Learning: 70-20-10

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1   LEARNING

1.1   INTRODUCTION

Learning is something which is inherent in human nature. A lot of learning takes place automatically in one's environment. From childhood people are taught many things by their parents, siblings, teachers and others. Several things are pointed out to them, and they are told what is right and what is not, what is safe and what is dangerous. As they explore their environment – which they do every waking moment – they grasp new images, associate them with names and learn to make use of them in everyday interactions.

In fact, learning is unarguably the most important activity which is at the core of human development. People learn most of the things outside of any formal system. Philosophers and psychologists have always tried to understand the nature of learning, how it occurs, and how it affects the behaviour of a person. Towards this aim, various theories of learning have been suggested. However, these theories give different interpretations.

In addition to formal theories, people have their own theories also. The questions they raise are:

- How do we determine if learning has taken place?
- What factors are responsible for determining this?
- Where are these factors found?
- Are they in the environment surrounding people?
- Are they within themselves?

1.2   CONCEPT OF LEARNING

The term 'learning' means different things to different people. It cannot be assumed that a word or phrase, for example, has identical meaning for everybody. Different people interpret learning of an idea in a different way. Even the theories of learning have been evolving and continuously changing the definition of learning. They vary considerably from each other in deciding the nature of changes that occur in an individual's behaviour.

1.2.1 TYPES OF LEARNING

The occurrence of learning takes different forms. The same rules cannot be applied to all types of learning. The approaches to learning are dependent on two factors – Skill-based learning and Knowledge-based learning:

- **Skill-based learning:** This type of learning has a practical component. People learn the rudiments of doing a job while actually working with the requisite equipment, for example, electricians, carpenters, typists, data entry operators, mechanics, drivers etc.
- **Knowledge-based learning:** This can be classified into two categories:
  - **Skill and knowledge-based:** Learning which involves knowledge of concept at a higher level combined with practical experience falls in this category, for example, doctors, engineers, software developers etc.
  - **Concrete or abstract ideas-based:** This type of learning takes place only when one can grasp both concrete and abstract ideas, for example, teachers, public speakers, analysts, management professionals etc.

1.3 EVOLUTION OF THEORIES OF LEARNING

Several psychologists have studied learning and come out with various theories. Prominent among these are the following.

1.3.1 E.L. THORNDIKE

Thorndike (1913) presented a dissertation on problem solving. His theory was based initially on a series of puzzle box experiments that he used to plot learning curves of animals. In these experiments learning was defined as a function of the amount of time required by the animal to escape from the box. In his view, learning is the process of forming associations or bonds, which he defined as the connection of a certain act with a certain situation and resultant pleasure.

Thorndike provided a formative culmination of his theory of learning in the form of three laws of learning. They are:

- **Law of readiness:** It was intended to account for the motivational aspects of learning.
- **Law of exercise:** It stated that connections grow stronger when used, and grow weaker when not used.
- **Law of effect:** It is related to the law of exercise. Thorndike stated that the connection results in satisfaction, and that they are weakened when the result is annoying.

1.3.2   IVAN PAVLOV

Ivan Pavlov (1849–1936) did research on classical conditioning. He studied salivation in dogs as part of his research programme. He set up an experiment to find out if dogs could be trained to salivate at other stimuli (not food) such as the sound of a bell. After several trials he rang the bell without presenting the food and found that the dogs salivated in the same way as if food was being presented.

John B. Watson (1930) further extended Pavlov's work and applied it to human beings. Both these theories focused on environmental factors such as reinforcement, feedback and practice. These became known as behaviourist theories.

1.3.3   BEHAVIOURIST THEORY

B.F. Skinner (1953) put forward the behaviourist theory. According to this theory, a child learns whatever their environment teaches them.

He propagated the idea of Operant Conditioning. According to him, a child goes through trial and error, and continues to do so until they get success. It happens with reinforcement and shaping provided by the parents' gestures (smile, attention and approval) which are pleasant to the child.

Skinner differentiated between two types of verbal responses that a child makes:

- Verbal behaviour that is reinforced by the child receiving something it wants; and
- Verbal behaviour caused by imitating others.

To support this theory, Skinner carried out an experiment on an animal. He kept a rat in a box in which he fixed a bar. A moment came when accidentally the rat pushed the bar. On this act the supervisor served him with food. The next time it pressed the bar, the food was again given. From this act it learned that whenever it wanted to have food it must push the bar. Then the task was made difficult. Skinner fitted a flashlight in the box. Then the rat learned that each time the light flashed, it would get food. This experiment was made an evidence to support that in the same manner a child learns what his/her society wants them to learn.

According to this concept, stimulus carries a response followed by reinforcement which results in repetition. For example, a stimulus is produced when a baby feels hungry or lonely. The baby cries in response. The reinforcement is when the mother comforts him/her. The same

process which happens again is called repetition. In this way the baby learns new behaviour that every time he/she feels hungry, they cry. It happens like this:

Stimulus > Response > Reinforcement > Repetition > New Behaviour

Reinforcement is of two types:

- **Positive reinforcement:** Positive reinforcement results in increase of repetition process. For example, a child cries for candy, he/she receives the candy and learns that crying results in candy.
- **Negative reinforcement:** Negative reinforcement results in reduction of repetition process. For example, a child cries for candy, but he/she is slapped, and they learn that slap is the consequence of crying. As a result, the child ceases crying for the accomplishment of his/her desires.

1.3.4   THEORY INNATE/MENTALIST

In contrast to behaviourist theory, Noam Chomsky (1965) presented 'Mentalist Theory'. This theory was of the view that a child acquires learning with his/her cognitive ability whereas ecological factors are not disturbed in learning.

Chomsky believed that a human being is superior to animals in all aspects of life, and that we can never apply the same rules and principles to language learning which are derived from experiments on animals.

He further stated that human beings are blessed with the power of thinking while animals are not. A human being has a strong cognitive ability which stores the vocabulary in lexicon and then uses with the formulation of syntax. Child at first learns words in isolation and later on uses them in sentences without knowing their rules of grammatical structure. Here, the question arises: How does a child learn to handle irregular grammatical patterns then? So, the reason is that language is a matter of maturation rather than imitation. This can be considered to apply to all types of learning.

1.3.5   SOCIAL CONSTRUCTIVISM

Lev Vygotsky (1978) developed the theory of social constructivism. In fact, it is a version of constructivism theory of learning which is divided into two branches – cognitive and social.

- In the cognitive branch it is believed that to construct their own version of reality, learners must discover complex information individually.
- Social constructivism lays emphasis on:
    - Social interaction; and
    - Cooperative learning.

According to constructivist theory, learning environments:

- Provide multiple representations of reality;
- Represent the complex nature of the real world;
- Provide for authentic tasks that have a meaningful context;
- Provide real-world settings instead of relying on pre-determined notions;
- Encourage reflection on real-time experiences;
- Support collaboration through social negotiation; and
- Discourage competition among learners.

In fact, social constructivism stresses the importance of social interaction and cooperative learning in order to construct cognitive as well emotional images of reality.

According to Vygotsky, everyone builds their own understanding of the world. He emphasizes the social and collaborative nature of learning. He believes that:

- To learn, people need to be doing it with other people;
- Learning is a social process and not a solo process; and
- Learning needs to involve social processes such as discussions and sharing of ideas.

Social constructivist theory supports the integration of experiential-based learning with social and collaborative learning. A few examples of social constructivist theory are:

- Communities of practice;
- Retrospectives;
- Coaching.

1.3.6   EXPERIENTIAL LEARNING THEORY

David Kolb (1984) produced a systematic and comprehensive exposition of the theory of experiential learning. He said that:

> *"Learning is a process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping experience and transforming it".*

According to him:

- The process of learning starts with concrete experience; and
- The learner needs to observe and reflect on the experience:
    - Form a conceptual understanding of the experience,
    - Practise these concepts, and
    - Test these concepts.

This process restarts for each segment of new learning, as shown in Fig. 1/1 below.
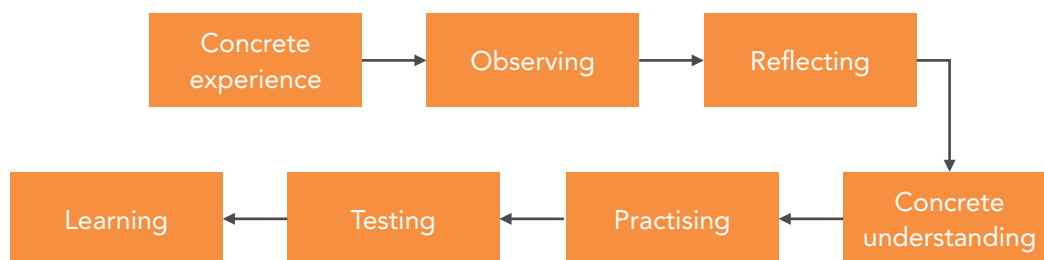
Fig. 1/1 Process of experiential learning

In order to make the process of experiential learning effective it is necessary that:

- Work and learning are integrated;
- Learners are given time and guidance for reflecting on what they have learned, for example:
    - Regular consulting between Learning & Development professionals/managers and learners;
    - Discussion in team meetings; and
    - Maintenance of personal logs by learners.

