

# Models for Trainers: An A to I Guide

Samuel A. Malone



SAMUEL A. MALONE

---

# **MODELS FOR TRAINERS: AN A TO I GUIDE**

Models for Trainers: An A to I Guide

1<sup>st</sup> edition

© 2018 Samuel A. Malone & [bookboon.com](http://bookboon.com)

ISBN 978-87-403-2650-5

# CONTENTS

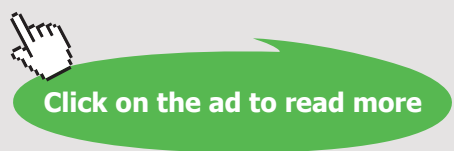
	<b>Introduction</b>	<b>6</b>
<b>1</b>	<b>ADDIE Model</b>	<b>8</b>
<b>2</b>	<b>Adult Learning</b>	<b>12</b>
<b>3</b>	<b>ARCS Motivation Model</b>	<b>20</b>
<b>4</b>	<b>Bloom’s Taxonomy</b>	<b>24</b>
<b>5</b>	<b>CAP Model of Learning</b>	<b>29</b>
<b>6</b>	<b>Case Study Method</b>	<b>33</b>
<b>7</b>	<b>CIRO Model</b>	<b>37</b>
<b>8</b>	<b>Cognitive Dissonance</b>	<b>40</b>
<b>9</b>	<b>Cone of Experience</b>	<b>43</b>
<b>10</b>	<b>Conscious Competence Learning Model</b>	<b>48</b>

www.sylvania.com

**We do not reinvent the wheel we reinvent light.**

Fascinating lighting offers an infinite spectrum of possibilities: Innovative technologies and new markets provide both opportunities and challenges. An environment in which your expertise is in high demand. Enjoy the supportive working atmosphere within our global group and benefit from international career paths. Implement sustainable ideas in close cooperation with other specialists and contribute to influencing our future. Come and join us in reinventing light every day.

Light is OSRAM **OSRAM SYLVANIA**



<b>11</b>	<b>CRAMP Model of On-The-Job Learning Skills</b>	<b>55</b>
<b>12</b>	<b>Critical Incident Technique</b>	<b>58</b>
<b>13</b>	<b>Four Styles of Learning</b>	<b>62</b>
<b>14</b>	<b>Input, Process, Output, Feedback Training Model</b>	<b>66</b>
	<b>Acknowledgements</b>	<b>69</b>
	<b>About the Author</b>	<b>70</b>

# INTRODUCTION

This is an A to Z guide and resource book of the best learning models currently available for learning facilitators/trainers. The guide is in two parts. Part one covers A to I while part two cover K to V. It is the first of a series of guides on models. Others in the series are Models for Personal Development, Models for Coaches/Mentors, Models for Teams and Models for Managers. In addition, line managers interested in the further development of their staff will find this series of particular interest when helping their staff reach their full potential. Students studying for qualifications in the training, and teaching profession will also find this book a useful jargon buster and introduction to difficult concepts in learning and behavioural psychology.

In fact, anybody interested in the exciting and intriguing world of learning will find the book a fascinating collection of learning models, and a source of information to be dipped into as the urge or need arises. You don't have to spend years delving into texts about learning psychology to acquire the information to meet your needs as a learning facilitator, trainer or teacher. It's all in this book in an easily accessible and understandable form. In fact, this book required a major effort, though a labour of love, on the author's part, requiring thousands of hours of dedicated study, research, reading, and writing. It is also a reflection of the author's experience over many years lecturing, teaching and training in industry and academic colleges.

The models in part one ranges from the ADDIE model of course design to the Input/Process/Output/Feedback Model of learning. In between you will encounter many other models, some of which are critical to a good understanding of modern training, learning and teaching practice. It took this eclectic source of information to reveal the secrets of learning.

The models will enable learning facilitators and teachers to improve their training and teaching sessions by capturing and engaging the imagination of learners. The models cover a huge range of topics – all of which have relevance for the various types of professionals in the training, coaching, mentoring and teaching game and those interested in personal-development. The models will help learners grasp some seemingly daunting and esoteric topics and will enable trainers, learning facilitators and teachers build the models into appropriate sessions as core concepts, making them enjoyable, meaningful and understandable.

Mnemonics in the form of acronyms have been used throughout the text as a memory aid to make some of the models more memorable. Those interested in knowing more about the process of learning will find the Adult Learning model, CAP model, Bloom's taxonomy and Four Styles of Learning Model beneficial.

Each model is accompanied by an illustrative diagram and appropriate quotation. The diagrams will help users to grasp the key concepts behind the model quickly and easily. A conclusion is reached on each model showing its strengths and weaknesses and relevance to learning. Each model is discussed in a user-friendly manner making them more accessible to trainers, learning facilitators, teachers and students alike. Detailed references are provided to enable users to research the topics in more depth if they wish.

Good luck in your quest for excellence in the learning, training and development, and teaching fields.

Samuel A Malone

November 2018

# 1 ADDIE MODEL

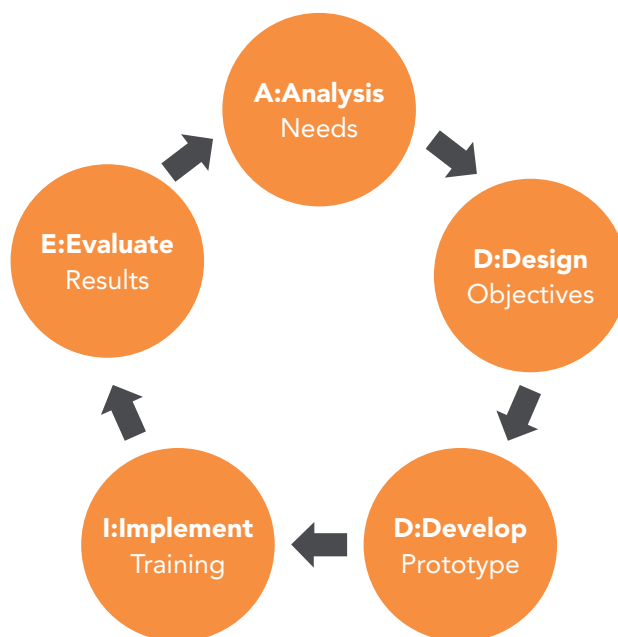


Fig. 1. ADDIE Model

*“Job training empowers people to realize their dreams and improve their lives.”*

– Sylvia Mathews Burwell

Florida State University initially developed the ADDIE model in the 1970s to explain ‘the processes involved in the formulation of an instructional systems development (ISD) program for military interservice training that will adequately train individuals to do a particular job and which can be applied to any intersevice curriculum development activity.’ The ADDIE model is widely used by instructional designers and content developers as the standard method to create instructional course material. ADDIE is an acronym for the five phases of course development of analysis, design, develop, implement and evaluate. The five stages of the **ADDIE** model in more detail are:



- **Analysis:** This is about identifying training needs and developing specific instructional goals to meet these. What will our learners be able to do as a result of the training? What are their expectations about the training programme? It is also about finding out the existing level of knowledge, skills and capabilities of course participants before the training is undertaken and building on this. We need to know about any personal obstacles they have to learning such as anxiety, colour blindness, hard of hearing, concentration issues, attitude problems and internet access. These may need to be addressed before the training begins. Have any of your learners acquired learning to learn skills? In order to find out the characteristics of our learners, we need to do surveys, interviews, pre-tests, or pre-assessments of the learners to collect the data about them. Delivery options will be considered in order to pick the appropriate ones for the particular learning styles and needs of participants. Consider the timeframe for delivery and what you want your learners to be able to do after they complete the training. Will they be able to apply the knowledge and skills learned back on-the-job?
- **Design:** This is about designing the learning environment, learning goals, learning objectives, lesson plans, delivery format, training activities, content, assessment instruments, and exercises such as role play, games and case studies. There is a difference between learning goals and learning objectives. Learning objectives are more specific, describing in more explicit detail what you expect your learners will know and be able to do at the end of the programme. Begin each learning objective with an action verb, something that learners can do which is capable of being measured or observed. The design should be comprehensible, sequential and logical. Consider how you will get the participants to pay attention and the various approaches you can use to do so such as lectures, demonstrations, discussion groups, practice sessions, online over the Internet, reflection and audio/visual approaches. Some of these approaches are more engaging and interesting than others and thus more effective as learning tools. In general, when designing learning programmes keep in mind that adults are self-directed, practical, need to have a purpose for learning (WIIFM – What’s in it for me?), like to use their experience, need respect and want to apply the learning in real-life situations. One fact that we know about learning is that we learn best in a context that simulates as closely as possible the conditions of the real workplace.
- **Develop:** This is about creating a prototype to test out in advance how good and acceptable the programme is likely to be. It is an opportunity to develop and test, course material, handouts, reference material, workshop activities, and assessments, and to correct any faults and deal with criticisms at an early stage. Make sure that you cater for the various learning styles of participants, such as visual, kinesthetic and auditory. Consider what you want your participants to be able to do after they attend the training. Ideally, they should be able to apply their learning to

improve their job performance when they return to work. If e-learning is involved, programmers develop or integrate technologies. Designers create storyboards and graphics. Testers debug materials and procedures. The project will be reviewed and revised in line with feedback.

- **Implementation:** We need to consider three phases at this stage: - training the trainers, preparing the learners and creating the right environment for the learning. Training facilitators may need to be trained in the appropriate techniques, presentation style and technologies for running the programme. This is about running the actual training programme and having the right tools, techniques, equipment, and learning materials in place. This would include the curriculum, learning outcomes, method of delivery and testing procedures. The learning facilitator prepares the learners by explaining the purpose of the training and how it fits into learners' role and responsibilities. If you demonstrate a skill give the learners an opportunity to apply, practice and reflect on the knowledge they were taught. During the implementation it is a good idea to keep a record of the good and bad things about the process so that you can improve on it in subsequent presentations. Learning is best achieved in a non-threatening, stress free, enjoyable, collaborative environment.
- **Evaluate:** Evaluation is the final stage of the ADDIE process. This is finding out if the course programme has been successful in meeting its objectives and delivered the anticipated behaviour change, knowledge, skills and results. This may be done at two stages – during the process of delivery and at the end of the programme. After the course, it is important to ascertain if the knowledge and skills acquired during the programme have been transferred to the workplace and that the anticipated business needs in the form of improved performance have been met. Get the feedback of learners and line managers to ascertain this is the case. With this in mind ask yourself 'How can I improve the next presentation.'

## Conclusion

The ADDIE model is a systematic approach to instruction design and evaluation which ensures that you take the needs of the learner into account, the goals that drive the instruction, and the objectives learners will follow to ensure that they do what you want them to do. The focus is on outcomes, using a systems perspective with the intention of adding value. ADDIE is a useful acronym which will help users remember the stages involved in the model.

It can be used in many environments including online, face-to-face, and coaching. One of the attractions of the ADDIE model is its flexibility – it can be used with both individual and classroom instruction. In addition, its phases can be modified to suit individual needs. The disadvantage of the model is that the process can be time-consuming and costly. In

addition, it assumes that training is the solution to the problem, whereas the problem may be caused by the conditions in the workplace environment such as inefficiency, quality issues, poor policies, systems, procedures, job design and equipment, not to mention inferior line management practices. It is best if these issues are rectified first before any training is undertaken.

## References

Aldoobie, Nada. (2015). ADDIE Model. American International Journal of Contemporary Research. Vol.5. No.6. December 2015.

Chevalier, Roger D. (2011). When Did ADDIE Become addie? Performance Improvement. Vol.50. No.6. July 2011.

Danks, Shelby. (2011). The ADDIE Model: Designing, Evaluating Instructional Coach Effectiveness. ASQ Primary and Secondary Education Brief September 2011. Vol.4. No.5. [www.asq.org](http://www.asq.org)

Weinstein, Margery. (2015). Model Learning. Training. May/June.

COPS Fact Sheet. U.S. Department of Justice. The ADDIE Model of Instructional Design. [www.cops.usdej.gov](http://www.cops.usdej.gov)

Course Design: A Systematic Approach. Northern Illinois University, Faculty Development and Instructional Design Center [facdev@niu.edu](mailto:facdev@niu.edu), [www.niu.edu/facdev](http://www.niu.edu/facdev), 815.753.0593.

# 2 ADULT LEARNING



**Fig. 2.** How Adult Like to Learn. Model Based on Malcolm Knowles Principles

**“Andragogy is the art and science of helping adults learn.”**

– Malcolm Knowles

Malcolm Knowles produced a comprehensive theory of adult learning anchored in the characteristics of adult learning. Andragogy is the technical term for adult learning and the term is attributed to Alexander Kapp, a German educator, who coined the term in 1833. Andragogy can be contrasted with pedagogy – the teaching of children. The following points are based on the work of Malcolm Knowles.

