


1. Background



1.1 Introduction

How do adults learn new skills? What is the difference between training and education – and is it relevant to us as team leaders? This book gives practical guidelines to help the team leader to develop the skills of his people. To inform the discussions that follow, this first chapter gives a little background in training theory. First I look at the differences between training and education and how they are relevant to the team leader. Next I briefly consider how adults learn new skills and examine some useful models of learning theory. Then I consider the stakeholders in training – who they are and what their main concerns might be. Finally I conclude that the main training task we have as team leaders is to help our people learn to learn, to develop their understanding from their experiences.

1.2 Main Points of this Chapter

- Training and education
 - How adults learn
 - Stakeholders
 - Team leader's role in training
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1.3 Training and Education

Is there a difference between training and education? The dictionary tells us that to train is to “bring to a desired standard of performance or behaviour by instruction and practice”, or to “teach and accustom *to do* a thing”. It also tells us that to educate is to “train or instruct intellectually, morally and socially”. (*Pocket Oxford Dictionary*, 1984) Thus education has a wider scope than training, while training is essentially practical in focus.

For our purposes of skill development within a work context, the same difference in emphasis is relevant. We think of training as being short-term and focused on a small set of topics, while education is long-term and gives a broad foundation

across a range of topics. Training gives instruction and practice in the use of tools, whereas education provides the background including the wider context in which the tool is to be used. Training develops specific skills, while education develops a deeper understanding and wider knowledge of why the skills are necessary and when to use them.

When we think of training within the job of an IT professional, we are thinking of the development of a particular skill or small set of related skills. We are often thinking of a specific tool, language, methodology or piece of equipment. We often need to learn sooner rather than later. So we are generally more concerned with training than with education. The main focus for the IT team leader is on short-term training needs and skill development. Very often a skill involves the use of a specific software tool or language, so that the terms “skill” and “tool” become interchangeable.

1.4 How Adults Learn

1.4.1 Learning by Experience

Adults learn by experience. We learn *about* something by reading or hearing about it, but we learn it for ourselves by doing it. We learn by trial and error, by trying something out and seeing what happens, by making mistakes and trying again until we can get it right. We develop skills in the same way. At first while the skill is unfamiliar we have to really think about what we are doing. As we develop the skill we get used to carrying out the actions, and can stop thinking so hard about each step. When we just carry out the actions, without even being aware that we are doing them, then we have learned the skill and it becomes part of the way we do things.

Adults can learn on their own very effectively. Indeed, some people prefer not to make their mistakes in public but try to perfect their skills in a “safe” environment away from the pressures of normal work deadlines. Many people, on the other hand, find that their learning is speeded up if they can learn with someone else. Here they learn to carry out the actions, they try things to see what happens, and then find someone to talk it over with. In these discussions the two learners exchange experiences – what they tried and how it worked – and together work out why it happened that way. They are using two different viewpoints to assess the same results, and can test their conclusions against each other’s point of view. The social aspect of learning can be very powerful as it allows people to explore ideas that are different from their own and to see the subject from a new angle – and thus to learn more about it quickly.

Because we as adults learn by experience, we often need to relate anything new to our previous experience and understanding. Thus we learn best from instruction which relates to what we have done or known before. We can learn all about how to carry out the actions, but until we can relate it to a task we’ve come across before we may find it hard to master. Once we can relate the new topic to a previous one, we can see where it fits. The context and reasons for the topic become clear. We learn not only how to use the skill but also when and why.

1.4.2 Learning Cycle

Our natural tendency to learn by experience can be described as a learning cycle as depicted in Fig. 1.1. (Honey and Mumford, 1992; their work on learning models is based on original models by Kolb, 1984, but using different descriptions). In the first stage of this learning cycle we try something out, take an action, have an experience, see what happens. In the second stage we review the experience, reflect on what happened, see the result of the action. The third stage is the point of making conclusions about the experience, deciding what the results mean, predicting what might happen in slightly different circumstances. The fourth stage has us planning the next experience, the next part of the experiment, working out what to try next. This learning cycle depicts the thought processes we go through as we learn from an experience, even though we do not always go through all the stages consciously or explicitly.