1.4   RELATIONSHIP BETWEEN THEORY AND PRACTICE

The relationship between the theories of learning and actual practice is quite complex. The factors of culture, environment, one's own ability and inclination, motivation etc. play a major role in how learning takes place. A common perception is that knowledge flows from scientific theories to effective practices. Science, however, does not operate in this way. Quite often ideas emerge from observing and questioning things that happen in real life. For example, Isaac Newton propounded the laws of motion after observing the fall of an apple from the tree. Archimedes shouted 'Eureka'! after he stepped into a bathtub and noticed that the water level rose, and understood that the volume of water displaced must be equal to the volume of the part of his body he had submerged.

Modern concepts of learning recognize that learners are active participants in the learning process, and hence they are capable of experimenting with various techniques, and ultimately deciding on what is most appropriate to their abilities and specific situations.

2   EVOLUTION OF 70:20:10

2.1   INTRODUCTION

With the preponderance of various theories of learning, it was widely believed that environmental factors alone do not influence learning. During 1960s it was observed that people definitely learn by observing others, and that the learner's ability to perform a task is crucial.

During the 1970s and 1980s behavioural theories gave way to theories that focused on mental activities and the ability to understand complex concepts. The main thrust of these theories was that learning takes place from inside and not from outside.

During the 1980s the study of self-regulated learning emerged. Zimmerman and Schunk (2001) advocated that:

- Learners are aware of their own learning;
- They can reflect on themselves; and
- They can manage their own learning.

All these and various other theories apart, traditionally it has been believed that learning occurs within an individual. Individuals may participate and learn in groups, but ultimately it is the individual person who learns. Knowledge is something that an individual acquires. In this process, each individual finds their own unique style of learning most suitable to them.

2.2   ORIGIN AND HISTORY OF 70:20:10

Drawing on the experiences of various theories of learning, several academicians and practitioners concluded that learning does not take place solely within an individual. Their environment and learning and development practices with their respective organisations were greatly responsible for it.

Allen Tough (1999) argued that most of the adult learning (about 70 per cent) takes place outside the framework of formal systems, about 20 per cent takes place on account of a learner's interactions with others such as their co-workers, managers, and about 10 per cent learning is facilitated by teachers, trainers and professional experts. This was based on his findings during the course of his studies at the University of Ontario.

In the 1980s Morgan McCall, Robert Eichinger and Michael Lombardo – based on their research at the Centre for Creative Leadership – suggested that learning and development take place best through means other than formal training.

McCall suggests that 70:20:10 model basically originated from the studies made by McCall, Lombardo and Morrison in 1988. Based on the lessons learned by successful managers, McCall & others (1996) stated that learning takes place as follows:

- 70 per cent from on-the-job experiences, tasks and problem solving;
- 20 per cent from feedback and observing others;
- 10 per cent from formal courses of study.
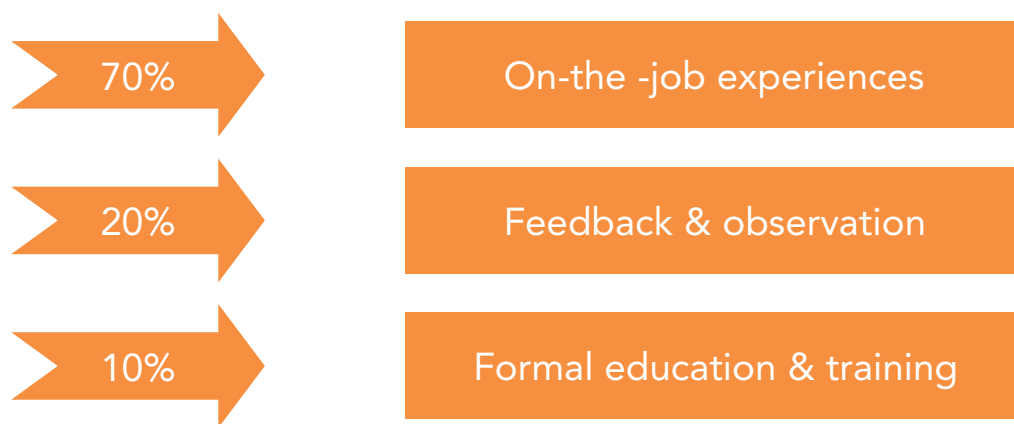
Fig. 2/1 Learning: 70:20:10 model

Consequently, the 70:20:10 model was advocated. It has stood the test of time and is a very powerful tool for learning and development.

2.3   ADOPTION OF 70:20:10

A large number of organisations understood the importance and implications of the 70:20:10 model and have successfully experimented by adopting it. While Charles Jennings – an authority on 70:20:10 – made it his guiding principle while working at Reuters, the prominent information company, some of the other organisations that have adopted this model are:

- Nike, British Telecom, Goldman Sachs, Maersk, Nokia, Price Waterhouse Coopers. Ernst & Young, L'Oréal, Bank of America, Diego, BAF Systems, ANZ Bank, Caterpillar, Sony Ericsson, Standard Chartered, Dell, Wal-Mart, Coca-Cola, and many more.

3   CONCEPT OF 70:20:10

3.1   DEFINITION

Studies conducted on experiments of the 70:20:10 model have revealed that professional development results mostly from doing, and not merely from formal education and training. Workers learn most when they actually perform various tasks as part of their job profile. This accounts for 70 per cent of their learning. 20 percent comes from their interactions with others and observation of tasks being performed at their workplace. They learn just 10 per cent from attending formal professional courses and undergoing various training programmes.

3.2   CONCEPT OF 70:20:10

This model focuses on the following.

3.2.1   HANDS-ON EXPERIENCE

It is believed that hands-on experience (70 per cent) enables employees:

- To discover and enhance their job-related skills;
- To make informed decisions; and
- To face challenges at workplace.

The organisations that have experimented with this model agree that:

- This is a good option for building and enhancing skills;
- There is an opportunity to support learning directly during work;
- It supports the belief that change is the co-reactivity of workplaces in modern times;
- It helps in learning new practices and procedures; and
- It helps in generating new ways of performing tasks, and doing them more effectively as well as faster.

Using this model of hands-on experience enables Learning & Development professionals to look at where learning occurs. They need not try to fit everything into a formal learning programme. Instead, they can focus their efforts on encouraging learning where it happens i.e. at the workplace.

This experiential learning provides for:

- Practising skills;
- Stretch assignments;
- Secondments and job swaps;
- Assignments offering new experiences; and
- Challenges at work.

It is important to recognize that a large proportion of learning occurs informally in an organisation. While formal learning structures provide for a basis for initial attainment of learning, it cannot account for all learning. Take for example, a doctor or a lawyer, or even an engineer. A doctor's skills remain theoretical through formal learning unless he/she works as an intern in a hospital where they are in a position to check and observe the types of medical problems that they have to face and find a cure for. A lawyer can learn everything about the laws of his/her country – even international laws – they cannot be effective and successful lawyers unless they actually practise law in a court initially under the supervision and guidance of a senior practising lawyer. An engineer (e.g. mechanical engineer) may get all the knowledge about mechanical engineering through his/her formal learning system, they really learn practically how to perform their jobs only when they actually work in a company where they come face to face with various kinds of machinery, systems, practices and operating procedures. This holds true for people in virtually all professions.

3.2.2 INTERACTIONS

During the course of their work employees need to interact with others – colleagues, supervisors, managers etc. They interact with their bosses and mentors within work settings. When they make mistakes, they receive immediate feedback on their performance, and hence learn from their mistakes.

Employees learn from others (20 per cent) through a variety of activities. These activities include the following:

- **Social learning:** Employees routinely discuss their work-related activities with each other. They share their experiences and appreciate what one has done well and point out the mistakes that might have hindered the attainment of desired results. These interactions provide a platform to develop through social interaction with co-workers.

- **Collaborative learning:** Since employees work in teams, they need to collaborate with each other. Individuals have their own individual goals and objectives, but at the same time they must sync their goals with those of the team. Moreover, quite often they need to work on special projects for which though there might be individual assignments, they need to be done in collaboration with others in the team. These activities provide for intensive learning through collaborative effort.

- **Coaching and mentoring:** Managers or team leaders help the employees in the learning process. They also act as their coaches and provide them the information required and help in acquiring/enhancing the skill sets required to perform various tasks. Coaching involves an ongoing demonstration, guidance, instruction and teaching in job situation by the supervisors. The performance and learning of workers are continuously monitored and necessary appreciations and corrections are introduced. During this process these managers/team leaders hold the employees' hands and act as mentors through the various steps and intricacies of tasks to be performed.

- **Access to experts:** When some specialised skills need to be developed or new procedures are to be learnt, experts – internal and/or external – are roped in, and they provide the much-needed expertise. This ensures that the employees get access to professional expertise in their real work setting.

- **Debriefs and assessments:** Employees are debriefed by the managers to ascertain what had been done and how. Depending on the information generated an analysis is made as to what was done right and what could have been done in a better or different way. This analysis becomes the basis of assessing employees' performance, which enables them to know what they could further do to be more effective and efficient workers.

3.2.3   FORMAL EDUCATION AND TRAINING

This model envisages that the rest of 10 per cent learning is the result of taking formal courses and undergoing training programmes. Though practitioners from academic background get surprised when informed that real learning takes place practically in work situations, it is also a fact that though formal educational and training programmes ensure a theoretical framework – which is much-needed, of course – it is the practical application of these theoretical concepts in a real work situation that empowers people to have complete learning of performing certain tasks and managing their work activities.