**Adults are self-directed learners**

Adults like to take control and responsibility for their learning. They like to solve immediately relevant problems, and figure things out for themselves including how they go about learning. Self-directed learners cultivate and satisfy an insatiable curiosity and passion for finding out the unknown. They formulate questions and then seek out answers. Ideally, they should be involved in diagnosing their own learning needs, formulating their learning goals and in the planning and evaluation of their learning. If you have ever Googled something, consulted Wikipedia or carried out research related to a hobby, or something else you were interested in, then you are a self-directed learner.

Self-directed learners like to identify the human and material resources enabling them to learn, and to choose and implement appropriate learning tactics and strategies. Adults resist information being imposed on them, or which doesn't match up with their own life experiences, expectations or learning needs. Trainers, coaches, mentors and facilitators can guide the way but you must learn yourself. In formal learning situations adults prefer to be facilitated, coached, mentored and encouraged rather than directed.

**Adults like to share experience**

Adults have accumulated considerable knowledge and experience over many years providing an increasingly rich resource for learning. Sharing expertise gives adults a sense of self-worth, pride and motivation. It also makes information more memorable so that it is retained for a longer period of time. Trainers should tap into this valuable reservoir for learning. Adults learn best in an active collaborative group learning situation. Small group activities foster the development of interpersonal relationships among learners.

Adults learn more from their peers, friends and work mates than they do from formal instruction. Aristotle echoed this when he said, "What we have to learn to do, we learn by doing." Thus, adults learn more effectively through experiential or practical techniques such as hands-on-learning, just-in-time learning, role-play, discussion, debate, open-ended questions, case studies, examples and problem solving than they do passively sitting and listening. They also learn by reflecting on their experiences and learning from their mistakes.

### **Adults are motivated by goals**

The goals must be specific, relevant, measurable, attainable, timely and meaningful to their needs. These needs could be work related or personal such as the arts, recreation, hobbies or simply increasing their intellectual capital. Thus, they appreciate learning that is organised and purposeful with clear learning objectives. Prior to the learning adults should reflect on what they expect to learn and how it will meet their goals. After the learning they should reflect on what they learnt, how it helped them meet their goals, and how they will be able to apply the learning in the future to their working and personal lives.

Generally, adults tend to be more motivated by intrinsic factors such as an inherent interest or curiosity. Intrinsic interest creates stronger engagement and better recall, rather than external or extrinsic factors such as a rise in salary or the prospect of promotion. Some adults even pursue learning for its own sake – they enjoy acquiring knowledge which satisfies an innately curious mind. Even learning boring material could be enhanced if facilitators harness the power of adult curiosity – something they are inherently interested in and motivated to learn. Nevertheless, the desire to get a good degree relevant to their career, with the support of their line manager is a strong extrinsic motivator likely to encourage commitment, dedication and engagement.

### **Adults like practical problems**

Adults tend to have a problem-centred approach to learning rather than a subject-matter orientation. You learn the work through necessity and repetition – by doing it over and over again until the process becomes habitual. Adults are often more interested in information they can apply rather than theories and concepts. Adults are competency-based learners. This means that they want to learn a skill or acquire knowledge that they can apply to their immediate life and work circumstances. Hence the principles of adult learning have been applied in multiple disciplines such as training, engineering, medicine, criminal justice, law, accountancy and management.

In training the application of the principles of adult learning helps trainers design engaging programmes more pertinent to adult needs. In management education it has been used to prepare students for their working environment. As business structures become flatter; employees within groups must become more self-reliant and better able to do their own research and solve their own problems. Groups learn as they work and learn from the challenges and obstacles they encounter. They learn how to work more collaboratively and effectively as a unit and how to do jobs better. Thus, modern management requires practical implementation of skills rather than theories and concepts. Students, when they enter the workplace need to be able to work in groups, adapt to rapid change, cope with different personalities, and solve real-world business problems.

### Adults like to know the reason for learning

Adults are pragmatic – before they invest time, money and energy, they like to know why they should learn something. This is known as the WIIFM principle or “What’s in it for me.” Adults like to do projects relevant to the company’s needs, that interest them and which they find useful to their work situation, self-development and career prospects. They also need frequent effective constructive feedback on how they are performing. Constructive feedback focuses the employee’s attention on the task, highlighting specific behaviours that need to be improved or done differently. Feedback should be objective rather than subjective. Personal feedback which attacks the individuals’ characteristics can undermine self-esteem, confidence, morale and motivation.

It is also important that feedback is constructive, and provided in settings that are private, respectful and non-threatening, rather than within the hearing range of work colleagues or customers. There is nothing more undermining of morale than to be shamed in front of work mates. Learning occurs on completion of a task when it is followed by feedback, which is then reflected on, leading to a new understanding and sometimes a revised course of action. This is an example of the well-known learning cycle. Fellow workers, mentors, coaches, trainers and learning facilitators can be a reliable source of guidance and constructive feedback.



Discover the truth at [www.deloitte.ca/careers](http://www.deloitte.ca/careers)

**Deloitte.**

© Deloitte & Touche LLP and affiliated entities.

### **Adults like to be challenged**

If challenged too little adults will get bored; if challenged too much they will get frustrated, anxious, overwhelmed and stressed. Optimum challenge is the key to optimum performance. Challenge can be compared to playing tennis with a slightly better player. In such circumstances your game is likely to improve. On the other hand, if the other player is far better and you find it impossible to return a ball, you are likely to give up, overwhelmed, discouraged and disheartened by the experience. If the other player is less skilled than you, and can return none of your balls, you will not be challenged and learn little.

You need to be taken out of your comfort zone in order to be challenged, grow and learn. States of flow occur when people become so absorbed by their work that they are not conscious of anything else and enter a dreamlike state where time seems to stand still or alternatively speed up. According to Mihalyi Csikszentmihalyi who has written extensively about 'flow' optimal learning occurs when you achieve your 'flow' state of focused concentration. This is a distinctive state of mind and feeling in which learning is effortless and enjoyable. The flow is also known as the stretch zone because it takes you out of your comfort zone.

### **Adults have other responsibilities**

Because of other responsibilities such as parent, carer, worker, friend, colleague and citizen, they may have other things on their minds besides the learning at hand. In formal education, adult learners are predominantly part-time students. Adults who decide to pursue part-time studies at night while holding down a full-time job have to balance family life, domestic chores, work life and study commitments. To be successful in such a situation requires considerable diplomatic, planning and time management skills as well as resilience, persistence, dedication, commitment and determination.

In the case of adults pursuing part-time studies while working full-time they may feel tired and stressed at work, which may adversely affect their work performance. Similarly, while attending night classes they may feel tired after a hard day's work. So, adults are unlikely to leave their domestic and personal concerns outside the door when they come to work. In particular, parents with young children may have spent a sleepless night trying to soothe a teething baby or a difficult young child who refused to fall asleep.



**Adults are sometimes fearful of formal learning**

This is so because of unpleasant learning experiences they had in the past. For example, they may have suffered unfortunate traumatic learning experiences at school at the hands of an insensitive teacher. This teacher may have ridiculed them in front of their fellow students. Therefore, adults like to learn in an emotionally supportive and positive climate conducive to learning which is safe, warm, non-threatening and non-judgmental. They like their uniqueness, abilities and life achievements to be acknowledged, respected and celebrated. They appreciate a collaborative learning environment that fosters intellectual freedom and growth. They loath an authoritarian climate that treats them like children. They expect their opinions to be listened to, honoured and appreciated.

Humour can be used to relax adults in formal learning situations. Humour in the training room or classroom creates openness and respect, and lowers levels of tension and stress. In addition, it improves the speed of learning, decreases anxiety and increases learners' attention.

**Adults crave recognition**

Adults like to be treated with respect and don't appreciate being made to look foolish in front of their peers. They do not like to make mistakes in front of others making them appear as foolish or incompetent. They have a wealth of experience and should be encouraged to share it with others. People learn a great deal from their peers. Adults are social learners, and social interaction and collaboration is a key enabler and motivator of learning. People like to build social networks and make new friendships. Adults have a rich reservoir of knowledge, expertise and experience that can be shared with others and serve as an educational resource for learning.

Adults purposefully connect what they need to learn to what they know already. This provides a meaningful context for their learning. They like to have their own learning styles recognised, respected and accommodated for. At a basic level these can be visual, auditory or a-hands-on-approach or a combination of all three. Recognising and catering for their learning styles will improve an adult's information processing abilities.

**Adults should aspire to lifelong learning**

In the globalised, competitive world adults need lifelong learning skills to remain competitive and relevant in a world that is constantly changing. The amount of knowledge in the world is now doubling every few years. To survive in the modern workplace you need strong creative, problem solving, research and decision-making skills. You also need to be able to

identify and exploit opportunities. The rote learning skills we acquired in school and college do not help adults think independently, problem solve or develop an inquiring mind. They are taught to be dependent and passive recipients of knowledge rather than innovators, decision makers and critical thinkers.

On the other hand, the modern workplace needs people who can produce creative and innovative ideas that will help the company to come up with new products, improvement in existing products and improved systems and procedures. The ability of employees to learn and go on learning is the new competitive advantage of the learning organisation.

## **Conclusion**

Andragogy is a theory of adult learning that has a set of assumptions based on humanistic psychology about how adults learn. It recommends an approach to learning that is self-directed, participative, problem-based and collaborative rather than traditional teaching and lecturing. It holds the assumption that adults bring considerable knowledge and experience into the learning situation which should be used.

One criticism of andragogy versus pedagogy (pedagogy is the study of the theory, methods and principles of teaching) is that the difference between the two is not as clear cut as previously claimed. In fact, it is now thought that they are more similar than different. It is not clear whether andragogy is a set of assumptions, principles of adult learning or a model of adult learning. Nevertheless, it adds to our understanding of how adults learn based on observation and the claims of adults themselves.

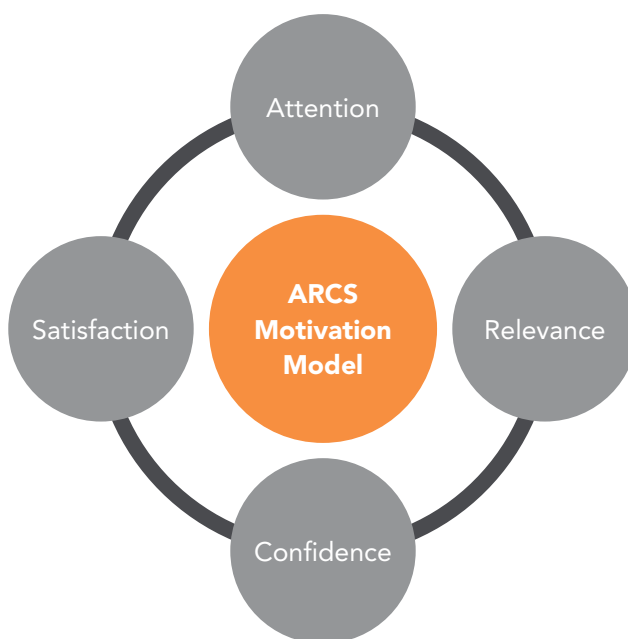
Most adults have their own unique approach to the challenges of learning. They like to have a strong input into why, what, where and how they learn. They like to learn in collaborative non-threatening settings. And they are motivated by goals, expectations, interest and practise. They like the learning to be practical and pertinent to their needs. Because of past hurtful emotional experiences, they sometimes fear formal learning situations.

Adults expect learning facilitators to treat them with respect, acknowledging their prior learning and giving them the opportunity to share their experience with others. In other words, they expect to be treated like adults. Because of their maturity and experience of the world they are more independent and self-resourced than children. And they like to be given the opportunity to solve their own problems alone or in conjunction with their peers. There are always exceptions to cases – some adult learners like the guidance, convenience and sense of security offered by conventional teaching, and lack the confidence and skills to be self-directed learners.

## References

- Burrell, Lisa. (2014). How to Keep Learning and Still Have a Life. Harvard Business Review. November.
- Carliner, Saul. (2013). How Have Concepts of Informal Learning Developed Over Time? Performance Improvement. Vol. 57. No 3. March 2013.
- Decelle, Gina. (2016). Andragogy: A Fundamental Principle of Online Education for Nursing. Journal of Best Practices in Health Profession Diversity Research, Education & Policy. Vol.9. No.2. Fall 2016.
- Knowles, Malcolm. (1980). "How Do You Get People to Be Self-Directed Learners?" Training and Development Journal, May 1980.
- Malone, Samuel A. (2000). Learning Skills for Managers. The Liffey Press.
- Malone, Samuel A. (2003). Learning about Learning. CIPD London.
- Training and the Needs of Adult Learners. <http://joe.org/joe/2006december/tt5.php>.

