Meeting learning and development goals

To help prove the effectiveness of learning and development, the evaluation phase must address the validity of the associated program. Goldstein describes four approaches to program evaluation:

- **learning program validity** – whether employees have learnt something from the program
- **transfer validity** – whether knowledge or skills transfer has occurred back in the workplace
- **intra-organisational validity** – whether new and more experienced employees share similar performance
- **inter-organisational validity** – whether a program validated in one organisation has similar results in another organisation.

It may be argued that the second approach is the most relevant for most organisations, as discussed earlier in this chapter.

Cost–benefit considerations

The ability to measure the benefits derived from HRD varies according to the type of job. Where employees are performing relatively simple tasks, the effects of learning and development may show up quite dramatically. For more complex jobs, such as those at the managerial and professional levels, the benefits are more difficult to measure. It is generally found, however, that the benefits will far exceed the costs when the objectives to be met by an HRD program are clearly defined, when the most suitable instructional techniques are used and when employee motivation is high.

The benefits that are experienced by an organisation are similar to those found through a carefully developed selection program. Increased productivity and the ability of the competent employees to assume more responsible roles in the organisation are the major benefits. Reduction of waste, accidents and similar problems may also result from HRD programs.

The argument which the HRD manager must sustain is that the employee development program led to such improvements. In many areas of training, learning and development, many intangibles will arise that make measurement of results very difficult, although a number of researchers have addressed this key area.

Principles of learning

The success of an HRD program depends more than the identification of employee needs and the preparation of the program. In order to maximise learning, careful consideration needs to be given to the relevant principles of learning. Two of the most accepted theories of the principles involved in adult learning are Knowles’ (1984) theory of ‘andragogy,’ and Kolb’s (1984) Learning Style Inventory (see Exhibit 8.8). Knowles researched the ways in which adults (and therefore employees) learn most effectively, concluding that, unlike children, adults are generally self-directed and expect to take responsibility for their own learning. As a consequence, adult learning and development programs should factor in explanations of the need to learn; provide frequent opportunities for learning by doing; and frame learning as a problem-solving activity. Therefore exercises such as role plays, case studies and group projects are useful in employee learning and development, and instructors act as facilitators rather than lecturers.

Kolb’s model illustrates similar features, with its four-stage cycle of adult learning – namely, *concrete experience, reflection, abstract conceptualisation* (the derivation of general rules) and *active experimentation* (developing future ways of building on learning). More recent notions of ‘single loop’ versus ‘double loop’ learning, and ‘deep’ learning are applications of
these theories to organisational learning, conceptualised best in Senge’s (1990) concept of the ‘learning organisation,’ or an organisation which systematically incorporates these adult learning principles into its routine problem-solving and decision-making techniques in an ongoing manner. These principles are illustrated in the following discussion.

**Exhibit 8.8  **Kolb’s Learning Style Inventory

<table>
<thead>
<tr>
<th>Concrete experience</th>
<th>Reflective observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active experimentation</td>
<td>Reflective observation</td>
</tr>
<tr>
<td>Abstract conceptualisation</td>
<td>Active experimentation</td>
</tr>
</tbody>
</table>

**Preconditions for learning**

Two preconditions for learning will increase the success of those who are to participate in such programs: employee readiness and motivation. The condition known as employee readiness refers to both maturational and experiential factors in the employee’s background. Prospective employees should be screened to determine that they have the background knowledge or the skills necessary for learning what will be presented to them. Recognition of individual differences in readiness is as important in HRD as it is in any other learning situation. It is often desirable to group individuals according to their capacity to learn, as determined by scores from tests, or to provide a different or extended type of instruction for those who need it.

The other precondition for learning is that the employee be properly motivated. That is, for optimum learning the employee must recognise the need for acquiring new information or for having new skills; and a desire to learn as learning progresses must be maintained. While people at work are motivated by certain common needs, they differ from one another in the relative importance of these needs at any given time. For example, new recruits often have an intense desire for advancement, and have established specific goals for career progression. Objectives that are clearly defined will produce increased motivation in the learning process when instructional objectives are related to individual needs.

**Some prerequisites for learning**

After employees have been placed in the learning situation, their readiness and motivation should be assessed further. In addition, facilitators should understand the basic learning issues discussed below.

**Meaningful materials**

In accordance with adult learning theories, the material to be learned should be organised in as meaningful a manner as possible. It should be arranged so that each successive experience builds upon preceding ones so that the employee is able to integrate the experiences into a useable pattern of knowledge and skills. The material should have face validity.
**Reinforcement**

Anything which strengthens the employee’s response is called reinforcement. It may be in the form of approval from the instructor or facilitator or the feeling of accomplishment that follows the performance; or it may simply be confirmation by a software program that the employee’s response was correct. It is generally most effective if it occurs immediately after a task has been performed.