This 10 per cent learning takes place through the following:

- **Formal traditional courses:** Basic learning takes place through formal traditional courses which people pursue in colleges, institutes, or universities. Though there is some sort of practical component in several courses, mostly it is academic study. However, the knowledge gained through this theoretical framework is the stepping stone to apply knowledge in practical work situation and provides an impetus to enhance further what was learnt in educational settings.

- **Structured courses:** Quite often many people pursue specialised courses which are not a part of the accredited university system but are organised by various institutes and organisations such as Microsoft, Cambridge, International House, Pearson etc. These structured courses train them in specialised aspects of knowledge which is ultimately going to be related to their job profile.

- **Online courses:** The evolution of Internet has become a boon to prospective learners. Learning opportunities have come to the finger-tips of learners who are able to enrol for virtually any type of course from the comfort of their homes. This they can do while pursuing their regular traditional course or while working even.

- **Training workshops:** There are tremendous all-round changes in the work environment due to development of science and technology. In almost all organisations the work methods and procedures, processing and storage of data, management of information systems etc. are being changed. Training workshops are organised for employees to acquire the necessary skills, knowledge and attitude orientation to adapt to the changing environment and for better performance. These training programmes could cover: Activity, Craft, Refresher, or Promotional training.
Separate programmes are organised for different categories of employees:

- **Training programmes for workers:** They should be capsule programmes of short duration. The methodology should be highly participation oriented with interesting audio-visuals.

- **Training programmes for managers and supervisors:** Managers and supervisors need extensive training programmes in the areas of: Technical training (wherever necessary), Behavioural training, Leadership styles, Interpersonal relations, Elements of financial management, and Communication skills.

3.3   CONCLUSION

The 70:20:10 model enables people to understand that learning programmes need to be more than just training sessions. Extensive research proves that most learning at work is informal. However, if learning team has to introduce a new coaching framework in an

organisation, they are not likely to achieve it with informal learning alone. The solution lies in a combination of formal courses, social learning and workplace tasks.

The 70:20:10 model is an effective guideline for organisations that seek to increase the effectiveness of their learning programmes through various other activities. In fact, 70:20:10 indicates how we can be able to build employees' knowledge and skills. Experiences of most executives reveal that they cannot credit formal training as their main source of learning leadership traits. By recognizing that training or formal learning is only one element of learning we can say that most learning takes place at the workplace.

4   MODELS OF DEVELOPMENT

4.1   INTRODUCTION

The 70:20:10 model is not to be considered a formula. The numbers 70:20:10 are general indicators and can be slightly flexible depending on the situation prevailing in a particular organisation at a certain point in time. Actually the 70:20:10 model can help in generating and sustaining a sophisticated learning culture at an individual, team and organisation level.

4.2   MODELS

It cannot be exactly explained what a 70:20:10 model looks like. It can – and does – change as per the context of the organisation and its employees. Hence quite often the model needs to be custom-designed as per the need of the hour without, of course, diluting the basic premise.

Given below are some of the designs that could be implemented.

4.2.1   SHARING KNOWLEDGE

The practice of sharing knowledge is where 70:20:10 is extremely powerful. A typical example of knowledge sharing is the technical onboarding programme. Let's consider the following example:

An organisation wants to design an on-boarding programme for new assessors. The whole process is going to be quite complex and may involve a lot of work in which there may not be clear guidelines how to proceed further. Moreover, it may take more than a year for the new employees to become competent enough to be in a position to perform their task without supervision.

The process of this on-boarding learning experience will be as follows:

- Online learning experience through simulated cases;
- Coach – expert assessor – explains how to make decisions;
- Employee starts making decisions about some parts of the case;
- Coach keeps a close watch;
- He/she keeps conversing with the employee;

- He/she keeps talking about the employee's work and related activities;
- Employee's ability begins to build further;
- Employee begins to do more real work;
- Employee remains connected to their peer group;
- They debate the complexity of the problem with each other;
- They start completing real work;
- Portfolio of competence gets developed;
- Quality and quantity of work done are also measured and become part of assessment.

4.2.2 PRACTICE COMMUNITIES

Another form of knowledge sharing is the community of practice. This community consists of a group of peers who not only work together but also share their ideas and knowledge. They also help each other to generate innovative practices. A good example of this could be a weekly or monthly team meeting wherein a member facilitates discussion on a certain topic. Old ideas are discussed, new ideas, procedures and practices generated – thus leading to a lot of learning which could be possible through such team sessions.

4.2.3 COLLECTING NEW KNOWLEDGE

Organisations need to develop the culture of continuous learning. For this to happen, it is essential that managers/leaders have the requisite skills. This is possible if some formal learning experience is designed and introduced. This can be done through the following process:

- A survey is conducted focusing on managers and their teams;
- The survey aims to self-assess their approaches to team-based continuous learning;
- Story-based eLearning module is introduced;
- Managers are given an example how they can run a retrospective;
- They are encouraged to include the new approach into the work culture of their teams;
- Planning templates are shared on the organisation intranet;
- Later, managers share each other's problems and experiences;
- The practice of sharing knowledge helps in collecting feedback and is useful in the process of evaluation.

4.2.4   INCREASING INNOVATION

Employees are to be encouraged to engage in projects that result from self-initiated ideas. In order to make such a programme successful, employees may be provided funds they may require during the process of their innovative efforts. Normally these activities are part of group effort and the employees are motivated to work in teams that share challenges and solve problems together.

5   STAGES OF DEVELOPMENT

5.1   INTRODUCTION

Learning as per 70:20:10 model just doesn't happen by itself. It is not a goal. It cannot be achieved by talking about it. If managers conduct seminars or workshops on how to practise this model, they are not doing anything else but rather trying to encourage a training programme. What they are doing is just explaining what this model is all about. Will it enable employees to implement this particular model of learning? Of course not! Instead of this, favourable circumstances are to be created, and managers are to be provided opportunities to have their own learning experience based on the concept of 70:20:10.

Given below are some ideas as how 70:20:10 learning model can be adopted.

5.2   STAGE-1: INDIVIDUAL DEVELOPMENT PLAN

Some people might think that talking about starting the 70:20:10 learning is the roundabout approach. But it is not true. It is a fact that before one can start informal or on-the-job learning, it is essential that they have some kind of learning experience through traditional formal learning programmes. When they have an insight into certain aspects and methods of learning during their formal learning period, they can transfer their traditional or formal learning to their social experiences and workplace tasks.

This type of programme implementation could include the following:

- Community of practice – face-to-face or online;
- Coaching;
- Mentoring by the peer group;
- Managers can be guided to design informal learning through learning guides that describe various tasks that can be performed at the workplace;
- They can then emulate the experience gained.

Planning is the route to organisation of professional and personal development. It also enables one to identify various learning activities focused on experiences that are:

- Experimental;
- Social; and
- Classroom-based.

Quite often there is a gap between a developmental activity and the intended competency level. Creating an individual development plan helps in bridging this gap. Basically, the purposes of IDP (Individual Development Plan) include some or all of the following:

- Enhancing existing strengths;
- Strengthening weak areas of skills;
- Learning new skills;
- Adopting new technology;
- Developing leadership skills;
- Building and strengthening relationships.

5.2.1   BENEFITS OF IDP

The following benefits accrue through the IDP:

- Connects learning activities to targeted competencies;
- Shapes ideas into a comprehensive plan;
- Paves the way to work on short-term, mid-term and long-term goals and objectives;
- Aligns development activities with the organisation's objectives;
- Helps managers/supervisors understand clearly their employees' professional strengths, goals, and areas that need to be addressed and looked after; and
- Provides an artificial and structured mechanism for identifying and processing individual development plans.

5.2.2   RELATIONSHIP WITH CAREER PLANNING

Career planning helps in identifying the career that is most likely to provide job satisfaction. It further paves the way to grow further in one's chosen profession. Career planning enables one to:

- Identify a career of interest;
- Identify what is needed to achieve that target:
    - Relevant technology,
    - Skills,
    - Competencies.

IDP then enables one to organise learning activities in sync with the desired knowledge, skills and competencies.

5.2.3   PROCESS OF IDP

The process of Individual Development Plan is initiated and developed by the employee in cooperation with the manager or mentor. The most common uses of IDP are the following:

- Developing competency level in the current position; and
- Enhancing one's professional growth.

The steps in this process are the following:

- **Identifying career goals:** It involves self-reflection leading to job satisfaction. One needs to identify the skills and competencies required to attain the career goal.
- **Assessing the skills and competencies:** It means evaluating the current level of skills and competencies.
- **Planning the IDP:** It is the stage when one creates a plan for IDP and shares it with his/her manager or mentor. It is essential that there is agreement on this between the employee and the manager/mentor.
- **Implementing the plan:** It is the stage when learning activities are undertaken to implement the plan. IDP involves a change in behaviour as well as learning new behaviour. This can happen when:
  - There is a specific definition of the desired competency;
  - One has a strong commitment to bring out change in behaviour;
  - IDP is shared with manager/mentor and co-workers;
  - There is a strong support group to cooperate with the employee; and
  - There is a system to measure the desired changes in behaviour.
- **Evaluating the problem:** Feedback from manager/mentor/co-workers is required to evaluate if the plan is succeeding.

Process of Individual Development Plan:

Identify career goals > Assess Competencies > Plan IDP > Implement Plan > Evaluate

5.3   STAGE-2: SOCIAL AND TEAM LEARNING

The second stage to 70:20:10 is social learning which can be achieved through peer interaction. This could be done both face-to-face as well as on the online social learning network. At a team level the following approaches can be adopted.