### 3 ARCS MOTIVATION MODEL



**Fig. 3.** ARCS Motivation Model

"Ability is what you're capable of doing. Motivation determines what you do. Attitude determines how well you do it."

– Lou Holtz

**ARCS** is a practical model and acronym designed for learning facilitators. According to the ARCS model, put forward by John Keller in 1984, there are four factors that in combination motivate learners. The model is backed by considerable research and experimental evidence. The model consists of Attention, Relevance, Confidence and Satisfaction. These are the factors learning facilitators must address and include in their course design if they want to be successful presenters and create the right motivational strategies for learners. Let's now discuss these factors in some detail.

**Attention.** Keller maintained there are two key factors in attention – namely arousal and variability. In turn there are two types of arousal which he called perceptual and inquiry. As a facilitator you will often need to use novel ways to arouse the curiosity of learners. It is well-known that the span of attention of most people is very short with the boredom threshold always quick to surface. Consequently, we need interesting and stimulating ways to attract and hold learners' attention – sometimes using the element of surprise will work wonders. Role play, games, simulation, brainstorming, discussions, short lectures, humour, and storytelling are some of the methods which come to mind. The second factor is variability. This is the simple idea that variety is the spice of life. This means that an occasional change of environment, presentation style, tempo, stories and practical examples will help you keep your presentation fresh, energizing and interesting. Using simple techniques like a change in voice level, or a change in pace, or the appropriate use of questions will often revive the flagging interest of learners.

**Relevance.** This means identifying the needs of learners. There are many issues here that need to be addressed. The facilitator must identify and cater for the existing learning styles, knowledge, interests and experience of the learner and build on these. Once learners are interested in a topic they will apply their mind, energies and attention to find out more. Learning which is linked and associated with previous knowledge and experience is easier to learn and more memorable. Finding out the personal goals, attitudes and motives of the learners is also important. This should be part of the identification of needs. An interesting acronym in this context is WIIFM which means 'what's in it for me?' In other words, how is this learning useful to the learner's job, life and career? How can the learner apply this information to their unique circumstances? Although the facilitator can't force the learner to learn he can create the right conditions for learning; lead by example and act as a role model through contagious enthusiasm, passion and interest. In addition, he can invite guest speakers, practitioners and experts in to show learners the benefits of the learning. However, at the end of the day the learner is responsible and must motivate themselves to learn. Some learners believe that it is the facilitator's job to teach them while forgetting about their own responsibility. Personal responsibility can be encouraged by giving the learners as much choice and control over their learning as possible usually through the use of experiential or practical learning methods such as discovery learning, problem solving and cooperative work groups. The job of the facilitator is to make the task of learning as easy as possible.

**Confidence.** Learners with a positive attitude towards learning are more likely to learn than those with a negative attitude. Part of the role of the learning facilitator is to create the conditions for developing and sustaining this positive outlook. The facilitator should instill in the learner a growth rather than a fixed mindset by demonstrating belief in the learner's ability to learn. A person with a growth mindset believes they have the natural capacity to grow and develop provided they work hard. People with average intelligence can

achieve great things provided they are motivated to put in the required time. On the other hand, a person with a fixed mindset feels their intelligence is fixed and there is nothing they can do about it. The result is that they lack the confidence to try new challenges, and generally give up before they give themselves a chance. At the start of the programme the facilitator should present the learning objectives making them desirable and feasible for all learners to achieve, and the steps they need to take to become lifelong learners. This might include telling the learners what they need to do to be successful and the support they will get from the facilitator to overcome the challenges presented. The facilitator should provide feedback and reinforcement during the programme and also encourage the learner to evaluate their own performance so that they can take corrective action to improve their learning. Peers may also be encouraged to evaluate each other's work. On the other hand, facilitators should get feedback on their own performance so that they can improve the design of their motivational strategies.

**Satisfaction.** This is what the learner hopes to achieve during the process of learning and at the end. Satisfaction may be provided by intrinsic and extrinsic events. Intrinsic events include self-esteem, pride, respect and a sense of achievement. Adults, in particular, like to interact with other people, have their views heard and respected, and successfully complete their course. They hope that at the end of the course they will be able to apply their knowledge and skills successfully in their work or profession. Extrinsic events include career opportunities, public acknowledgement of achievements, improved pay and the ability to transfer skills to other areas of their lives, supporting their desire to become effective lifelong learners. Post graduate qualifications, degrees, diplomas and certificates are the external recognition of our achievements and often the door to advancement in our jobs and other opportunities in life. They may also be the gateway to further study and lifelong learning. Lastly, learners expect to be treated fairly, so that grades are consistently applied with no favouritism.

## **Conclusion**

**ARCS** is a practical model and acronym designed for learning facilitators. According to the ARCS model, put forward by John Keller in 1984, there are four factors that in combination motivate learners. The model is backed by considerable research and experimental evidence. The model consists of Attention, Relevance, Confidence and Satisfaction. These are the factors learning facilitators must address and include in their course design if they want to be successful presenters and create the right environment and motivational strategies for learners.

It is well-known that the span of attention of most people is very short with the boredom threshold always quick to surface and distract the learner. Consequently, we need interesting and stimulating ways to attract and hold learners' attention.

The facilitator must ensure that the topic being addressed is relevant to the needs of learners. Facilitators must identify and cater for the existing learning styles, knowledge, interests and experience of the learner and build on these.

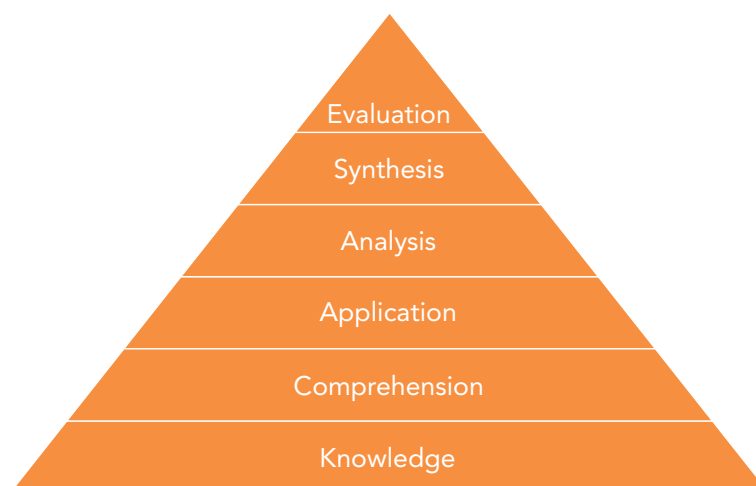
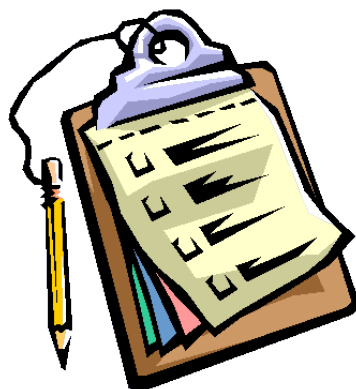
Learners with a positive attitude towards learning are more likely to learn than those with a negative attitude. Part of the role of the learning facilitator is to create the conditions for developing and sustaining this positive outlook.

Learner satisfaction is met through providing intrinsic and extrinsic events. Intrinsic events include self-esteem, pride, respect and a sense of achievement. Extrinsic events include career opportunities, public acknowledgement of achievements, improved pay, financial incentives and the ability to transfer skills to other areas of their lives, supporting their desire to become effective lifelong learners.

## References

- Keller, John, M. (1987). Strategies for Stimulating the Motivation to Learn. *Performance & Instruction*, October, 1987.
- Keller, John, M. (1987). The Systematic Process of Motivational Design. *Performance & Instruction*, November/December 1987.
- Keller, John, M. (2000). How to integrate learner motivation planning into lesson planning. The ARCS model approach. Paper presented at V11 Semanario, Santiago, Cuba, by John Keller, Florida State University, Feb.2000.
- Popovich, Nicholas G. (2000). Applying the ARCS Model of Motivational Design to Pharmaceutical Education. *American Journal of Pharmaceutical Education*, Vol. 64, Summer 2000.
- Poulsen, Aura; Lam, Khoa; Cisneros, Sarah; & Trust, Torry. (2008) ARCS Model of Motivational Design. *EDTEC 544* November 2008.
- Saunderson, Roy. (2013). Motivating Learners to Learn. *Training*, Vol.50, Issue 4, p62-63.

## 4 BLOOM'S TAXONOMY



**Fig. 4.** Bloom's Taxonomy

"Education is the key to unlocking the world, a passport to freedom."

– Oprah Winfrey

This is a well-known learning model of learning objectives used in academic and training circles. It was developed in 1956 by Benjamin Bloom. The model is sequential so that a learner must master a given step before progressing to the next. Each level builds on the previous levels and is dependent on them. This allows learners to identify a progression of learning outcomes as evidence of content mastery. The taxonomy consists of six levels (shown above and explained below) that represent a hierarchy of learning objectives.

**Knowledge** is remembering information in a form very close to that in which it was first encountered. Remembering is the most basic form of learning and does not require further intellectual abilities or skills. Being able to recall terms and definitions, memorise poetry,




list the Seven Wonders of the Ancient World, or name the parts of the human brain, are all examples of the expected behaviour at the knowledge level. Examiners use words like 'list,' 'name,' 'define,' 'describe,' 'show,' 'label,' 'tabulate', and so on to test learning at this level. Although at the bottom of the hierarchy knowledge is very important as it forms the foundation for all the rest.


**Comprehension** is the ability to understand the meaning of this knowledge. Meaningful learning, unlike rote learning, provides learners with the knowledge and mental capacity they need for successful problem solving. Part of the process involves connecting new knowledge to prior knowledge. This might involve demonstrating knowledge in the form of interpreting facts, summarising results or showing comparisons or contrasts between theories or information. It includes extrapolation – drawing conclusions, extending trends or tendencies beyond given data to determine consequences, cause and effects and so on. Examples of comprehension include expressing an argument in one's own words, giving directions on how to do something, or reviewing or summarising the main points of a discussion. Examiners use words like 'interpret,' 'contrast,' 'compare,' 'distinguish,' 'illustrate,' 'differentiate,' 'estimate,' 'discuss,' and so on to test learning at this level.

SIMPLY CLEVER

ŠKODA



**We will turn your CV into an opportunity of a lifetime**



Do you like cars? Would you like to be a part of a successful brand? We will appreciate and reward both your enthusiasm and talent. Send us your CV. You will be surprised where it can take you.

Send us your CV on  
[www.employerforlife.com](http://www.employerforlife.com)



**Application** is the ability to apply general principles to specific problems and situations. This is the difference between being able to understand the concept of the internal combustion engine versus being able to work on one. It might involve using methods, concepts, theories, principles, role plays and models to understand and solve problems in new situations. Examples would include relating principles of job motivation to an actual case study, using statistics to test for differences between two experimental groups, or employing computer language to write a computer program. Examiners use words like 'apply,' 'demonstrate,' 'calculate,' 'illustrate,' 'solve,' 'examine,' 'classify,' 'design,' and so on to test learning at this level.

**Analysis** is an advanced skill. According to Bloom, analysis involves the ability to break a topic into its constituent parts and show the relationship between them. Examples would include being able to detect flaws or defects in the design of a product, break information into parts and identify the basic elements, specify the interrelationships between the elements, and recognise the structure and organisation of the information as a whole. This might involve examining the information to draw conclusions, show trends or find evidence to support recommendations. Examiners use words like 'analyse,' 'explain,' 'connect,' 'classify,' 'arrange,' 'select,' and so on to test learning at this level.

**Synthesis** is the combination of elements and parts so as to form a new and meaningful whole. Activities involving creating, planning, designing, preparing or setting up would all require the synthesis of different elements. It may involve drawing information from many sources and putting them together. It may also involve forecasting future results using current information. Examples of synthesis would include writing a story, designing an experiment, planning a conference, or designing a building. Examiners use words like 'combine,' 'integrate,' 'modify,' 'rearrange,' 'design,' 'compose,' 'formulate,' and so on to test understanding at this level.