1.4.3 Learning Styles

In fact, different people tend to prefer one stage or another in the cycle. Recognizing this, Honey and Mumford developed a parallel model of learning styles that mirrors the learning cycle; see Fig. 1.2. They also developed a questionnaire which is in common use as a way of identifying an individual's preferred learning style. The learning styles are:

- **Activist** – those who enjoy taking actions, getting up and doing something, having an experience often for its own sake.

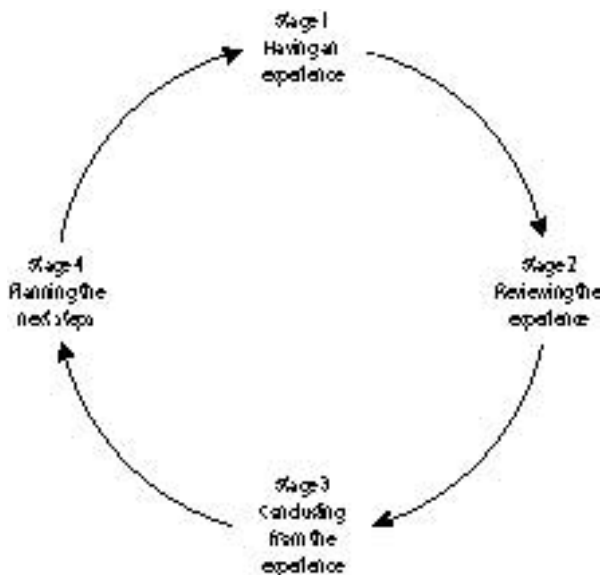


Fig. 1.1 Learning cycle

Source: Honey and Mumford, *The Manual of Learning Styles* 1992, p. 4. Reproduced with permission.

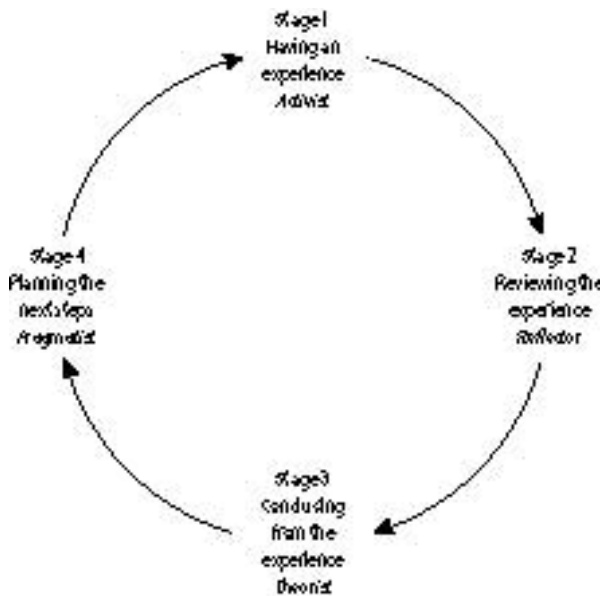


Fig. 1.2 Learning styles

Source: Honey and Mumford, 1992, p. 7. Reproduced with permission.

- Reflector – those who prefer to sit back and think about what they have experienced, reviewing what it might tell them.
- Theorist – those who like to put the results together and make conclusions, work out why what happened did happen and predict whether it would happen in different circumstances.
- Pragmatist – those who like to see how it can be done the next time, get a practical useful result, plan the next steps.

These four learning styles mirror the four stages on the learning cycle. An individual may not prefer just one style but may combine two styles. Someone may be a reflector-theorist for example, wishing to reflect on what he has experienced and also figure out why it happened that way. An individual's learning style will indicate what part(s) of the learning cycle he prefers and will concentrate on most naturally. This does not mean that he cannot do the other stages of the cycle, only that he may have difficulty or reluctance in spending any time on those activities. Thus a reflector will carry out an action then spend a lot of time reflecting on the results; the activist will do the actions but not reflect very long on the outcome – he is ready for the next action!