5.3.1   GROUP LEARNING

For this, a team member makes a presentation on a relevant topic for his/her team and invites feedback and discussion. In online version team members can create a blog, post their comments, and discuss matters of common interest. One of the team members can act as facilitator and moderator. This type of discussion through virtual reality is very convenient for the entire team to participate at a time of their own choosing.

Since a large number of businesses are global in nature, online process of interaction among team members – working from different places globally – can add value to their interactions. For example, various teams may be assigned a challenging task to be completed within a specified time frame. These teams come up with various ideas that could be put into practice individually or pooled together in order to decide upon a viable proposition. In this process all the members of various teams have an opportunity not only to enhance their learning but also experience the satisfaction of having achieved the task of adding value not only to their competence levels but also to their organisation. Several global companies – IBM among many others – have immensely benefited through generation of ideas by adopting this method.

5.3.2   RETROSPECTIVE LEARNING

This type of learning is an effective way of evaluating what has been done and what learning has taken place through the process of performing a task. When a certain portion of the task has been completed, members of the team look back – individually and jointly – and reflect on what more could have been done – or adopted a different approach – in order to ensure that what was envisioned has been achieved.

This type of retrospective analysis paves the way for removing the kinks and ensuring a smooth and continuous learning process.

5.4   STAGE-3: DEVELOPMENT PLANS

This is the stage when individual development plans are introduced as part of 70:20:10. At this stage managers/mentors need to pose the following questions to themselves:

- Which projects to start?
- How to implement in stages?
- How will the outcome look like?
- How to motivate the employees to be self-directed learners?

When deciding to embrace the 70:20:10 model the team members must change the way they have been accustomed to work traditionally. For this, they need to think of the following.

5.4.1   ANALYSIS OF PERFORMANCE NEEDS

In the traditional learning method emphasis is laid on doing the training needs analysis. With the adoption of 70:20:10 model it is necessary to move away from this approach to the analysis of performance needs.

This approach involves a critical analysis of what an employee is expected to do and what shortcomings and barriers to achieving this are causing hindrance. At this stage an analysis is made as to how the barriers to expected performance levels can be eliminated – or reduced at least. This helps in designing solutions that can be integrated in the learning experience.

5.4.2   BECOMING CONSULTANTS

Traditionally, learning programmes have been perceived as service centres. This approach needs to be changed while moving on to the 70:20:10 model. In this situation the Learning & Development teams need to act not as trainers but rather as consultants who must identify the bottlenecks to real practical learning and guide the employees how to face the challenges and learn. This change in the L&D team is not easy but with a shift in their mindset it can be achieved, and that will be the right way to ensure proper implementation of 70:20:10.

Fig. 5/1 below depicts the stages of 70:20:10 development.
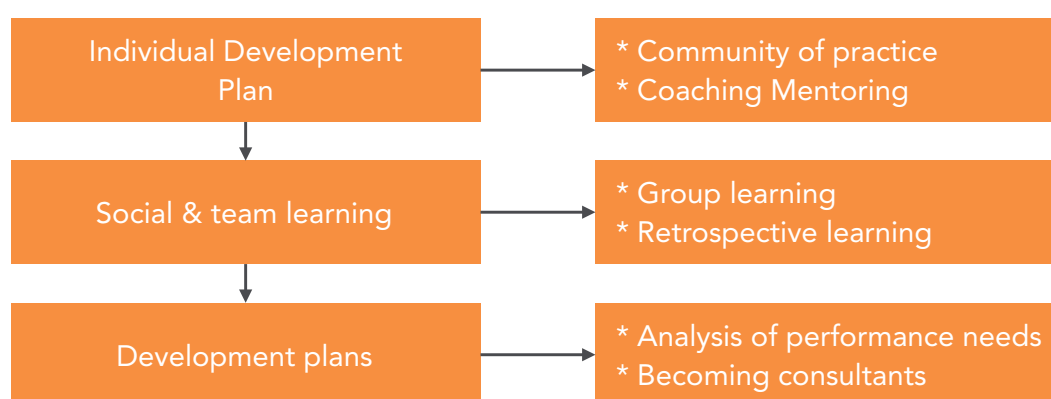
Fig. 5/1 Stages of 70:20:10 development

6   BENEFITS OF 70:20:10

6.1   INTRODUCTION

While employing people and continuing with them, organisations have traditionally depended on formal learning systems – school/college education and in-house training. Consequently, they have been saddled with ineffective managers and unimaginative work teams. Companies have failed to develop skills fast enough. This happens because they mainly focus on the 10 per cent formal education and training. True that this prepares people with the basic learning required for a profession, but it does not open their eyes to further innovative ideas and does not drive real behaviour change.

This phenomenon has led the researchers and practitioners to believe that only 10 per cent of knowledge comes from formal education and training, 20 per cent from observing and interacting with others, and 70 per cent is obtained on the job. Moreover, the 70:20:10 model of learning is not just a training gimmick, but it can lead to better organisational culture and higher performance.

6.2   BENEFITS OF 70:20:10

It has been observed that this model is generally consistent with the developmental experiences of many individuals. It is a valuable guide to employ different and non-traditional developmental experiences. Benefits can be briefly described as follows.

6.2.1   INSTRUMENT OF CHANGE

It has been rightly predicted that workplace learning is on the threshold of technology-enabled change. Moreover, workforce also expects – and demands – greater say in how work is planned and executed. The focus is not on carrying out instructions but on doing tasks based on group discussions and decisions. They also expect the organisation to provide and sustain a work environment that looks after the enhancement of existing knowledge and skills and gives opportunity to acquire new knowledge and skills, and they want all this through their own initiative and effort – of course, under the guidance of a qualified and experienced mentor.

Training professionals agree that the existing traditional model does not reflect the market's fast-growing focus on informal learning, and believe that the 70:20:10 model fills the existing vacuum.

It may be emphasised that the employees following this model are more likely to demonstrate a faster and more effective response to change running through the business environment, and that it will see a very highly motivated workforce.

6.2.2   RELEVANCE IN MODERN TIMES

For modern corporate leaders learning is a critical issue. This has led to an increased investment in corporate training. They believe that significant development happens outside of a formal learning event. It is more challenging and requires facilitating the mind shift from the traditional classroom learning to workplace learning.

Managers and leaders need to understand that they have a responsibility for the development of their people – and consequently on the development and progress of their organisation. Various organisations like IBM – and many others – have implemented this model and have found it to be extremely effective, and so necessary in modern times.

6.2.3   HIGHER EFFECTIVENESS

The adoption of 70:20:10 model is likely to bring in some or all the following changes and benefits to the organisation as well as the workforce:

- A culture of continuous learning flow is bound to happen.
- Employees are more likely to have access to job aids.
- Managers can be encouraged to support a continuous learning environment.
- Employees are likely to get what knowledge and skills they aspire to have.
- It can help establish a workplace culture supported and empowered by informal social learning.
- Business problems can be analysed more thoroughly.
- The capability to retain information and knowledge for a longer period is possible.
- It can ensure an increased involvement of managers, supervisors and others.
- It can provide a common language of development to the entire workforce.
- It provides a continuous learning environment. It ultimately leads to on-demand learning, and when it is provided, it acts as a greater motivational force.

6.2.4   FASTER RESPONSE

When employees are engaged in learning all the time at their workplace, they have a feeling of empowerment, and so they start focusing on their career goals. This behavioural change is likely to lead to the following:

- Employees are eager to collaborate with their peers.
- They willingly try to connect with their leaders and mentors.
- This enables employees to develop and sustain critical relationships.
- Employees themselves choose a faster pace of learning as they are highly motivated to prove themselves.
- Since learning needs are identified based on performance, employees are ready to engage in learning programmes, and so they can employ learning resources faster than could have been possible through formal learning programmes.

6.2.5   COST EFFECTIVE

The adoption of 70:20:10 model ultimately leads to cost effectiveness of training and development. This happens because of the following factors:

- Training budget can be significantly reduced because most of the time employees are engaged in the learning programme through interaction with their co-workers and mentors/leaders.
- This becomes possible because of lower spending on:
  - Formal learning events;
  - Development costs;
  - Instructor time;
  - Travel costs for instructors and learners; and
  - Technology.

The adoption of 70:20:10 model is a useful resource and fosters employee growth across all categories of employees. This happens through a mix of:

- Experiential learning;
- Social learning; and
- Formal learning.

6.3   CATEGORIES OF LEARNER EMPLOYEES

All categories of employees stand to gain by adopting the 70:20:10 model. They could be broadly categorized in the following.

6.3.1   MANAGERS/LEADERS

To be a manager/leader in a modern workplace is quite challenging. They are responsible for assigning tasks equitably and ensuring the best performance. They need to be guides and mentors too. It could be said that they are in the middle – the 20 per cent – of the 70:20:10 model, and are a bridge between formal and informal learning. To ensure that learning is performance-based many companies are doing away with their end-of-year performance reviews, replacing them with weekly performance reviews. These reviews are openly done with the entire team or group wise, and individual as well as team/group performance is reviewed, deficiencies are identified, suggestions for improvement are discussed and appropriate decisions are made. This activity ensures an active involvement on the part of managers in the employees' learning curve.

6.3.2   ADMINISTRATIVE STAFF

Members of the administrative staff are traditionally bound by the written rules and regulations and not only fail to read between the lines but are also unable to think out of the box. When they are involved in working through the 70:20:10 model, they are enabled to go beyond their bureaucratic approach and find new procedures to perform their tasks.