**Evaluation** is the ability to judge the value of learning material using clear criteria and standards, either of one's own devising or derived from the work of others. The criteria most often used are quality, effectiveness, efficiency, and consistency. It involves classification of information, making comparisons and choices and is considered the highest form of learning. Evaluation might involve assessing the value of theories or models and making choices based on reasoned argument. Examples of evaluation would include being able to make judgements about the accuracy of an estimate, the adequacy of a budget, the value of a new idea, or the significance of a research article. It would include making recommendation based on the findings, conclusions or facts presented. Examiners use works like 'assess,' 'decide,' 'rank,' 'measure,' 'recommend,' 'judge,' 'conclude,' and so on to test learning at this level.

Facilitators should be aware that adult learners need to participate in small group activities to help them move beyond understanding to application, analysis, synthesis and evaluation. Adults like an opportunity to share, reflect, and generalise the learning experiences. Some professional bodies have organised their examination system around Bloom's taxonomy with the foundation parts of the exam concentrating on the lower levels and the professional exams concentrating on the higher levels.

## **Conclusion**

Learning is complicated. There are different types of learning – starting at the most basic levels and progressing to the most advanced stages. The deeper the learning the more advanced it is on Bloom's taxonomy. Lectures can be effectively applied as a method of instruction at the lower levels such as knowledge transfer and less so when comprehension or understanding is needed. However, understanding is often achieved through the enthusiasm and commitment of the lecturer. More interactive methods such as case studies, role play, assignments, projects, simulations, demonstrations and discussion are often needed at the more advanced levels to bridge the gap between theories and practice and provide real understanding.

Surface learning happens at the basic level. This is the type of learning that is often referred to as rote memorisation. A parrot can be trained to say certain words but it has no real understanding of the words. Similarly, with humans there is usually no real understanding at the knowledge level. Although knowledge is the foundation for the other levels (it provides a database of memorised information) it doesn't teach learners to think critically. Nevertheless, without knowledge the rest of the levels cannot happen. However, it is only at the advanced levels that real understanding or deep learning is likely to happen.

Real understanding requires reflection and advanced mental processes such as analysis, synthesis and evaluation. Most third level programmes, such as degrees and professional qualifications, are organised on this basis with the professional stages of the examination testing analysis, synthesis and evaluation built on a foundation of knowledge taught at the earlier stages. Also, the more advanced the levels the more interactive the approach used for learning.

## **References**

- Booker, Michael J. (2008). A Roof without Walls: Benjamin Bloom's Taxonomy and the Misdirection of American Education. *Acad. Quest.* (2007) 20:347-355.
- Callens, Melissa Vosen. (2014). Using Bloom's Taxonomy to Teach Course Content and Improve Social Media Literacy. *Journal of Interdisciplinary Studies in Education*, Vol.3, Issue 1.

Goldsmith, James, J. (2014). Revisiting the Lecture. T&D June 2014.

Handy, Sheila A & Basile, Anthony. (2005). Improving Accounting Education Using Bloom's Taxonomy of Educational Objectives. Journal of Applied Research for Business Instruction. Vol.3, Issue 3.

Malone, Samuel A. (2003). Learning about Learning. CIPD London.

Niehoff, Brian P. PhD; & Whitney-Bammerline, Donita L. (1995) Don't Let Your Training Process Derail Your Journey to Total Quality Management. SAM Advanced Management Journal, Winter 1995.

Razzouk, Nabil Y; Razzouk, Jay N & Razzouk, Michael N. (2007) Teaching With The Case Method: Beyond Knowledge and Comprehension. NMA Fall Educators' Conference 2007.

Wineburg, Sam & Schneider, Jack. (2010). Was Bloom's Taxonomy Pointed in the Wrong Direction? Kappan, December 2009/January 2010

## 5 CAP MODEL OF LEARNING

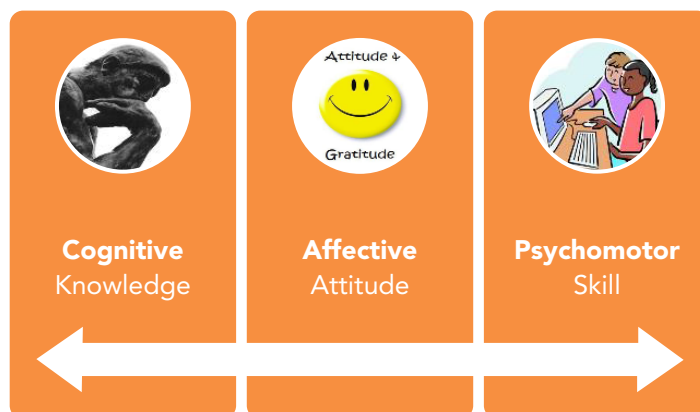


Fig. 5. CAP Model of Learning

“The function of education is to teach one to think intensively and to think critically. Intelligences plus character – that is the goal of true education.”

– Martin Luther King, Jr.

**CAP** is an acronym which stands for **C**ognitive (thinking), **A**ffective (attitudes) and **P** psychomotor (physical). In training circles this model is known as **KAS**: - **K**nowledge; **A**ttitudes and **S**kills. Learning objectives can be classified under these three headings. Learners on training programmes are expected to pick up knowledge content, acquire appropriate attitudes, and learn specific skills. Learning facilitators have determined that adult learners learn most effectively when the three learning areas of cognitive, affective and psychomotor are combined. In other words, to retain learning, learners need the right attitude and opportunities to reflect on the topic, and connect the content and apply it to real-life situations.

**Cognitive.** This has already been explained in our Fig.4 under Bloom’s Taxonomy earlier in this book. It is involved in analytical, decision-making and problem-solving skills. Therefore, in this section we will concentrate on the other two: - Affective and Psychomotor.

**Affective.** Affective is concerned with beliefs, values, attitudes, motivation such as self-efficacy and goal setting, and feelings or emotions as involved in interpersonal skills. If you place a high value on safety you are more likely to be committed and switched on during a safety training programme. A perception of self-efficacy is an important factor determining whether or not learners apply the skills they have acquired. Research has shown that people who set specific and challenging goals are more likely to exert effort and perform at a high level.

Similar to cognitive objectives, affective objectives are organised in the form of a hierarchy – going from more simple feelings to those which are more complex. One becomes more involved, committed, and self-reliant as one moves up the hierarchy. One goes from being externally motivated to internally motivated. The learner moves from awareness of what they are learning to internalise learning so that it plays a significant role in guiding their actions. Learners come to appreciate the significance of the ideas and topics they are learning rather than mere mastering of skills. The classification of feelings can be explained as receiving, responding, valuing, organisation and characterisation.

- Receiving is the learners' attention, willingness or sensitivity to learning. They develop an awareness of ideas and topics and show they are open to experience and willing to listen.
- Responding is the learners' motivation to learn and feelings of satisfaction when they have done so. They commit to the ideas by responding appropriately to them.
- Valuing is the learners' beliefs and feelings of self-worth. They are seen as valuing certain ideas and topics and willing to express personal opinions.
- Organisation is where learners reconcile internal conflicts and develop a value and belief system.
- Characterisation is where the learner adopts a belief system and philosophy about life and has the ability to consistently act out their values and beliefs.

**Psychomotor** (physical). This is concerned with physical movement, coordination, and the use of motor skills as involved in manual skills such as operating a machine and is an important part of any corporate training situation. Among the numerous applications in the psychomotor area are personal fitness skills, various sports, dance, music, drama and the visual arts. It also covers modern day business and social skills such as communication, public speaking, word processing and computer skills. Furthermore, it includes any type of movement such as running, diving, biking, skateboarding, football, volleyball, badminton or tennis, playing a flute or piano or guitar and carrying out gardening tasks.

Development of these skills requires practice and is measured in terms of speed, precision, distance, or efficiency in execution. Traditionally, skill development has been evaluated by observing learner performance in role play at the end of training or in actual job performance. There are various classifications of this area but one of the most useful and popular is that based on R.H. Dave's work (1970).

Similar to cognitive and affective learning objectives the psychomotor objectives move from less complex skills to more complex levels of behavior.

- Imitation. Observing and copying someone else's behavior. The expectation is that the learner is able to repeat an action after watching the teacher or trainer. Performance may be slow and of low quality. Example: Copying a work of art.
- Manipulation. Performing certain actions based on written or verbal instruction without a visual model or direct observation. Unlike imitation the actions are performed without visual demonstration. Example: Creating work on one's own, after taking lessons, or reading about it.
- Precision. This means becoming skilled through practice without written instruction or a visual model. One is expected to reproduce an action reliably, independent of help with the minimum of errors. Example: Working and reworking something, so it will be "just right."
- Articulation. Coordinating a series of actions, achieving harmony and performing them consistently. One is expected to perform the acts accurately, with control as well as with speed and timing, and be able to adapt the skills to new situations with little effort or thought. Example: Producing a video that integrates music, drama, colour, special effects and sound.
- Naturalisation. Through continuous practice learners become highly skilled at the unconscious level. Achieving a high level of performance without thinking about it, and allows one to perform other tasks at the same time such as carrying on a conversation while driving. One is expected to perform the behaviour efficiently, spontaneously and automatically. Example: Rory McIlroy hitting a golf ball or a mechanic repairing a car without referring to a repair manual.

## Conclusion

CAP is used widely in the planning, design and evaluation of learning programmes in colleges, coaching and corporate training. It is a simple, clear and effective model, used for explanation and application of learning objectives, teaching and training methods, and measurement of learning outcomes.

The model is timeless and will always be relevant to the understanding of how people learn. Particularly in corporate training and coaching the learner should benefit from knowledge and intellect (cognitive); attitude and beliefs (affective); and the ability to put physical skills into effect (psychomotor).

In the academic area there is more emphasis on the knowledge and intellect (cognitive) aspects, while in training and coaching the personal values and motivations of learners and the application of results is of prime importance.

## References

Businessballs.com (2009). Blooms Taxonomy-Learning Domains. <http://www.businessballs.com/bloomstaxonomyoflearningdomains.htm>

Dave, R.H. (1970). "Psychomotor Levels." In Developing and Writing Behavioral Objectives, ed. Robert J. Armstrong. Tucson AZ: Educational Innovators Press.

Kraiger, Kurt; Ford, Kevin J & Salas, Eduardo. (1993). Application of Cognitive, Skill-Based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation. *Journal of Applied Psychology*, Vol, No.2, pages 311-328.

Malone, Samuel A (2003). *Learning About Learning*, CIPD London.



# 6 CASE STUDY METHOD



**Fig. 6.** Case Study Method

**“Case studies of failure should be made a part of the vocabulary of every engineer so that he or she can recall or recite them when something in a new design or design process is suggestive of what went wrong in the case study.”**

**– Henry Petroski**

Case studies are scenarios based on actual problems experienced by organisations that are used as a vehicle for discovery, discussion, analysis and solution in management training. The case study usually involves a challenging situation or a dilemma which requires analysis of the situation, identification of the problem, consideration of alternatives, choosing the best solution, developing the most appropriate strategies and implementation plans. In addition, the situation in the case study may involve global, cross functional and cross-cultural issues.

Learners do more than just passively read information; they are also given the opportunity to reflect on and practice what is learned.

Case studies provide learners with the opportunity to connect their knowledge to the real business world and to adopt the perspective and roles of managers or consultants in analyzing complex business situations. Through analysis the learners literally pull the case apart and through synthesis they put it back together again in order to thoroughly understand its

ramifications. Each case study represents a realistic situation that prospective managers might face in the future. By studying hundreds of cases, the learner develops skills in pattern recognition and analysis, and in matching each situation with the various options for dealing with it.

Case studies bridge the gap between theory and practice. They were originally used in law, medicine and psychology, popularized by the Harvard Business School in management education and go back to about 1910. Managers study a written narrative about a situation confronting an actual or fictitious organisation. Relevant production, marketing, sales, finance, information technology, and human resources data are usually provided.

The description of the problem may contain all the information needed to suggest a solution. Alternatively, it may leave out certain important facts so that different solutions can be generated depending on the assumptions made. Case studies offer a less costly alternative to simulation, often with greater learning benefits. Learners are given the opportunity to experience a managerial situation at first hand which otherwise they would not have the opportunity to experience. They step into the shoes of the manager faced with the decision-making situation or dilemma; thus, making them understand the ambiguity and complexity faced in typical management situations. They provide a good vehicle for the development and exercise of judgement and problem-solving skills.