Both the individual and his team leader should be aware of his preferred learning style, as this will influence the kind of training activity he will enjoy most and gain most from. For example, a reflector will need a training exercise in which he can step back and review what is being learnt or tried; an activist will need to be allowed to learn by doing as actively as possible. Training exercises do not have to precisely match the individual's learning style, as people are adaptable and most

can perform adequately at all stages of the cycle. In practice, most training methods do include all four stages of the learning cycle and thus do allow all learning styles to find a comfortable approach to learning.

1.4.4 Conscious Competence

Another interesting model of adult learning contains four steps on the way to unconscious competence (Kalinauckas and King, 1994; Lovell, 1980):

- Unconscious incompetence – when “ignorance is bliss”, we don’t yet realize that we lack a certain skill. Maybe we don’t yet need that skill, maybe we’re just blissfully unaware of our shortcomings in that area.
- Conscious incompetence – once we have recognized the skill gap we can start to learn the skill and fill the gap. At this stage, we don’t yet have the skill but at least we are aware of the fact and are doing something about it.
- Conscious competence – having learned the basics, in this third step we still have to think about what we are doing when using the skill. “Practice makes perfect”, we tell ourselves as we get better at it.
- Unconscious competence – in this final step we have mastered the skill and use it automatically without thinking about it any more. We are no longer consciously aware of the detailed processes of using the skill.

For example, when we start to use a computer keyboard we are in Step One, unaware that there are some keyboard skills we don’t yet have. As we start to use the keyboard and try to type quickly we move into Step Two, realizing that there’s more to this than meets the eye. If we learn to type properly, we move into Step Three where we have to work hard at hitting the right keys without always looking at what we are doing, and getting it right more and more often. When we have mastered typing skills, then we are in Step Four where we don’t have to think about where the keys are but just use them automatically.

An individual can of course be in different steps with different skills, even if he is in one of the steps for his overall role or job.

This Four-Step model can be a useful aid in talking to people about their skill levels, as it asks the individual to relate his performance to the ease with which he carries out the tasks. Is he fluent with the skill, or does he still have to think about each part of the process involved?

1.5 Stakeholders

Who are the stakeholders in the training of IT professionals? There are several interested parties, although some have a relatively small influence on the training process.

1.5.1 Individual

Clearly, the individual learner has an interest in the training he receives. It is his skill set that is being developed, and he will use it not only in the current role but

also possibly in future roles. Training has a big impact on the individual learner and he has a large influence on its effectiveness. He has much to gain from the ability to use the new skills as he carries out his work. If he wants to learn, his enthusiasm will carry him through the skill development process.

1.5.2 Team Leader

The learner's team leader (or supervisor or manager) also has an obvious role to play in the development of skills. In many ways training is a partnership between the individual and the team leader, with the team leader providing the opportunity for skill development. The team leader can also impact the effectiveness of the training by the extent to which he supports the individual in the learning process.

1.5.3 Trainer

The trainer or instructor is another clear participant in any training exercise; if a book or other self-study material is to be used, the trainer is the author of the material. The trainer's major impact lies in the material he chooses to present and the way in which he presents it. Good trainers will encourage the learners to go through all the stages of the learning cycle and to consolidate their learning. The trainer may be able to increase the learning by getting the individuals to relate it to their own work context.

1.5.4 Team

The individual is part of a team; these people together form another group of stakeholders. The team shares the workload with the individual; they may have gone through the same learning curve to develop the same skills. They will rely on the individual being able to carry out his tasks without continually asking for help and so will want him to succeed in his skill development. They will also be able to provide support when he returns to the workplace, by patiently answering his questions and helping him learn from his mistakes.

1.5.5 Organization

The organization in which the individual works is a somewhat more remote stakeholder in his training. The organization provides the wherewithal for the training to happen, and provides the environment in which the skill is to be used. Its influence on any one individual's training rarely goes beyond the general setting, although this includes the culture and organizational attitude to learning.