6.3.3   TECHNICAL PERSONNEL

Technology is developing at such a fast pace that it is a herculean task to keep up with it. Formal training programmes not only cost a lot but are also time-consuming. Moreover, it takes a lot of time away from work, which is not a desirable situation for any organisation. But when the employees learn about innovative technology and practise it at their workplace, they learn fast and through the method that is in consonance with their job profile. The 70:20:10 model is the best approach for employees to embrace technology in a practical way.

6.3.4   WORKERS

No productivity is possible if the workers stop learning. They cannot also be spared from work and sent for some formal training. To overcome this hurdle, it is essential – and profitable – that suitable learning programmes are organised at their workplace under the supervision of their managers/supervisors who act as their mentors. The 70:20:10 model provides ample opportunities to achieve this target.

7   IMPLEMENTATION

7.1   INTRODUCTION

It has been very well established that people learn their jobs by doing their jobs. For ensuring this it is necessary that employees at all levels are aware, confident and committed to adopt the 70:20:10 model and implement it. The onus of responsibility is obviously more on managers/leaders who need to oversee this implementation on a regular basis. They must learn that they need to shed off the hackneyed and haphazard approaches to learning and embrace the approach that ensures an organisation-wise movement through the 70:20:10 model.

7.2   COHERENT ORGANISATION

In recent times the business world has undergone a tremendous transformation because of the increased focus on speed, productivity – and consequently, on profitability. To create and increase value, workers must learn faster and perform better. Consequent upon this, learning and work have merged, and employees learn while working. This convergence of work and learning ensures that – as opposed to the older system of formal training first and work later – employees are enabled to do complex and unpredictable work. They are also able to deal with situations that are not written in any job description. This is the best way to achieve the goals and objectives of the job – and the organisation – in collaboration with co-workers.

This can be achieved in a better way if an employee knows what the other employee is doing. All of them need to be on the same page thus leading to a harmonious environment and ultimately to a coherent organisation. The adoption and implementation of the 70:20:10 model facilitates this.

7.3   LEARNING ORGANISATION

It is necessary for organisations to develop the 'culture of change'. In this type of environment everyone in the organisation understands that there is need for ongoing change, and that change is in their interest. Managers become increasingly adapt at implementing changes, part of which involves consultation, discussion and explanation.

In its more advanced form, the acceptance of change and the management of change to optimum advantage can create positive excitement. Moss Kanter (1989) quotes typical responses from people in American companies where this occurs:

"It's exhilarating; it's fun; there is never a dull moment; time flies here", and so on. Such workplaces have been described as 'learning organisations', where everyone expects as a matter of course to routinely acquire new knowledge and skills with which not only to better perform their existing responsibilities, but also do so in anticipation of the expected changes to come.

Peter Senge (1990) said:

> *"The learning organisation is a place where people continually expand their capacity to create the results they truly desire, where new and expensive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together".*

There is a great need for transforming organisations into learning organisations because competition in the market continually changes. To advance and grow – and indeed to survive – in a highly competitive environment, an organisation needs to have a learning culture. This is because of the following:

- There is a need for a smart and adaptable workforce;
- The workforce needs to challenge itself and the business;
- The workforce needs to be responsive with an insightful approach;
- The business must learn from its employees and constantly adapt as per circumstances;and
- To excel, organisations need to tap into people's capacity to learn.

Peter Senge (1990) further defined the five disciplines which can enable organisations to change and develop through both individual and collective learning.

He proposed the following elements to ensure a learning organisation:

- Team learning;
- Building shared vision;
- Mental models;
- Personal mastery; and
- Systems thinking.

Learning organisations do not simply 'happen' effortlessly. Managers need to be deeply committed to monitoring and forecasting, developing contingency plans, seeking to match skills to emerging needs as they arise, reviewing all systems and processes continually and maintaining a 'can do' atmosphere which is stimulating and responsive. By being proactive and not reactive, they seek to determine both the pace and direction of change.

Managers are not alone in making learning organisations operate effectively and efficiently. Everyone else – all employees – will be encouraged to contribute their ideas and suggestions which will help to improve operations. Feedback systems are designed to promote this, including individual appraisal by line managers of their direct subordinates. There is a feeling of 'membership' and participation, which goes to the heart of the 'culture'. Implementation of the 70:20:10 model ensures creation and sustenance of such a learning organisation.

7.4   LEARNING ECOSYSTEMS

The 70:20:10 model will require the development of a learning ecosystem. This ecosystem will comprise various components that work in conjunction with each other to create a wholesome learning experience. In designing the ecosystem, the learning professionals need to rethink, redesign how learning works in the organisation.

7.5   CHANGING ROLES AND WORK CULTURE

In modern times work culture is changing and so are the roles of various categories of employees. In coming years, the learning and development professionals will have more responsibilities and a greater commitment to employees' learning programmes. They will need to tackle challenges in an integrated way and use their expertise in learning in the organisation by working closely with team members and their teams. The 70:20:10 model will pave the way for increased learning opportunities at the workplace.

Managers need to shift their focus from training needs to performance needs approach. Quite often employees know how to use the system, but choose to not do so. It is possible that they do not care to learn about it. In such a situation management personnel must ask themselves:

- Is there anything missing in the system?
- Can the system be redesigned to ensure employees' performance level to go up?
- What steps are needed to ensure effective performance levels?

After analysing the above, it is desirable that any learning programme is designed to suit the performance needs as well as aspirations of employees. This shift in the approach to work culture will ensure that the organisation reaps the benefits of the 70:20:10 model.

This means that the roles of various categories of team leaders need to change. It will ultimately mean the development of a work culture that is conducive to embrace the 70:20:10 model in the interest of an efficient organisation.

7.5.1   SENIOR MANAGEMENT SUPPORT

The employees' manager is the key to their enhanced learning experience. They have a role to:

- Provide feedback to team members about their performance;
- Encourage reflective thinking;
- Encourage continuous learning;
- Create an environment which ensures sharing of knowledge, skills and experience with co-workers;
- Employ the system of job rotation; and
- Mentor their teams.

In this task each manager must be practically supported by senior managers. They must work with HR and L&D to develop and align the new strategy. Only then they will be able to draw the benefits of using the 70:20:10 model.

7.5.2   PEOPLE MANAGERS

Gone are the days when managers were expected to sit in isolated cabins, and issued instructions, wrote performance reports, disbursed rewards and punishments. They were far removed from the other employees. Today's work environment requires that a manager behaves as the leader of his/her team, is an important part of the team, and considers himself/herself as nothing more than first among equals. For this purpose, they need to do the following:

- Develop and sustain two-way communication channel with the rest of the team;
- Treat every individual in the team as an efficient contributor to team effort;
- Ensure that the team remains a cohesive group;
- Encourage free and frank discussion – not considering disagreement as opposition;
- Be ready to guide and support the team in all their endeavours;

- Give credit to the whole team for good performance;
- Own responsibility for any failure;
- Assign tasks to practise new skills that go beyond the existing competencies;
- Describe expectations in clear terms; and
- View employees' mistakes as learning opportunities.

7.5.3   SELF-DIRECTED LEARNERS

The modern workplace has mostly democratized. Employees have an increased say in what and how they learn. They want to be in control of their own development. Just as they were used to complete their assignments in collaboration with their peers when they were in school or college, they naturally want to perform their tasks – and learn – at the workplace in collaboration with their co-workers. To do so, they need to direct their own learning.

According to Malcolm Knowles (1975):

> *"Self-directed learning describes a process by which individuals take the initiative, without the assistance of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes".*

Even though some employees will be reluctant to be responsible for their own learning, they need to be encouraged to do so. This will depend on how their managers are able to foster an organisational culture which will instill in the employees the value of personal and professional growth based on their self-directed approach. As a matter of fact, these worker- learners must take charge of their own learning. They must willingly extend the area of their activities to difficult and uncomfortable situations and initiate action to seek new knowledge and skills.

Self-directed learning passes through the following stages:

- **Identification of learning needs:** Employees can identify their learning needs in consultation with their managers who use their knowledge – through feedback system – to identify learning needs that are aligned with organisational goals and needs.
- **Learning:** The process of self-directed learning is different for each employee. However, the following are the common steps:
  - Resources;
  - Time;
  - Practice;
  - Reflection.

- **Evaluation of learning:** It is the process of asking:
  - Have I acquired the desired skills and knowledge?
  - Am I able to apply these at work?
  - Is my performance level improving?

The 70:20:10 model provides ample opportunities to employees to achieve this goal.

7.5.4 HR AND L & D PERSONNEL

In most organisations the HR and L&D departments are engaged in organising the traditional and formal learning programmes. To get the benefit of the 70:20:10 model they need to realign their priorities and focus on making fundamental changes to their approach to learning. They need to do the following:

- Provide appropriate support to managers/mentors and learners;
- Encourage managers to embrace the changing expectations of their roles;
- Stop managing learning programmes, and facilitate learning in a supportive environment; and
- Shift their approach from training needs to performance needs.

7.5.5 MANAGER AS A LEARNING LEADER

To enjoy the benefits of the 70:20:10 model a manager needs to understand that they are not merely managers but learning leaders too. They must act as mentors to their employees. Employees have on-the-job opportunities for acquiring new skills. Managers must allow them to practise the existing skills and to learn new skills through the completion of innovative tasks.