A case study may include the history of an organisation, an organisation chart, the key management players, production information such as a manufacturing plan, financial information such as past trading, profit and loss accounts, budgets, cash flow statements and balance sheets, marketing information such as a marketing plan, sales information such as sales statistics and trends, and details about competition. The managers are then asked to devise a solution based on assumptions about resources, economic and legal constraints, and to devise an implementation plan. Later, they are given feedback on the feasibility of their solution, compared to the actual outcome, to ensure successful transfer of learning to their own organisations.

There is no single answer to a case study; neither is there a right or wrong answer. The solution should be evaluated on the basis of how practical it is, and what the consequences of implementing the solution are. Case study analysis must not focus on just the symptoms of the problems. Instead it should focus on the root cause of the problem, and the consequences it has on the company, the group or the individual. It might also elicit discussion on how the problem could have been avoided.

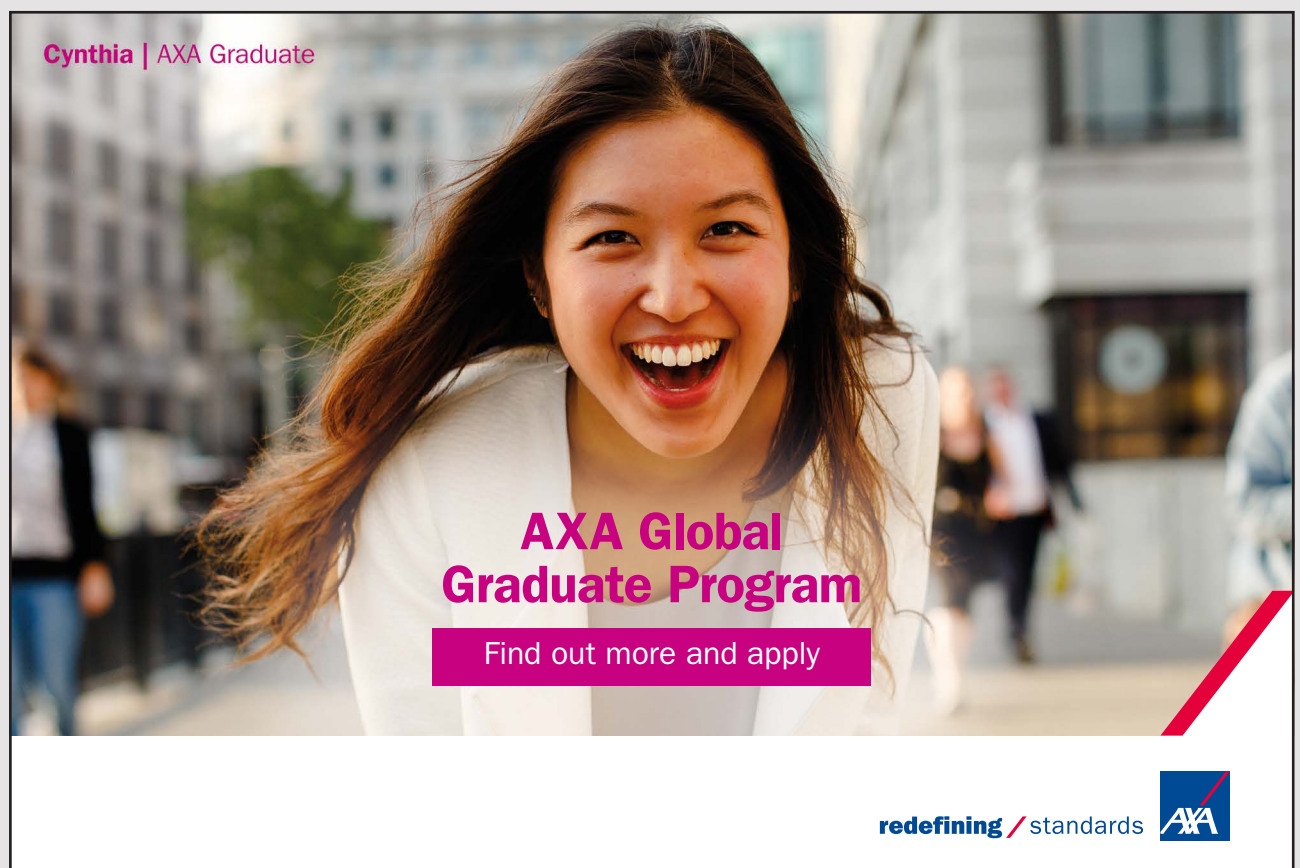
Case studies can be analysed individually or in groups. Techniques such as SWOT analysis, Force Field analysis, and Porter's Five Forces analysis may be used to understand the organisation's strategic position. Analysed in a group, case studies give participants an opportunity to develop interpersonal relationships, negotiation, communication, collaboration and team's skills.

The purpose of a case study may be to illustrate a point, explore conceptual models used for analysis, and help learners discover principles or solutions for themselves. Case studies can also be drawn up based on the managers' own organisation's problems. In fact, the more realistic and relevant they are to the actual roles that the participants play in their own organisations the better. They are an important part of MBA programmes and other business degrees.

### Conclusion

Case studies are a very effective way to improve learning and development. They give learners an opportunity to discuss and solve a problem by applying theory and practice to a business scenario. They provide a safe and risk free supportive environment in which to learn, providing learners with an understanding of what they need to know to solve practical business problems in the real world.


Learners are asked to use their skill, knowledge, and analytical powers to identify problems, consider alternative solutions, choose the most appropriate solution in the circumstances and make recommendations on how it should be implemented. The findings, conclusions and recommendations must be justified on the basis of hard facts and tested principles.



Cynthia | AXA Graduate

**AXA Global Graduate Program**

Find out more and apply

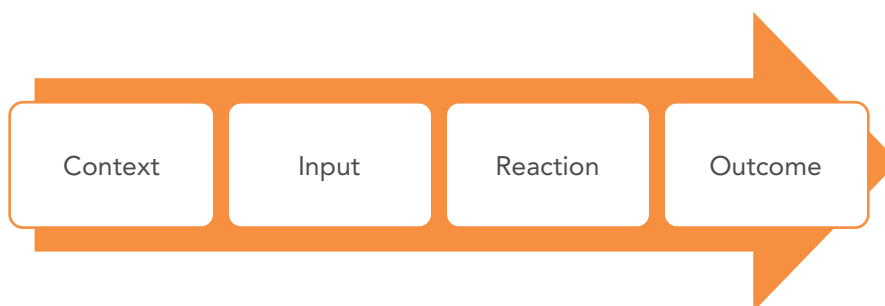
redefining / standards 

The benefits of case studies are many. They can be used for team-building, management training, leadership, and skill development. They instill problem-solving, decision-making, critical thinking, communication, negotiation, conflict resolution, leadership and interpersonal relationship skills in participants. They facilitate deeper learning through discussion, reflection and debate, rather than surface learning through mere memorisation of facts.

### **References**

- Malone, Samuel A. (2000). *Learning Skills for Managers*. Oak Tree Press, Dublin.
- Malone, Samuel A. (2003). *Learning about Learning*. CIPD London.
- Shivakumar, Kirti. (2012). *The Case Study Method in Training and Management Education*. The IUP Journal of Soft Skills, Vol.6, No.2.
- Zhao, Jensen J. (1996). *Using Case Studies for International Business Communication Training*. *Business Communication Quarterly*, Vol. 59, No.4, pp11-24.

# 7 CIRO MODEL



**Fig. 7.** CIRO Model of Evaluation

“Evaluation of training and development means assessment of the impact of training on trainee’s performance and behaviour.”

– Harshit Topno

The CIRO model is an acronymic guide to the stages involved in the evaluation of training. Suggested by Warr, Bird and Rackman in 1970, the acronym **CIRO** stands for **C**ontext, **I**nput, **R**eaction and **O**utcomes. It, together with the Kirkpatrick model, is one of the most popular evaluation models used by trainers, coaches and mentors. CIRO is explained in more detail as follows:

**Context** – This is the environment, formal or informal, in which the training takes place. The reason for the training event should be set out in a training needs analysis and involves setting objectives in harmony with the company’s culture and climate. The training objectives should be set at three levels:

- The ultimate objective – corporate level such as impact on corporate objectives like return on investment or market share.
- The intermediate objective – the changes necessary in the employees work behaviors to facilitate the ultimate objectives being achieved.
- The immediate objective – the knowledge, skills or attitudes that employees need to acquire in order to change their behaviour and so achieve the immediate objectives.

A proper needs analysis is the foundation of the CIRO process.

**Input** – This is the input to the training event and involves the planning, design, management, and delivery of the training programme. It includes the selection and evaluation of programmes, learners, trainers, resources, materials and equipment. The appropriateness of the inputs is crucial to the success of the training initiative. For example, if the wrong type of learners were chosen for a customer care course (they have no face to face or telephone contact with customers) then the course would be a waste of time and resources for the organisation.

**Reaction** – This is the learners’ reaction to the training event. It involves getting the opinions of course participants, maybe through the use of a questionnaire or by asking them informally. This evaluation is subjective and thus needs to be collected as systematically and objectively as possible. How did the learners react to the training and was it relevant to their roles in the organisation? This feedback is used to improve the training process.

**Outcomes** – This is information about the results or outcomes of training. This is easier to do when the training is concerned with hard and specific skills such as word processing. It is more difficult to do in the case of soft skills such as conflict resolution. If performance is expected to change as a result of the training, then the evaluation needs to establish the initial performance level of the learner and compare it with the new level. Outcome evaluation is done at three levels – immediate, intermediate and ultimate.

- Immediate attempts to measure changes in knowledge, skills or attitudes before a trainee returns to the job. This could be a post-test done at the end of the programme.
- Intermediate refers to the impact of training back on the job. Has the trainee applied the knowledge, skills and attitudes learned during the programme back on the job?
- Finally, ultimate attempts to assess the impact of training on departmental or organizational performance in terms of overall results. Has the efficiency and productivity of the employee improved as a result of the training?

## **Conclusion**

CIRO provides a systematic model for employers to follow when conducting a training and development assessment. The CIRO model focuses on measurements before and after the training has been carried out and thus meets some of the criticisms of the Kirkpatrick model. The main strength of the CIRO model is that the objectives (context) and the training resources (inputs) are considered. It is popular for measuring the effectiveness of management training programmes.

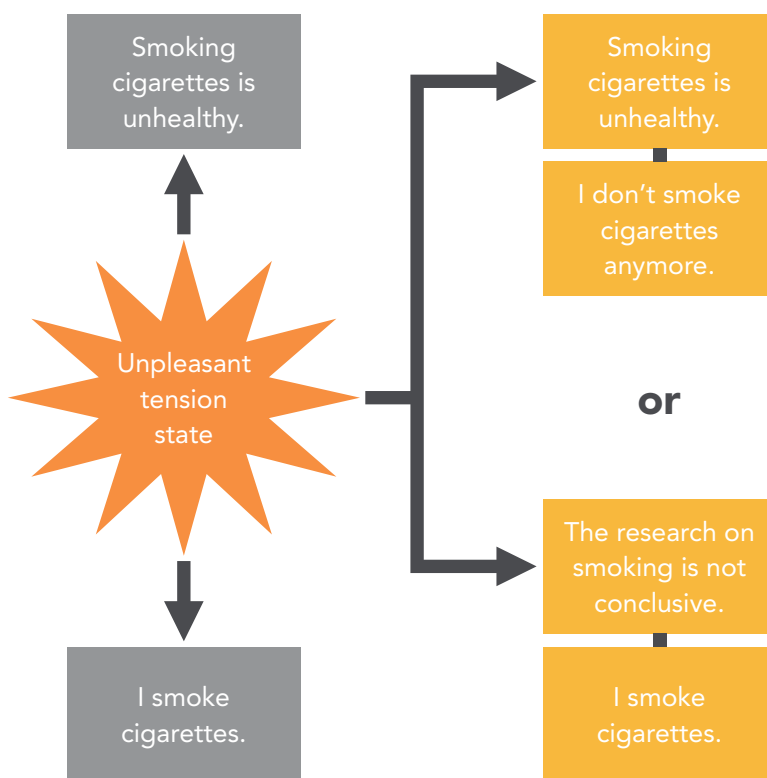
**References**

Malone, Samuel A. (2003). *Learning about Learning*. CIPD London.

Topno, Harshit. (2012). *Evaluation of Training and Development: An Analysis of Various Models*. IOSR Journal of Business and Management, Vol.5, Issue 2, Sept-Oct.

Warr, P; Bird, M & Rackham, N (1970). *The Evaluation of Training*, Gower. Aldershot.

# 8 COGNITIVE DISSONANCE



**Fig. 8.** Cognitive Dissonance

“Middle-aged people can balance between believing in God and breaking all the commandments without difficulty.”

