: a comprehensive guide*, Jossey-Bass, 1991.

On the shelf

Below is a list of essential reading and reference sources that any trainer should have in his/her bookcase. The list has been broken into categories for quick reference.

Active and experiential learning

- *Experiential learning: experience as the source of learning and development,* David Kolb, Prentice-Hall, 1984

Adult learning

- *Adults learning,* Jennifer Rogers, Open University Press, 1989
- *Learning in adulthood: a comprehensive guide,* Sharan B Merriam and Rosemary S Caffarella, Jossey-Bass, 1991
- *Learning to listen, learning to teach: the power of dialogue in educating adults,* J Vella, Jossey-Bass, 1994
- *Mastering the teaching of adults,* JW Apps, Krieger, 1991

The brain

- *Mindmapping,* Joyce Wycoff, Berkley Books, 1991
- *The brain book,* Peter Russell, Plume, 1979
- *The owner's manual for the brain,* Pierce J Howard, Leonian Press, 1994

Educational psychology

- *Punished by rewards: the trouble with gold stars, incentive plans, A's, praise, and other bribes,* Alfie Kohn, Houghton Mifflin, 1993

Instructional technology

- *Making CBT happen,* Gloria Gery, Ziff Institute, 1987

Knowledge age

- *The fifth discipline: the art and practice of the learning organization,* Peter M Senge, Doubleday, 1990
- *Thriving on chaos,* Tom Peters, Harper and Row, 1987

Learning styles and preference

- *Accelerated learning,* Colin Rose, Dell, 1985
- *Frames of mind: the theory of multiple intelligences,* 3rd edition; Howard Gardner, Basic Books, 1993
- *Quantum learning,* Bobbi DePorter, with Mike Hernacki, Dell, 1992
- *The adult learner: a neglected species* (4th edition), Malcolm Knowles, Gulf Publishing, 1990
- *Understanding and facilitating adult learning,* Stephen D Brookfield, Jossey-Bass, 1986

Performance technology

- *Handbook of human performance technology,* Harold D Stolovitch and Erica J Keepseds, Jossey-Bass, 1992
- *The ASTD technical and skills training handbook,* Leslie Kelley, McGraw-Hill, 1995

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