To support this type of learning the manager must have a good feedback system which will ensure a fairly accurate knowledge of shortcomings and what they will need to focus on in the future.

Since social learning is the main component of increased learning efficiency, managers need to stimulate it through effective team development and management. For this to succeed, managers must set new objectives that are challenging enough to promote learning, yet are realistic and achievable.

8   BLENDED LEARNING

8.1   INTRODUCTION

Blended learning can be defined as a combination of classroom and virtual learning events. However, learning for leadership development must move beyond mere course work because leadership development requires effective relationships and challenging assignments. This is critical for leadership development in the right way.

8.1.1   LEADERSHIP DEVELOPMENT

Leaders are not born but they are made. When leaders work in managerial positions, they must have the ability and willingness to learn from experience. This is the foundation for creating positive impact and thus leading successfully. They are continuously involved in learning, and thus they continue to grow and successfully adopt appropriate changes as they move up the ladder of their career.

An essential part of management is coordinating the activities of groups and directing the efforts of their members towards the goals and objectives of the organisation. This involves the process of leadership and the choice of an appropriate form of behaviour.

Leadership might be interpreted in simple terms, such as 'getting others to follow' or 'getting people to do things willingly', or interpreted more specifically as 'the use of authority in decision making'. It is interpersonal influence which is exercised in a situation and directed through the communication process towards the attainment of a specified goal. It is often associated with the willing and enthusiastic behaviour of followers. Since leadership is an inspirational process, a leader influences long-term changes in attitude. It doesn't necessarily take place within the hierarchical structure, and many people operate as leaders without role definition.

We can say that:

> "Leadership is related to motivation and the process of communication through which one person influences the behaviour of the other people. The process of leadership is not separable from the activities of groups. Effective leadership is a two-way process".

Leadership development encompasses several features, and leaders are expected to learn and perform various tasks while at the same time developing an attitude that positively changes the whole work environment.

These are the following:

- They show average people how to do the work of superior people.
- They harness the power of people.
- They create capacity in others. They imagine the future, determine strategic direction, and align the organisation and its people to a vision.
- They accept that they are not gods of management, and that, in fact, occasionally being told 'no' can be more important than always hearing 'yes'.
- They understand that the most important trait for successful leaders is emotional intelligence, and constantly strive to develop and sustain it.
- They develop a vision for the organisation, advocate change and new approaches, and implement to make a new, stable environment.
- They communicate their vision to the rest of the people, and motivate staff to act in ways that will bring about the required change.
- They set the agenda and empower people to produce useful change.
- They know that markets are dynamic and that technologies and competitive processes change.
- They understand that for businesses to survive, leaders must motivate staff to avoid fixed thinking. Consequently, they understand – and practise too – that thinking outside the box is a leadership tool that encourages critical responses to problems.

8.1.2   ROLE OF BLENDED LEARNING

Successful leaders learn best through actual experience at work. They can learn better because of:

- Involving in challenging assignments at workplace (70 per cent);
- Maintaining and sustaining relationships with co-workers (20 per cent); and
- Acquiring knowledge and skills through attending formal courses and training programmes (10 per cent).

In the quest for total learning, organisations need to embrace blended learning which is a combination of:

- Traditional classroom learning;
- Virtual learning: eLearning, webinars, virtual classroom events.

By combining the classroom experience with various features of virtual learning, workplace-based learning can be significantly enhanced.

8.2   MOBILE LEARNING

Innumerable mobile apps are available to collect and disseminate information, and which are important tools used both inside and outside the workplace. Most of the information that quite often remains buried in the learning management system can be easily summoned to make use of.

8.3   SOCIAL MEDIA

Social media has emerged as a valuable tool for communicating and connecting with people, and is great not only for sharing one's knowledge and initiative but also for learning from others.

These could include: Online learning, Virtual reality, Expertise in location, Community practice.

8.4   EXPERIENCE OF OTHERS

There are always two types of research. One analyses the experiences that are responsible for creating great and successful leaders. The other outlines the experiences that show the failures which keep the people away from reaching their expected potential targets. Both types of experiences help the people to understand what road they need to take and what pitfalls to avoid. Lessons learnt from the past lay the foundation for developing key relationships. This is very important for taking full advantage of the 70:20:10 model.

8.5   ACTION LEARNING

It is neither possible to separate leaning from work nor one should attempt to do so. Moreover, the pace of learning can be accelerated by doing the following:

- Adding reflection time which is appropriately directed;
- Working with a personal or team coach/mentor;
- Interacting with teams that focus on peer learning; and
- Working with teams that are practically interested in generating results of their actions.

Action learning is not an academic exercise, rather it is based on projects that are an outcome of real work. Projects that lead to action learning ensure the following:

- They involve the team and all other stakeholders;
- They provide opportunities for: Reflection, Coaching/mentoring, Practice, and Discussion about leadership skills.

Thus, blended learning – as part of the 70:20:10 model – brings about transformation in learning, and ensures that learning takes place in a thoughtful and systematic way.

8.6   EXPERIENTIAL LEARNING

Theories of learning teach us that children learn best through the play-way method. The same holds true for adults who learn best by doing a certain work. For example, one can learn complete theory about driving a motor vehicle in a classroom and on a simulator, but they will not actually be able to drive one until they drive it. Based on this concept we can say that learning takes place through doing something in practice after getting knowledge from the formal system and simulation.

It is a fact that our knowledge – and thus learning – comes from 70 per cent of our work environment. This can be very well achieved by challenging the learners. These challenges come in various forms that push people to reach their highest potential. This type of push can be provided by:

- Creating online learning modules for new learning;
- Encouraging people to have a different perspective to their work;
- Using quizzes that show how new skills learnt can be applied in work situation; and
- Using gamification to sustain people's focus on new learning.

8.7   COLLABORATIVE LEARNING

A lot of expertise exists in an organisation. These experts in various related fields can significantly boost the learning experience of their co-workers by sharing their knowledge with them. They can have interactive communication with the learners and motivate them to ask relevant questions and get answers. This collaboration accounts for 20 per cent of the 70:20:10 model which highlights the premise of so much learning taking place through social interaction.

8.8   CELEBRATING SUCCESS

It is natural for normal human beings to share their experiences with others. This leads to connectivity with experiential and social learning, and ultimately to sharing their success stories which have an enormous potential for learning and getting motivated. Examples of such sharing could be the following:

- Recounting the knowledge gained from formal education and training; and
- Sharing a video or presentation that helped them in getting their job done effectively.

9   ROLE OF TECHNOLOGY

9.1   INTRODUCTION

Changes in the system of learning have also come about because of the interventions of technology. These changes get a fillip when people have an innovative idea and have access to a wide range of technology to help them transform their dream into reality.

Boyan Slat, founder of "Ocean Clean up" – a Netherland based non-profit organisation which aims to clean up the oceans from plastic waste – has remarked:

> *"I believe technology is the most powerful agent of change we have. It creates entirely new building blocks and opens up a massive amount of possibilities".*

Similarly, technology plays a significant role in ensuring an effective learning environment through the adoption of the 70:20:10 model. Learning management modules provide a link between the training interventions and the job roles people play. These interfaces add to the efforts of learners and provide them an expert and user-friendly platform to acquire new knowledge and skills.

9.2   VIRTUAL REALITY AND ONLINE RESOURCES

A lot of virtual reality is available in modern times to learn from others' experiences and their will to share what they have learnt or done. People can use the platform of virtual reality through the following methods:

- Uploading and browsing through videos on: YouTube, SlideShare etc.,
- Pushing learning content to learners using online platforms.

Engaging in learning activities using online resources connects formal learning with experiential learning and motivates learners to learn at their own pace while engaged in performing their assigned tasks at their workplace.

9.3   E-LEARNING

E-learning or digital learning has made great inroads in the realm of education and training. Since learning modules in this system provide self-paced learning as per the work schedule and convenience of learners, it has an immense potential. Consequently, it holds immense possibilities for supporting the 70:20:10 model. E-learning opportunities are available not only for usual professional modules but also cater for technical subjects. Moreover, eLearning solutions support the idea of personal learning environment which encompasses not only eLearning opportunity but also a wholesome learning experience.

E-learning environment enables an employee to:

- Collect information at one point to make use of it without loss of time;
- Reflect on what learning is taking place;
- Share the knowledge gained with others on the online platform;
- Get feedback from others; and
- Make their work visible to others so that they too get help, resulting in greater connectivity.

9.3.1   TYPES OF E-LEARNING

There are basically two types of eLearning:

- **Synchronous:** This involves interaction of learners with an instructor via the Web in real time. Interaction can be done through instant messages, chat, audio/video conferencing; it can also be recorded for future reference.
  Advantages are:
    - It can be used for tracking learning activities.
    - It is possible to have continuous correction.
    - Learners can connect and collaborate globally.
- **Asynchronous:** This allows the learner to complete web-based training at their own pace – without involving interaction with the instructor.
  Advantages are:
    - It is available 24/7.
    - It can be accessed from anywhere.

The emerging new learning – blended learning – makes use of both synchronous and asynchronous learning methods. This assists the implementation of the 70:20:10 model.

9.3.2 BENEFITS OF E-LEARNING

E-learning could do a lot of things for learners:

- The interactive computer programmes could be used to provide an alternative to writing as a form of active participation in knowledge-building.
- It can model real-world systems and transactions, and can therefore create an environment in which learners can explore, manipulate and experiment.
- The features of the digital environment are fully controlled by the computer program, and so it gives learners freedom as appropriate to their level of mastery.