– T.H. White, The Ill-Made Knight

Cognitive dissonance (lack of mental harmony between things) is the internal conflict and anxiety that people experience when they encounter information at variance with their thoughts, attitudes, values and beliefs. People do not like or feel comfortable with dissonance. Consequently, they try to remove or reduce it in order to restore balance. They may try to get new information, change their interpretation of events, reverse their decision, or change their values. They may even refuse to believe the dissonant input, ignore the information, deny the evidence, or rationalize it out of the way. In the example illustrated in the diagram



people may know that smoking is harmful while still continuing to smoke (it is a major cause of cancer, heart disease and numerous other ailments). They may rationalize it away on the basis that the research on smoking as a carcinogenic is inconclusive or that lots of old people smoke and they are still alive and well.

The concept of cognitive dissonance is not new. A classic illustration of cognitive dissonance is expressed in the fable “The Fox and the Grapes” by Aesop (ca. 620 – 564 BCE). In this story a fox sees some high hanging grapes on the branches of a tree and wishes to eat them. The grapes are bursting with juice and the fox’s mouth waters as he looks at them. Despite much effort the fox is unable to reach them, and decides that they are not worth the effort, with the justification that they are not ripe and sour. The moral of the story is that anybody can pretend to despise and belittle that which is beyond their reach. Thus if one desires something and finds it unattainable one can reduce dissonance by criticizing it.

Cognitive dissonance was first suggested in 1956 by social psychologist Leon Festinger who investigated the beliefs of a cult. They believed that the earth was going to be destroyed by a flood, and that they would be rescued by aliens from outer space. They had given up their homes and jobs to work for the cult and wondered what would happen to their homes in the event of the flood not coming to pass. The flood never happened and the UFO landing didn’t take place. A minority of the members realised that they had made fools of themselves while the more committed members were more likely to reinterpret the evidence to show that they were right all along. The reason the earth was not flooded was because of the faith of cult members. This in fact reinforced their beliefs in the cult, and they went on to proselytize for the cult despite the failed prophecy.

In a well-known study, adults who were paid a lot of money to tell a lie rationalized lying simply by telling themselves that the amount of money justified just one lie. People offered less money managed to convince themselves they weren’t really lying at all – the bribe was worthless so the lie didn’t matter. In a court case reported in the newspapers a priest rationalized away sexual abuse of children saying it was merely a venial sin and as such did not conflict with his vows of celibacy and chastity. A politician accused of bribery and corruption rationalized it away as begrudgery. It seems that people can justify any wrongdoing in their own minds.

I can reduce dissonance in four ways:

1. I love ice cream. I also like to keep my weight in check. If I eat ice cream my weight is likely to increase. I can ignore or eliminate the dissonant thought by pretending that eating ice cream does not increase my weight. In this way I can enjoy the best of both worlds. Ignoring the dissonant thought allows me to eat ice cream which otherwise I would view as wrong or inconsistent with the desire to keep my weight down.

2. I can also overcome or lesson the cognitive dissonance by altering the importance of certain thoughts. I can either decide that ice cream is extremely good or that losing weight is not that important. If one of the dissonant thoughts outweighs the other in importance then my mind has less difficulty dealing with the dissonance – meaning that I can eat my ice cream and not feel bad about it.
3. I can create or emphasise new thoughts and counteract the fact that I know ice cream is bad for my objective of losing weight. For instance, I can convince myself that as “I exercise four times a week” or “I need calcium and dairy products as part of a healthy diet or “I had a very light dinner.” These new thoughts lesson dissonance, as I now have several thoughts that say ice cream is okay, and only one, which says I shouldn’t eat it.
4. I can prevent the dissonant thought in the first place. I can ignore it, refuse to accept it, or simply avoid that type of information. Thus, if I come across a study that says ice cream is more fattening than originally thought I could decide to ignore it and refuse to read it. Future dilemmas can be preempted by avoiding reading that type of information. I can simply ignore and refuse to read health related studies on ice cream in newspapers and health magazines on the basis of what you don’t know won’t bother you. This is a type of confirmation bias where people read information which confirms their existing beliefs and attitudes and ignore everything else.

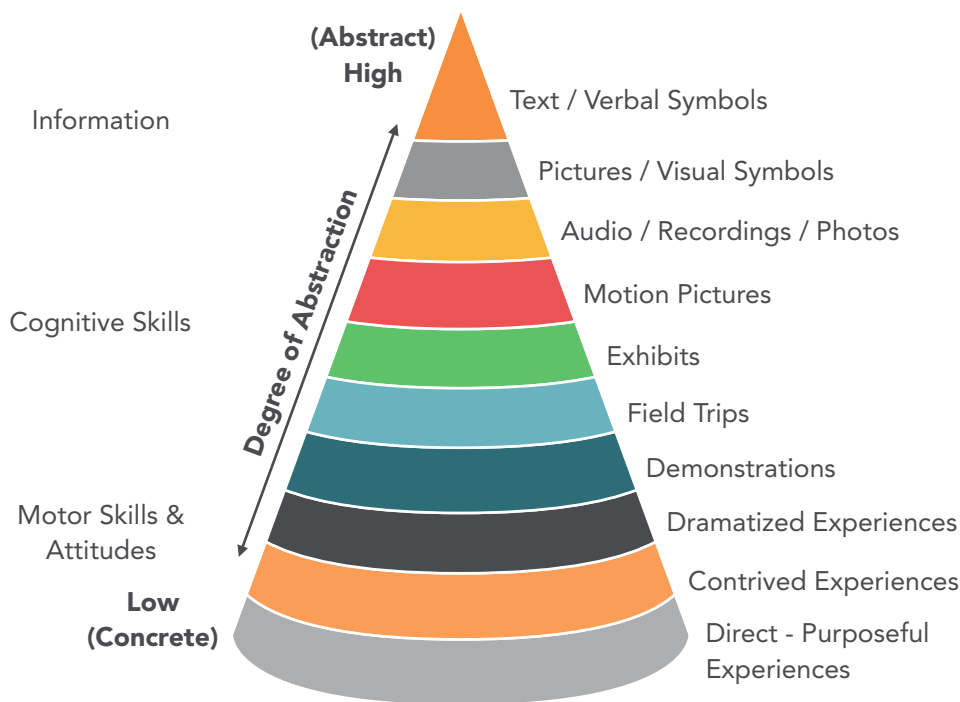
## Conclusion

Cognitive dissonance gives the reasons to learning facilitators why it is so difficult to change people’s attitudes, beliefs and behaviours. People find it difficult to change long held beliefs even when there is new strong evidence to the contrary. They particularly stick to ideas which took considerable time and effort to acquire. Thus, if learning something has been difficult and time consuming, people are less likely to admit that the content of what they have learned is useless or of little value. Furthermore, if people learn something new which contradicts prior knowledge that they are committed to, they are likely to resist the new learning. They may try to get new evidence supporting their case, reinterpret the information, ignore it or rationalize it away.

## Reference

- Barker, Phil. (2003). “Cognitive Dissonance.” Beyond intractability. Eds. Guy Burgess & Barker, Phil. Conflict Information Consortium, University of Colorado, Boulder. [www.beyondintractability.org/print/2465](http://www.beyondintractability.org/print/2465)
- Malone, Samuel A. (1999). *Success Skills for Managers*. Oak Tree Press Dublin

# 9 CONE OF EXPERIENCE



Graphic courtesy of Edward L.Counts, Jr.

**Fig. 9.** Cone of Experience by Edgar Dale

“What I hear, I forget;  
 What I see, I remember;  
 What I do, I understand.”

– Chinese proverb

The cone of experience (also known as the cone of learning) is a visual model of eleven stages going from concrete experiences at the bottom of the cone to abstract experiences at the top, or in reverse order going from theory at the top to practical experience at the bottom. At the bottom of the cone there is active participation by learners in their learning through experiential learning involving practical situations. Moving up the cone, learners decrease their participation while symbolic forms of learning such as ideas, formula and principles, increasingly become more prevalent.

Edgar Dale theorized that learners retain more information by what they ‘do’ in comparison to what is ‘heard,’ ‘read’ or ‘observed.’ Today, this ‘learning by doing’ has become known as experiential learning or action learning, and is considered to be one of the most effective ways of learning. His research is illustrated in the Cone of Experience which he never claimed was based on empirical evidence.

According to Dale the hierarchy is not based on difficulty but rather on the degree of abstraction and on the number of senses involved. The experiences at each stage of the hierarchy can be mixed and are interrelated. This means that more meaningful ways of learning can be facilitated. His hierarchy should not be taken as a value judgement – concrete experiences are not necessarily better than abstract ones but all the approaches should be used in appropriate combinations. It doesn't mean that reading and listening are not valuable learning experiences (but that experiential learning leads to a higher rate of retention). In fact, reading is a valuable, powerful and efficient way of conveying information.

The more senses, such as visual, auditory and kinaesthetic, that are involved in learning the more effective and memorable the learning. However, it doesn't mean that the only effective way of learning is through concrete experiences. To understand your concrete experiences, you often need a strong theoretical foundation or abstract knowledge to back it up and to provide a holistic development. Abstract concepts are needed to develop higher order thinking skills helping learners generalize learning and deal with more complex life situations.

Let's now explain each element of the hierarchy.

- ***Direct Purposeful Experiences.*** These are experiences that serve as the foundation of learning. More senses are used at this level to build up our knowledge. The learner learns by doing things themselves – actual hands-on experience. We know that an on-the-job experience where the learner uses all the senses is the most effective way to learn.
- ***Contrived Experiences.*** This is where mock-ups, simulations or models are being used to provide an experience that is as close to reality as possible. Air pilots learn to fly airplanes using flight simulators. This level is very practical and provides realistic learning experiences without the risk involved in doing the real thing; and engages visual, audial and kinaesthetic (touch and movement) senses and even the sense of smell if necessary.
- ***Dramatized Experiences.*** Through dramatized experiences such as drama and role play learners become more familiar with the concept as they immerse themselves in an 'as if' situation.
- ***Demonstrations.*** This is 'a watch me' and then do scenario. It can use physical actions, pictures, drawings, video and other media to facilitate clear and effective learning. Learners learn by seeing how things are physically done and reproducing what is done.
- ***Field Trips.*** This level extends the learning experience through excursions and visits to places such as factories, where an actual manufacturing process takes place, that are not available inside the classroom. Complex processes can be viewed at first hand and explained in an actual work context.

- **Exhibits.** This may be a combination of some of the earlier levels on the cone. It may be a combination of mock-ups, models and demonstrations. Exhibits may be specific to the needs of the learner but presented in a more abstract manner. Exhibits may allow learners to understand the meaning and relevance of things based on different pictures and representations presented.
- **Television and motion pictures.** Educational technology has extended the range and use of this media through internet courses and social media like Facebook and YouTube.
- **Audio/ Recordings/Photos.** This includes still pictures, recordings and radio. These can be used to advance and extend the learning experience of learners.
- **Text/Verbal Symbols and Pictures/Visual Symbols.** This is a combination of the top two levels. These two levels are the most complex and abstract of all the components of the Cone of Experience. In the text/verbal symbols level are words, ideas, principles, formula, and the likes. This level does not include visual representation of ideas. In the visual symbols level, charts, maps, graphs, and diagrams are used to represent abstract concepts.

The following percentages (or variations) are often superimposed on Dale's Cone of Experience.

People remember 10 per cent of what they read; 20 per cent of what they hear; 30 per cent of what they see; 50 per cent of what they hear and see; 70 per cent of what they say and write; 90 per cent of what they say as they do a thing. They appear to have originated in a magazine called 'Film and Audio-Visual Communications' by an employee of Mobil Oil Company in 1967.

These percentages have since been discredited. In fact, Dale never backed up his theory with any quantitative research. The Cone merely represented his intuitive view of how learning occurs and he was at pains to emphasise that his model should not be taken too literally. However, he did maintain the more numerous and varied the media we employ in learning, the richer and better the concept we develop. A variety of well-chosen instructional materials can provide a variety of experiences that enhance learning. However, other factors such as learning styles, the philosophy of the learning facilitator and the motivation of learners must also be considered.

### Conclusion

The Cone of Experience is a visual model that helps learners think critically about the ways in which concepts are developed in a learning context. The cone suggests that the more concrete and experiential learning experiences are the most effective for learning. This does not mean that abstract concepts are not important to learning. In fact, they help learners generalize learning making it more meaningful and useful. Abstract concepts are the foundation of our learning. A combination of abstract concepts and concrete experiences are the ideal as abstract ideas are difficult to understand if not illustrated by concrete relevant examples.