Behaviour modification, or a technique that operates on the principle that behaviour that is rewarded positively (reinforced) will be exhibited more frequently in the future, whereas behaviour that is penalised or unrewarded will decrease in frequency, is often used for such purposes.36

**Transfer of knowledge**

Unless what is learned in the development activity is applicable to what is required on the job, the effort will have been of little value. The ultimate effectiveness of learning, therefore, is to be found in the answer to the question: ‘To what extent does what is learned transfer to the job?’ Helpful approaches include ensuring that conditions in the development program conform as closely as possible to those on the job, and coaching employees on the principles for applying to the job the behaviours which they have learned. Furthermore, once formal instruction has been completed, the supervisor must ensure that the work environment supports, reinforces and rewards the employee for applying the new skills or knowledge.37

**Knowledge of progress**

As an employee’s development progresses, motivation may be maintained and even increased by providing knowledge of progress. Progress, as determined by tests and other records, may be plotted on a chart, commonly referred to as a learning curve. Exhibit 8.9 is an example of a learning curve that is common in the acquisition of many job skills.

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**Exhibit 8.9**  
A typical learning curve

In many learning situations, there are times when progress does not occur. Such periods of no return show up on the curve as a fairly straight horizontal line, which is called a plateau. A plateau may be the result of ineffective methods of work or of reduced motivation.
Proper analysis by instructors and employees may reveal the cause of a plateau and may be overcome by such means as suggestions for new work procedures, or aid in establishing new incentives. Plateaux are to be expected and do not necessarily indicate failure of the program.

**Distributed learning**

Another factor that determines the effectiveness of learning is the amount of time given to practice in one session. Should training or development be undertaken in five two-hour periods or in 10 one-hour periods? It has been found in most cases that spacing out the activities will result in more rapid learning and more permanent retention. This is the principle of distributed learning. Since the most efficient distribution will vary according to the type and complexity of the task to be learned, it is desirable to make reference to the rapidly growing body of research in this area when an answer is required for a specific learning situation.

**Whole vs part learning**

Most jobs and tasks can be broken down into parts that lend themselves to further analysis. The analysis of the most effective manner for completing each part then provides a basis for giving specific instruction. Airline flight attendant jobs, for example, involve a combination of mechanistic (specific tasks that follow a prescribed routine), and organic (tasks that involve decision-making and individualised responses) duties, which are best learnt separately, and then combined to form the whole job responsibility. Thus, the prescribed takeoff and landing announcements, and formal safety procedures, are supplemented with separate learning activities about how to deal with difficult passengers or how to cope with food supply problems. In evaluating whole versus part learning, it is necessary to consider the nature of the task to be learned. If the task can be broken down successfully for part learning, it should probably be taught as a unit.

**Practice and repetition**

It is those things we do daily that become a part of our repertoire of skills. Employees need frequent opportunities to practise their job tasks in the manner in which they will ultimately be expected to perform them. The individual who is being taught to operate a machine should have an opportunity to practise on it. Similarly, the supervisor who is being taught how to train should have supervised practice in training.

**Multiple sense learning**

It has long been acknowledged that the use of multiple senses increases learning. Smith and Delahaye state that about 80 per cent of what a person perceives is obtained visually, 11 per cent by hearing and 9 per cent by the other senses combined. It follows that in order to maximise learning, multiple senses of the employees, particularly sight and hearing, should be engaged. Visual aids are therefore emphasised as being important to the learning and development activities.38

**Developing non-managerial employees**

Once the learning need is clear, the instructional objectives have been determined, and the principles of learning relevant to the situation have been identified, the most appropriate development method may be chosen.

A wide variety of such methods is available, some of which have a long history of usage. Newer methods have developed over the years out of a greater understanding of human behaviour, particularly in the areas of learning, motivation and interpersonal relationships.


31 Goldstein LL. 1993. op. cit., p. 27.
38 Smith B., Delahaye B. 1998. op. cit., p. 16.
40 Ibid., pp. 118–21.
42 Lane A. 1997. ‘Online tuition cuts costs and lowers staff turnover,’ Australian Financial Review, 8 December, p. 94.
47 Davis K. 1992. ‘Program puts submariners in a class of their own,’ Weekend Australian, 23 May, p. 61.
54 Ibid, p. 763.
62 Ibid, p. 64.
67 Armstrong H., Gattegno G. 1993. ‘How are you going to manage if the good old days don’t come back?’, Management, May, pp. 11–14.