1.5.6 Customers

The individual's customers, whether internal or external, are also interested in his skill development. They need for him to carry out his tasks effectively, in a professional manner. They are more interested in the outcome of the skill development process than in the process itself. Customers tend to notice if the skill develop-

ment has not yet happened, and they respond with complaints. Rarely are customers conscious of skills applied well. Thus their main influence on training is to raise awareness of training needs.

1.5.7 Involvement

When we make skill development and training decisions, we are not usually consciously thinking of the various stakeholders. Yet they are interested parties and we should not be surprised if sometimes they express that interest. Their viewpoints are valid and their opinions should be respected.

1.6 Team Leader's Role in Training

1.6.1 Develop the Individuals

As team leaders, it is our responsibility to develop all of our people. We need to understand them as individuals. We need to be aware of their different learning styles, their varying rates of learning new things, the different ways in which they react to problems. We as team leaders must recognize the differences and accept them as part of the challenge of leadership. We can work with our people as individuals to realize their potential.

Some individuals are eager to learn new things; others are more reticent about admitting to gaps in their understanding. The reluctant learners need to be reassured that the training need arises not through some failing on their part, but from the fast pace of change in today's technologies.

1.6.2 Contract Staff

In many IT departments, teams include both permanent employees and contract staff. The contractors are brought in for specific pieces of work or to fill highly specialized roles. Most organizations are happy to train their permanent staff, but what about the contractors? We can safely assume that they have the specific skills we hired them for in the first place, and that we do not need to provide training in those areas. But if we ask contractors to develop new skills to carry out their work, for example, a new version of a product they are using, or a new project planning tool we need them to use, then we should expect to support their learning. Contractors are usually keen to keep their skills up to date and are often willing to invest in their own skill development. One option is to provide and pay for the training but not to pay for their time to attend the training. Another option is the opposite, to pay for their time but expect them to meet the actual training costs. Other options include meeting all the costs including their time, or meeting none of the costs, or reaching some agreed compromise.

The important thing is to recognize that contractors are part of the team and deserve our support. They can be encouraged to learn and to help other team members to learn. Very often they have skills they could pass on to other team members, if we made skill transfer part of their responsibilities.

1.6.3 Learning Culture

We also need to understand our people as a group. It is up to us as team leaders to create and maintain an environment of trust in which our people can flourish as individuals supported by each other. They need to be free to learn at their own rates. They also need to be free to express their views and know that they will have the full support of their team members and team leader.

There are many ways to go about developing our people, as we shall see in later chapters. Perhaps the most important thing we can do to create a learning culture is to use our people's talents. By asking for their input frequently and informally, and by listening to their contributions, we create an atmosphere of respect in which our people can develop both their ideas and their skills. (Soat, 1996)

1.6.4 Nurturing

Our main training task as team leaders is to help our people learn to learn. They need to be able to learn from instruction and from their own reading. They need to be able to learn from their own everyday experiences. We need to get our people to talk through what they have learned, helping them pull out the learning points – helping them complete the learning cycle for themselves.

We need to nurture our people, both individually and as a team. Seeing our people gain confidence and respect from knowing that they can do the job well is a hugely rewarding experience.

The most valuable things we can give our people are the ability to learn from mistakes and the ability to pick up new skills quickly. The main requirements are a willingness to learn on the part of the learner and a willingness to nurture on the part of the team leader.

1.7 Summary

In this chapter, I have discussed some of the background theory of training and put it in the context of the IT team leader's role:

- Training and education – training is short-term and skill-focused whereas education is long-term and general.
- How adults learn – four stages of the learning cycle link to four learning styles, describing how adults learn by experience.
- Stakeholders – there are many interested parties in the skill development process.
- Team leader's role in training – as team leaders we can help our people learn to learn.

In Chapter 2 I look at the first step in the skill development process, that of identifying and clarifying the training need.



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