The cone is a timely reminder that the more learning approaches used in a learning context the better. It is not a prescriptive model (what you ought to do) but rather a descriptive or classification system (it describes a process of what happens in a learning context using a variety of approaches). However, other facts such as learning styles, the philosophy of the learning facilitator and the motivation of learners must be considered.

Click here to learn more

# TAKE THE RIGHT TRACK

Give your career a head start by studying with us. Experience the advantages of our collaboration with major companies like **ABB, Volvo and Ericsson!**

Apply by 15 January

World class research

www.mdh.se

MÄLARDALEN UNIVERSITY SWEDEN

Click on the ad to read more

## References

Belohlav, James A; Cook, Lori S & Heiser, Daniel R. (2004). Using the Malcolm Baldrige National Quality Award in Teaching: One Criteria, Several Perspectives. *Decision Science Journal of Innovative Education*. Vol.2, No. 2.

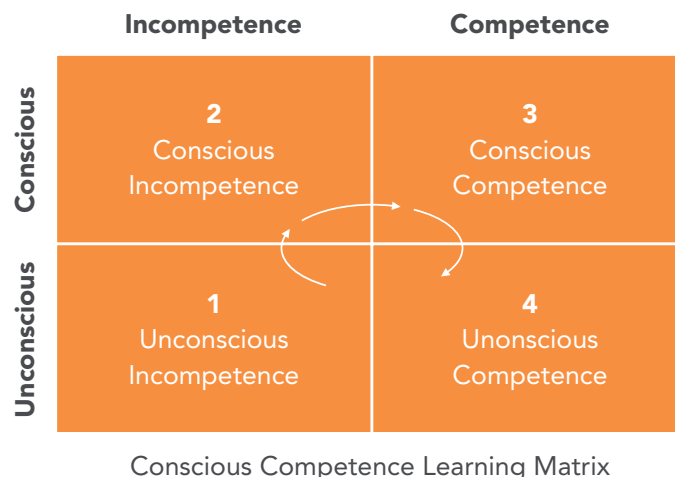
Little, Bob. (2006). Figuring it out. *e-learning age*. May 2006.

Subramony, Deepak Prem; Molenda, Michael; & Thalheimer, Will. (2014). The Good, the Bad, and the Ugly: A Bibliographic Essay on the Corrupted Cone. *Educational Technology/November-December 2014*.

Subramony, Deepak Prem; Molenda, Michael; Betrus, Anthony K; & Thalheimer, Will. (2014). The Mythical Retention Chart and the Corruption of Dale's Cone of Experience. *Educational Technology/November-December 2014*.

Subramony, Deepak Prem; Molenda, Michael; Betrus, Anthony K; & Thalheimer, Will. (2014). Previous Attempts to Debunk the Mythical Retention Chart and Corrupted Dale's Cone. *Education Technology/November-December 2014*.

# 10 CONSCIOUS COMPETENCE LEARNING MODEL



**Fig. 10.** Conscious Competence Learning Model

“We are what we repeatedly do. Excellence, then, is not an act but a habit.”

– Aristotle

The origins of this theory are obscure. Sometimes it is attributed to Abraham Maslow although it doesn't appear in his formal writings. In the 1970s, psychologist Noel Burch suggested a similar model for how we master skills and relationships. He called it the '*conscious competence learning model*.' It fell into disuse for decades but has now resurfaced as a popular model with trainers, coaches, mentors and educationalists. To my knowledge it hasn't been empirically proved. Nevertheless, it is intuitively appealing and is a very useful concept to be aware of.

Awareness of how you learn will make you a more competent learner. All learning involves persistence, determination and disappointments on the way to competence. Psychologists have discovered that there are four learning stages. These stages range from unconscious incompetence to conscious incompetence to conscious competence and lastly to unconscious competence. The model will help you understand the thinking and emotional stages that all learners go through when learning a new skill or discipline such as driving a car, mastering personal computers, learning a new language or becoming a better writer.



You will encounter different emotions at each stage as you feel initial anxiety and frustration at the seemingly insurmountable obstacles, until eventually you experience breakthroughs and excitement on your journey towards mastery. The model will help you stay focused and motivated when times seem tough and you feel like giving up until you experience success. It reminds you not to expect too much, too soon. After all, Rome wasn't built in a day! It shows you where you are on the road to competence and what more you have to do to get there.

The model is useful in mentoring, coaching, teaching and training situations, because it allows learners to stay in touch with people when they are going through the process of learning something new. It will help facilitators, teachers and trainers to empathise with the emotions and feelings that learners are experiencing so that they can encourage them to stick with the task. As a facilitator do not be afraid to praise the learner for each small progress made as this will reinforce the learning and motivate the learner to continue. Learners must be made aware that everybody goes through these stages so that they should learn to manage them effectively. The four learning stages are illustrated in the above diagram Fig.10.

### ***Unconscious Incompetence***

This is the stage where you don't know what you don't know. You are just not aware of your own level of ignorance and lack of skill and experience. Facilitators of learning often get resistance from learners at this stage because prospective learners do not know what they do not know. If you've never driven a car, you will have no idea of the challenges and difficulties involved. For example, very young children, often imagine they can drive a car. Their enthusiasm and confidence exceed their ability, while at the same time they have no idea of the range of skills necessary to drive a car. If you have ever given driving lessons, you begin to appreciate just how much you need to know without realising it. It is very difficult to translate tacit knowledge into words. This is why it is so difficult for an experienced, competent driver, at the unconscious competence level, to train somebody at the unconscious incompetence level.

It is very challenging to make tacit knowledge explicit because the skills have become habitual, automatic responses and are thus almost impossible to verbalise, organise and explain consciously. Many a happy marriage has come to grief because one partner has unwittingly agreed to teach the other how to drive without really thinking about how difficult, frustrating and traumatic it can prove to be. This demonstrates just how much of our everyday actions are done unconsciously, with the minimum of conscious awareness on our part. Everyday habits are activated unconsciously – we are on autopilot without realising it.

To move out of this stage do a strengths and weaknesses analysis and training needs assessment so that you are aware of the areas that you need to address. Consider your goals so that you acquire those skills that will help you meet your career and personal needs. The more precisely you define goals the more likely you are to achieve them. Vague unspecified goals will do little to move you towards success. Also refer to your peers for feedback as they may help you identify other areas that you need to improve. To move from stage one to stage two, read up on the subject you want to know, watch YouTube films on the topic, talk to experts in the field, or watch someone do what you want to learn. All of this will provide you with the roadmap and motivation to undertake the journey of learning.

### ***Conscious Incompetence***

This is the stage where you know you don't know. At the conscious incompetence level, you're aware of what you're doing and what you need to do to reach your full potential. To learn new things, you must motivate and challenge yourself to move out of your comfort zone. You start to learn how to drive. You quickly become disillusioned and your confidence drops when you see how awkward you are. You feel you would need to be an acrobat to co-ordinate the movements required for mirror work, steering, gears, clutch, brake and accelerator, while at the same time watching the control dials and the road. In addition, you are trying to obey the rules of the road. It seems like an impossible task. Feelings of anxiety and hopelessness are often a feature of this stage.

The conscious incompetence stage is where you have embarrassing kangaroo starts and jerky stops, forget to release the handbrake, fail to indicate, grind the gears, oversteer and generally challenge the patience of your instructor and other road users. You learn most at this time, but need confidence, persistence and determination to take you to the next stage. Motivation, true grit, encouragement, goals, action plans and taking responsibility for your own learning will get you there in the end.

Some people get frustrated and lose confidence at this stage and give up. Consider the number of people who start educational programmes, pay their fees and shortly afterwards give them up at great financial loss, disappointments and personal inconvenience. The first year at college has usually the greatest attrition rate. People don't realise that everybody goes through the same stages of the learning curve and experience negative feelings, setbacks, obstacles, frustrations, disappointments and difficulties before they finally master any skill. There is no gain without some pain. Determination and commitment will see you through in the end.

To counteract your lack of confidence, develop and adopt a positive attitude to your learning. Use positive affirmations to combat negative thinking and to refocus your energy and thinking on the days that you feel down. Everybody resists change to some degree. Remember learning new things can be uncomfortable but if you stick to the task you will achieve your goals in the end. Adopt role models that you admire to help you achieve your dreams.

### *Conscious Competence*

This is the stage where you know what to do and you're doing it. Good instruction, feedback and regular practise has moved you from a place where you got things mostly wrong to a place where you are getting things mostly right. The learner can perform the skill without assistance but needs the help of rules, procedures, guidelines, prompt cards and mnemonics. This has been achieved through effort and reflection – learning from your mistakes and moving on. You have been assisted in your goals by the facilitator who has imparted tricks, tips and techniques of the trade to help you gain proficiency. However, even though you may be able to demonstrate the skill to another, it is unlikely that you will be able to teach it well to another learner.

Let's refer to the driving analogy again. This is the stage where you can finally drive the car but you are very self-conscious of the fact. It takes all your concentration and energy, and you feel uncomfortable and drained after driving even for a short while. You still haven't mastered totally a smooth gear shift and your car stalls occasionally at traffic lights. In the meantime, you have assiduously studied and applied the rules of the road.

However, as time progresses your confidence increases in line with your skill. You are reasonably proficient but not yet a master of the art. You may even pass the driving test at this stage, but you must make a conscious effort to reach the required standard. As you make progress overconfidence may be a problem, leading to the taking of unnecessary risks. The result of this is a high rate of accidents for newly qualified brash young drivers, which is confirmed by road accident statistics.

Take every opportunity to practise your new skills so that you become proficient. Practice is the best and most effective way to move from stage three to stage four. For example, look for opportunities at work to use your new skills or take up volunteer positions outside of work that exercise similar skills. It's all about repetition and practise at this stage. As you know if you do something the same way over and over again, the behaviour becomes habitual and requires less conscious effort each time. As one famous golfer was quoted as saying 'the more I practise the better I become.' Practise makes perfect and practise makes permanent.

### *Unconscious Competence*

You are now at the pinnacle of your skill – a master of your craft! You’ve worked hard to get there and moved beyond your comfort zone. Using the driving analogy again, at this stage you can drive; listen to the radio and converse at the same time. You are a self-reliant and confident driver. Some drivers even manage to carry out several complicated conversations with passengers without a problem. The movements involved in driving the car have become an automatic response. Your unconscious mind has taken over the routine, freeing your conscious mind to concentrate on the road, on other road users and the prevailing traffic conditions.

Driving has become a routine and a habit. However, the problem with habits is that there are bad habits or poor practices as well as good habits. Many a person over the years has unconsciously acquired poor driving habits, such as steering with one hand, which may need to be unlearned and replaced by good habits. Others attempt to multitask such as using the mobile phone to converse or text while driving. This practice is dangerous and illegal in most countries.

When I was learning keyboarding skills I was very conscious, reflective and deliberate about striking the appropriate keys. After considerable practice, I got to know where the letters were, but was still very conscious and unsure about their positions on the keyboard. As a result, I was slow and inefficient. Today, after many years’ experience I don’t consciously know where any of the letters are, and I’m fast and efficient. I can focus entirely on what I want to write and let my fingers do the work automatically. In other words, my working memory can devote itself entirely to the problems of spelling, grammar, layout, composition and punctuation while my unconscious mind does the typing. Experts have an elaborate schema or model that they build up in their heads over a long period of time.

This is why they find it almost impossible to explain how they do things to others. This is why famous sports people often don’t make great coaches. Their skill is an intuitive reflex that they find impossible to verbalise and explain to others.

Remember to use your skills regularly and keep up to date or else you will lose them. A good way of doing this is to teach them to others. This will consolidate your knowledge, deepen your understanding and give you the satisfaction of passing on your skills. With your knowledge of the four stages of learning you should be more sensitive to others’ needs when imparting knowledge or skills.

## Conclusion

Expertise in any area of life takes time, determination, persistence and commitment. It will take about 10 years of application and reading before you become an expert in any subject. Learning is a continuous process, not a destination. To learn, you must go from unconscious incompetence to unconscious competence. The model is a timely reminder to educationalists, teachers, trainers, facilitators, coaches and mentors to train people in stages.

There is an appropriate way to teach or train people at each stage. For example, if you train people at stage three when they are still at stage one; the training will have been a waste of time. Learners must be aware of the skill and their deficiency in it to benefit from the training. Learners only respond to training when they are aware of their need for it and the benefits that will accrue from it.

Some companies make a mistake when training new entrants to a company. They get the best person in the department to train the novice in, hoping as if by osmosis; the new employee will become as proficient as the expert. If this doesn't happen they blame the situation on the new employee's inability to comprehend or lack of intelligence.