9.3.3 MICRO E-LEARNING

Micro-learning is a modular delivery approach to online learning where content is presented in a series of short, concise and dynamic learning moments.

Learners can integrate Micro-learning techniques into their eLearning programmes. It offers them an opportunity to more easily absorb and retain the information that is being offered. It breaks down the learning process into lessons that typically last no longer than a few minutes, and enables them to collect and recall learning material more efficiently and effectively.

9.4 E-LEARNING RESOURCES

There are several eLearning sites where one can access eBooks for their reference, and/or engage in virtual lectures or discussions. Prominent provider of such resources is the company called www.bookboon.com.

9.4.1 BOOKBOON.COM

Among others, bookboon.com – with its headquarters in London and Copenhagen, and offices in Stockholm, Amsterdam and Munich – is not only a prominent but also the largest global publisher. It has a collection of over 1000 textbooks for students and over 600 eBooks for business professionals in 10 languages, and the number is increasing every day. Their eBooks have so far been downloaded more than 75 million times.

Bookboon.com offers the following:

- **eBooks for professionals:** Their business eBooks are designed to provide crucial inputs to business professionals in their quest for efficiency and effectiveness at their workplace. These books provide practical knowledge and learning experience on a wide variety of topics in the fields of I.T., engineering, sales, marketing, finance, management, personal development and so on.
- **eLibrary:** Bookboon.com has provision for creating eLibrary which is highly beneficial to individuals as well as organisations. There is a 'Premium' section which they can sign up for on payment of a reasonable and affordable fee, and make use of the downloaded books at their own pace and convenience. Many of those who have availed this facility are currently able to make good use of employee learning resources.
- **Corporate eLibrary:** Bookboon.com offers corporate eLibrary to companies. Through this the employees can take charge of their own learning and development, and make use of the eBooks on their company's intranet management system. This goes very well with the adoption of the 70:20:10 model.
- **Online examination:** There is also provision for online examination and certification on various areas of interest to the employees. They can study the subject at their own pace using bookboon.com eBooks and sit the examination online and get an achievement certificate.

9.4.2 MOOCS

MOOC (Massive Open Online Course) provides direct access to learning via the Web. It includes:

- Traditional course materials; and
- Interactive forums for collaborative interactions.

MOOCs have made it possible to provide affordable alternative to formal education. Since these programmes are available online, learners can combine work using them as part of practising the 70:20:10 model.

MOOCs have links with several online learning providers such as:

- EdX, Pearson plc, Stanford, Harvard, MIT, Future Learn, and many more.

9.4.3   MOODLE

It is also an open-source learning management system, and is quite useful in providing blended learning programmes. It has a wide range of innovative features which create a virtual learning environment in training and development and business settings. It offers the following eLearning opportunities:

- **Sharable Content Object Reference Model (SCORM):** It defines communication between client-side content and server-side learning management system.
- **Learning Tools Interoperability (LTI):** It integrates learning applications with learning platforms.

9.5   ARTIFICIAL INTELLIGENCE (AI)

Artificial Intelligence (AI) – also known as Machine Intelligence (MI) – is a system that makes a machine behave just as a human being would.

9.5.1   CONCEPT OF AI

We can understand the concept of AI from different perspectives put forth by its advocates who emphasise that AI is a configuration of systems that:

- **Think like humans** – activities associated with critical thinking, e.g. decision making, problem solving etc;
- **Act like humans** – building machines that replicate human intelligent functions, e.g. language learning, storage of information, reasoning, adapting to changing situations etc;
- **Think rationally** – replicating logical thinking, e.g. computation as to how to perceive and reason;
- **Act rationally** – replicating and automating intelligent behaviour aimed at the achievement of goals.

9.5.2   HISTORY OF AI

The history of AI can be briefly summarised as follows:

- It all started in late 1940s and early 1950s when McCulloch did research on the structure of the brain and the concept of artificial neural networks. During this period Alan Turing (1950) came out with what is known as 'Turing Test'.
- Minsky and Edwards (1951) – with the help of von Neuman – built the first neural network computer.
- In 1962 Rosenblatt came out with the concept of learning algorithm.
- During the period 1961–72, Newell and Simon developed GPS, but this approach did not succeed.
- In the mid-1980s effort was made to use neural networks for machine learning.
- At this stage, the use of Fuzzy logic showed the way to improve cognitive modelling.

Such efforts are an ongoing process and frequently experts are coming out with new logic, techniques and improved models. Towards this aim neural networks are contributing a lot. These networks are processors connected with each other and capable of learning, analysis and synthesis. This smart system surpasses traditional algorithms in that the interaction between a person and computer becomes more interactive. The quest is neither over nor complete, and every day optimism grows that one day it will be quite possible to reach the goal. However, whatever has been achieved so far, has been quite useful in coming out with practical learning solutions to several problems.

9.5.3   AI AND LEARNING

AI is about designing software that has the capability of analysing the various forces operating in the environment and making intelligent choices from among the alternatives available. This can make it possible to be engaged in effective eLearning.

This is possible because of the following:

- AI can make analysis of data and decision making faster than a human being. This is already visible from its use in the fields of medicine and transportation. Inroads are already being made into the arena of education and learning.
- AI can make it possible to make teaching software adaptive, such as pre-programmed tests and examinations.
- AI systems can have the ability to identify the learners' needs and come up with relevant learning models.

9.5.4   IMPORTANCE OF AI IN FUTURE LEARNING

We can gauge the importance of AI in future learning if we look at the following:

- It may be possible to feed results into databases leading to development of theories and algorithms which AI can either validate or discard.
- Though AI in eLearning is still in the developmental stage, it has the potential to improve eLearning not only feasible but also convenient and effective.
- It allows learners to work at their own pace, and that too, individually.
- It allows them to explore in depth and test their knowledge even in the face of complex scenarios.

We can confidently assume that AI is likely to shape up the future of eLearning more forcefully than many other innovative systems. It is happening even now, and that too, at an astounding pace. Its importance is great; it has never been greater before.

9.5.5   EXAMPLES OF CURRENT USE OF AI

If we look around us, we will be surprised to acknowledge that a lot of things we take for granted have already been showing the increased use of AI – even with several constraints – and efforts are on to reach the stage when more options are available to use the AI systems.

Some examples of ongoing efforts are given below:

- Online service in education and learning beyond the printed text books;
- Access to information on the Internet;
- Google's conversational agent;
- Evidence-based treatment plans for cancer patients;
- Cambridge-based national language processing system (Vocall Q) – now owned by Apple;
- Application of AI to code development using DiHBlue from Oxford University;
- Microsoft's 'emotional recognition' web app;
- Google's 'Deep Dream' images;
- Microsoft's tools such as Azure Machine Learning Experimentation Service, Azure Machine Learning Workbench, and Azure Machine Learning Model Management service;

- One of the examples of using AI can be found in the organisation of Corporate Learning Week 2017 (CLW) involving learners from Google, Six Flags, LinkedIn, Southwest Airlines and the NBA among others, focusing on:
  - Empowerment of learning;
  - Bridging the gap in technical skills;
  - Enhancing leadership skills;
  - Building a more innovative organisation;
  - Enabling workforce to be more efficient and productive, etc.

9.6   GAMIFICATION

Gamification is not about playing games. Rather it implies using the concept of game design to non-game applications. This is a technique to engage learners to have non-game experiences that motivate them to learn in interesting and absorbing ways.

9.6.1   HOW IT WORKS

Users are encouraged to find a path to mastery through myriad obstacles – just as it happens in a computer game – and it results in the following:

- Positive feedback is generated in the form of points gained;
- It provides opportunity to practise from a simple task to a high-level task;
- It creates an environment of virtual reality that triggers prompt action by the user leading to the convergence of motivation and ability.

9.6.2   BENEFITS OF GAMIFICATION

Gamification has the potential to ensure the following benefits:

- It provides effective learning experience as the learners must use their ability of retention in order to successfully proceed further in the process.
- It creates an informal learning environment which helps learners to face challenges in real life situations, and which they can engage in repeatedly till they achieve success.
- Feedback is provided immediately, and it helps the learners to understand where they went wrong and what pitfalls they need to avoid.

- It helps in bringing about the desired behavioural change as the users can repeat the process several times till they are able to retain what they practised on.
- It can cater to several learning needs, for example, induction, soft skills, sales and marketing, professional skills etc.

9.7 PROFESSIONAL CONNECTIVITY

In modern times it has become rather essential to have professional connectivity with people working in different organisations. When they connect with their counterparts in other organisations, they not only gain insight into what others are doing in similar – or sometimes different situations – but also give them an opportunity to share their knowledge, work culture, insights, vision etc. with others. Many online sites cater to this important need. Some of the significant ones are the following.

9.7.1 LINKEDIN

It is a professional networking site which allows members to create their profiles and connect with other people. These connections represent real-life professional relationships. This site has become extremely popular and millions of people are using it on a regular basis to share their experiences, keep in touch with their connections, and forge new relationships.

9.7.2 YAMMER

This site is useful for connecting everybody in an organisation as they can keep track of each other's progress on a certain project. The top managers can see how different teams are engaged in solving problems, and coming out with innovative ideas. Spontaneous conversations with experts within the organisation can lead to obtaining much needed advice and guidance. This helps not only in quick and informed learning but also in increased productivity.

9.7.3 SOLABORATE

This site provides a platform to professionals and companies to connect with each other and discover opportunities and collaborate. Communication is conveniently ensured in real time via chat, audio and video features.
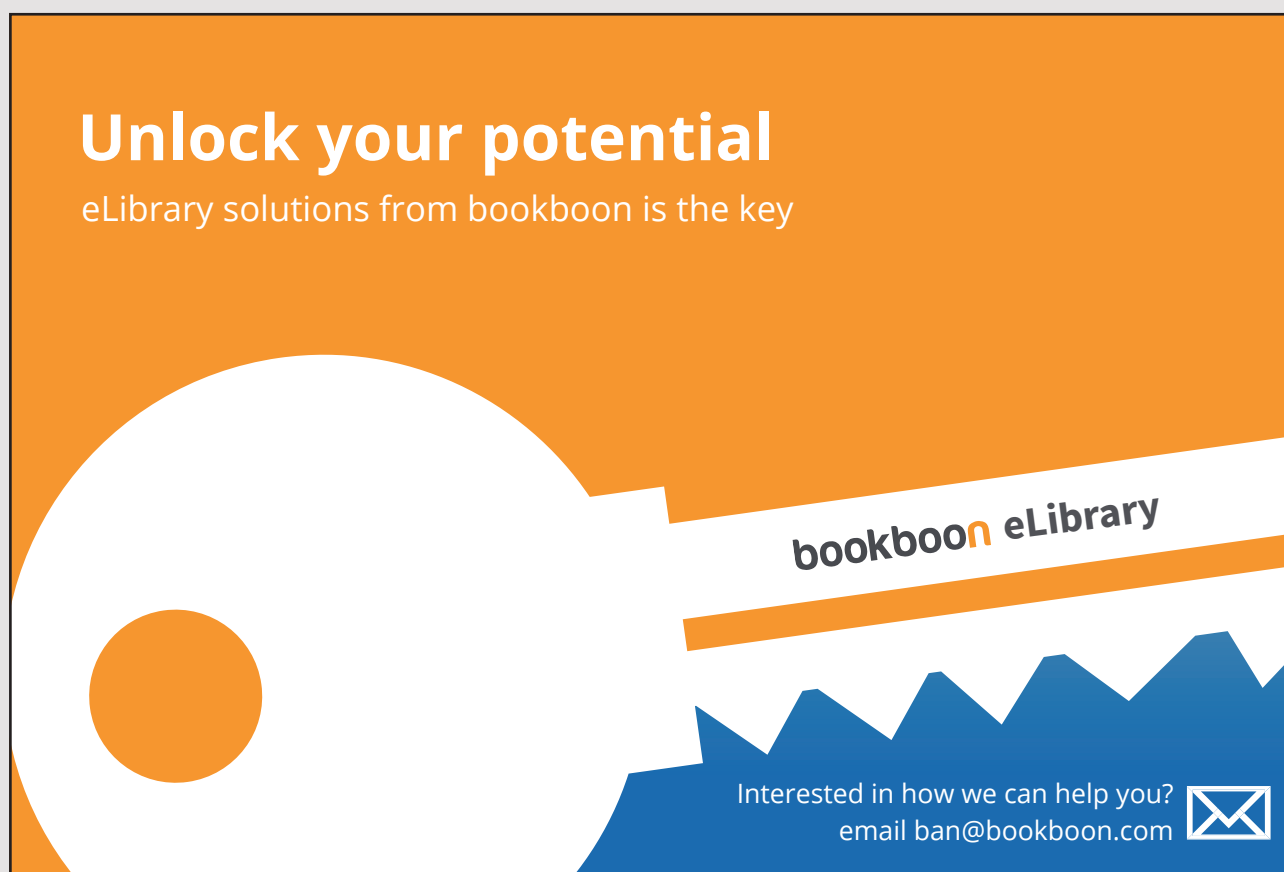
9.7.4 IDEAPLANE

This networking site is especially useful for financial institutions and well-regulated industries. It facilitates the concurrent use by a multiple audience. It also provides consultancy services in the fields of technology and enterprise.

9.7.5 SLIDESHARE

It is a slide hosting site – now part of the LinkedIn group – and is very popular among those who wish to browse through PowerPoint, Pdf, Keynote, or OpenDocument presentations. Learners can have access to a large amount of information through several presentations on the same topic even. Moreover, they can upload their content also and share their work with others worldwide.

9.7.6 ACADEMIA.EDU

This site is mainly for academics, and hosts papers, presentations, research projects etc. in virtually all fields. Learners can access these papers and upload their own.

10 CHALLENGES OF 70:20:10

10.1 INTRODUCTION

Implementing a learning programme based on the 70:20:10 model is more complex than organising a training programme. At least in the beginning, it is rather too difficult and complicated to the programme facilitators. They need to understand all the relevant parts of the design and plan accordingly. It is even more necessary because it is not a static programme but a dynamic one.

10.2 OVERCOMING MANAGERIAL RESISTANCE TO CHANGE

Adoption of the 70:20:10 model means that the learning and development teams must get used to new ways of learning while at the same time working. There is likely to be wider use of technologies, and it will mean that team members may have to reskill themselves in a certain area.

Moreover, managers – and other employees too – often find it difficult to understand what it means to be continuously involved in the learning process along with performing the assigned tasks. This makes them resist the changes that they need to adopt necessary for the innovative approach. They must realize that change is probably the only constant factor in life. Centuries ago the great philosopher-teacher, Socrates, advocated the same idea when he said:

> *"The secret of change is to focus all your energy, not on fighting the old, but on building the new."*

The first task for the learning and development professionals is to overcome this managerial resistance, and educate and motivate them to embrace the new learning model.

Discussing the following questions with them will help in bringing them around to accepting the change:

- How many conferences do they attend in a year?
- Could they reduce this number to the bare minimum?
- If so, can they not spend that time in peer learning at the workplace?

- Will the new skills and methods they learn not boost up their own career along with a spurt in their organisation's growth?
- Could they not try to bring about the change so much required at a modern workplace?

However, some people are usually attached to their traditional approaches to learning and development and are not comfortable – at least initially – with the concept of work-based learning. This happens because they do not want to come out of their comfort zones and are reluctant to do so. They need to be encouraged to come out of their comfort zones and take small risks. Only then they will be able to realise what it takes to succeed by adopting new methods of learning such as the 70:20:10 model.

In general, people have their own comfort zones within the limits of which they prefer to work. This happens because they are wary of the risks involved if they step out of their comfort zones. However, to achieve goals and objectives and move ahead in life, it is necessary to come out of the comfort zone, initially take small risks, and thus move towards their planned goal.

In view of this, the learning and development professionals have an important task of encouraging and motivating the employees to embrace the 70:20:10 model.

10.3 COMPETENCE AND SUPPORT OF LEARNING PROFESSIONALS

To introduce the 70:20:10 model and take full advantage of this approach to learning it is necessary that the learning professionals themselves are competent to do so, and then they provide the relevant support to the employees. For achieving this, it is required that first senior leaders and managers are converted to the cause. They need to be involved in the following:

- They should popularise the concept across all employees;
- They need to align the concept with their overall business strategy;
- They need to ensure a strong organisational structure;
- They themselves should understand what 70:20:10 means for their own efficiency and development; and:
    - How they must engage themselves with it, and
    - How they are to ensure the availability of the support required for achieving success through this model;
- They will have to undertake coaching and mentoring role;
- They need to participate in on-the-job experience.

This will be possible if it is ensured that managers and their teams are provided support to enhance their competency level, and consequently, a clear understanding how this model works. This can be achieved through the following efforts of the learning and development professionals:

- Educating them about the value and effectiveness of informal learning at the workplace;
- Strengthening their communication skills;
- Educating them by providing support mechanisms such as:
    - Coaching,
    - Handouts,
    - Introduction to eLearning,
    - Setting targets;
- Creating an environment of shared learning;
- Encouraging them to have effective communication with their teams through:
    - Guidelines for discussion,
    - Worksheets,
    - Suggested activities, and
    - Information about the learning options available;
- Allowing flexibility to encourage creative learning; and
- Customizing the approach and guiding how to integrate the 70:20:10 model.

10.4 MOTIVATION FOR EMPLOYEES

After the senior leaders and managers have fully grasped the concept of the 70:20:10 model and have developed confidence and ability to implement it, they need to provide the requisite motivation to all other employees. Various methods can be employed to ensure a high motivation level of employees.

These are:

- Educating employees to understand that experiential learning provides greater benefit than any other system;
- The employees do not have to stop working and go for special training programmes, rather they will be learning while performing their usual assigned tasks;
- Making them understand that learning does not take place only in a classroom environment, and that it can be achieved anywhere and anytime;
- Learning is easier when pursued along with the peer group at workplace;
- Clarifying expectations while engaged in learning through this system;

- Asserting that information generated and assimilated at workplace is easier to understand and apply in real work situation rather than getting it through an isolated formal training programme;
- Assuring them that managers and learning and development professionals will provide full guidance and performance improvement support;
- Explaining and insisting on the fact that learning through this model will aid their own personal development.

To conclude, it may be useful to understand what Lombardo and Eichinger (1996) have remarked. They said:

"Development generally begins with a realization of current or future needs and the motivation to do something about it. This might come from feedback, a mistake, watching other people's reactions, failing or not being up to a task – in other words, from experience. The odds are that development will be about 70% from on-the-job experience – working on tasks and problems; about 20% from feedback and working around good and bad examples of the need; and 10% from courses and reading".

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