In fact, an expert is the worst person you could get to induct another person in. He is at the unconscious competence stage and will more likely be unable to explain adequately what's involved in the job. In addition, it is likely that he has no instruction skills or knowledge of the learning process. Sometimes he may even resent training someone else in his skills as he doesn't want them to acquire the level of expertise that he has.

As soon as you attain mastery, you must keep up-to-date with developments and best practice as well as consolidating and practising your existing skills. If you fail to do so, your knowledge will be forgotten or become out of date. People who have accomplished stage four may become complacent and blind to new methods and technologies – they think they have reached the limits of mastery. The danger here is that the learner could find themselves at the consciously incompetence stage again.

In addition, learners need to keep their existing skills alive through practise. It is a question of using it or losing it. Lifelong learning and continuous self-improvement are the name of the game. The leading professional bodies have taken this concept on board through their continuing professional development programmes, which are mandatory in most institutes.

**References**

- Flower, Joe. (1999). In the Mush. *Physician Executive*. Jan/Feb. Vol. 25. Issue 1.
- Malone, Samuel A. (1990). *Success Skills for Managers*. Oak Tress Press, Dublin.
- Malone, Samuel A. (2000). *Learning Skills for Managers*. Oak Tree Press, Dublin.
- Malone, Samuel A. (2005). *A Practical Guide to Learning in the Workplace*, The Liffey Press, Dublin.
- Useem, Jerry. (2006). Five Levels of Excellence. *Fortune*. Vol.154. Issue 9. Pp176-177

# 11 CRAMP MODEL OF ON-THE-JOB LEARNING SKILLS

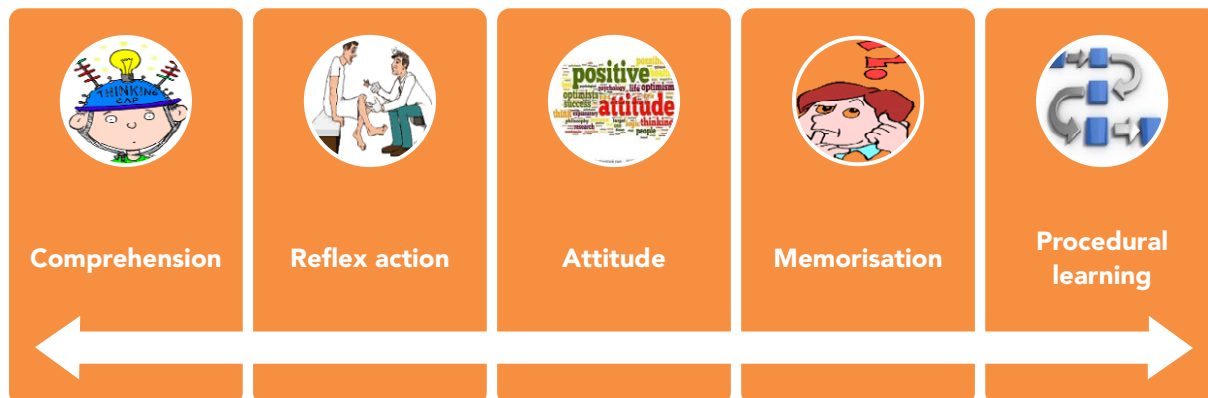


Fig. 11. CRAMP model of on-the-job learning skills

"The beautiful thing about learning is that nobody can take it away from you."  
 – B.B. King

The CRAMP system presupposes that a training needs analysis has been done; the appropriate content for the training has been determined; the best methods for delivery of the training have been decided; good instructors have been employed and the relevant trainees have been selected.

The CRAMP system has been defined as a flexible and dynamic approach to training which considers the characteristics of the person undergoing training, as well as the type of learning involved. It differs from traditional Task Analysis approaches which typically break a task into elements which are then trained according to their various characteristics. The CRAMP system, concerns itself equally with the nature of the task, as it does with the nature of the learning and the characteristics of the learner.

The CRAMP model is an acronymic guide to the type of skills that most of us have to develop for learning on-the-job. It was devised by the Industrial Training Research Unit of University College London. The acronym **CRAMP** stands for **C**omprehension, **R**eflex **A**ttitude, **M**emorisation, and **P**rocedural learning.

- **Comprehension** – You need an understanding of how business works and how the economy operates – more specifically, how your department interfaces with the other departments within the company, and how the company interfaces with competitors in the industry. In addition, you need to be familiar with health and safety regulations, and the principles behind the practical work taught. Such knowledge gives the contextual framework for information and underlies decision-making and problem-solving.
- **Reflex action** – You need to acquire skills in work activities and be quick in perception of what is going on around you (also known as kinaesthetic abilities). That is, you need skill, speed, movement and dexterity in doing job tasks – keyboarding skills are a good example of such abilities in combination. This is one of the eight intelligences listed by Howard Gardner.
- **Attitude** – You need to become aware of the culture of the company as reflected in the way it conducts business and treats customers and staff. Personally, a positive attitude will be reflected in the service you provide internally to other employees and externally to customers and suppliers. If a company treats its staff fairly, with consideration and respect, they in turn will do likewise with the customers. It is important that a shop assistant shows courtesy to a customer even if the customer is acting unreasonably. Attitude can determine the motivation to learn and the enthusiasm of the learner to the learning task. More importantly, interpersonal relationships, the ability to get on with others and team work are vitally important in most jobs.
- **Memorisation** – You need to memorise the names of people in other departments that you have dealings with, and those in branches or other companies within the organisation. This is in addition, to being totally familiar with the employees you work with. In an average organisation you will need to memorise codes, prices, safety regulations, job numbers, stock location, and company policies and rules. In some jobs the memorisation of basic subject matter is essential. After induction training there may be a written examination at the end so that the learners' ability to memorise information and pass tests is very important.
- **Procedural learning** – You need to know how the policies, processes, systems, procedures, rules and regulations, job aids and checklists that the company operates: this will enable you to do your job more efficiently and effectively. Flow charts are often used as a visual guide to systems and procedures. In a practical sense you need to know what to do in a given situation especially in emergency situations.

## Conclusion

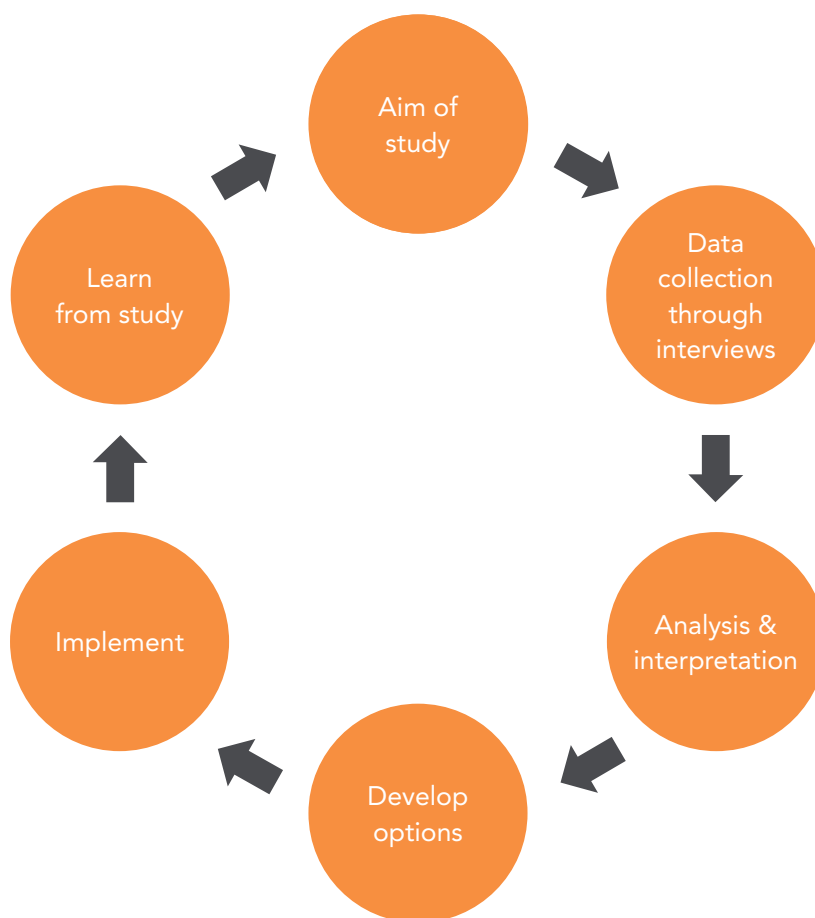
CRAMP is a systematic and comprehensive approach to training. It is likely to be more effective than traditional approaches to training. A study into the training of underground guards in London Transport using the CRAMP system showed promising results in comparison to the conventional method of training.



**References**

- Belbin, R.M. (1969). CRAMP a guide to training decisions. *Industrial Training International* Vol.4. pp160-163
- Downs, Sylvia & Roberts, Andrew. (1977). The training of Underground train guards – a case study with a field experiment. *Journal of Occupational Psychology*, Vol. 50, pp111-120.
- Malone, Samuel A. (2003). *Learning about Learning*. CIPD London.
- Prior, John. (1991). *A Handbook of Training and Development*, Gower Aldershot.

# 12 CRITICAL INCIDENT TECHNIQUE



**Fig. 12.** Critical Incident Technique overview

*"I'm stronger because of my hard times, wiser because of my mistakes, and happier because of my sad experience."*

– Instagram-The GoodQuote Co.

The critical incident technique (CIT) focuses on those tasks or job behaviours that have a critical effect on the success or failure of a job. Developed during World War II by John Flanagan, an American psychologist, its purpose was to investigate why errors were made during bombing missions over Germany and to discover ways of improving the training of pilots to eliminate such errors. At the time evaluation reports were full of clichés rather than facts lacking objective definition of effective and ineffective behaviours demonstrated by pilots. Critical incidents can be done in various ways but essentially, they are about people telling a story about a good or bad experience they have had.

Flanagan (1954) first described his technique as a set of procedures for collecting direct observations of behaviour to solve practical problems and develop broad psychological principles. Since then the CIT has been used in health care, construction, commerce, education, industry, aviation, space exploration and shipping. An incident is defined as any observable human activity sufficiently complete to permit inferences and predictions to be made about the person who is carrying out the activity. To be critical, an incident must occur in a situation where the purpose and consequences are clear to the observer.

It is particularly valuable when the constraints on training time force the trainer to concentrate on the vital or critical aspects of job performance. When the critical incident is done trainers will have data on appropriate and inappropriate behaviour that can be used for various training exercises. For example, simple things like a procedure check might be essential in a high-risk process where the repercussions of a mistake in the process might be very costly or indeed fatal. On the other hand, too many checks in some circumstances such as routine administration is inefficient and only add time and cost.

An overview of the CIT process as in Fig. 12 is:

- Identify aims, symptoms and range of study. Define the behaviours of interest, the background, context and circumstances of the study.
- Determine who should be interviewed and who should do the interviewing. Group interviews are a time efficient method and can be used in appropriate circumstances. Formulate questions. A well-designed questionnaire can help the interview process. Respondents talk about their impressions and experiences, and tell their stories in response to the questions. The incidents may be positive or negative but must be relevant to the study.
- Analyse, interpret, categorize and summarize the data collected. CIT results must be interpreted in line with the goals of the study. Consider the limitations of the study.
- Develop options or alternative approaches to solving the problem. Pick the most appropriate alternative having regard to all the circumstances of the study.
- Act to correct problem or suggest actions for improvement.
- Learn from the study so that the same mistakes will not happen again.

CIT can be used for:

- Identifying and describing skills, attitudes, knowledge or values that contributes to effective or ineffective job performance. The technique can be used to identify and analyse the reason for medical mistakes such as injury or even death to patients in the care of the health service. The results of such inquiries can be used to improve the health care of patients in the hope that such mistakes won't be repeated.
- Identifying effective behaviours to be included in training programmes such as wearing safety goggles while using the lathe in the workshop.
- Performance appraisal. The CIT identifies and describes specific incidences where the employee did something really well or something requiring improvement. This differs from other methods which rely on the assignment of ratings or rankings.
- Identifying a deficiency of key learning skills such as good interpersonal relationships. Reports into medical mistakes in hospitals, with dire consequences for patients, have often been attributed to systemic failures. This is a fancy term for incompetent medical professionals, poor interpersonal relationships between consultants and senior management, poor communication, and poor organisation resulting in damaged collaboration between the two.
- Identifying sources of errors or inappropriate behaviours so that corrective action can be taken to eliminate them in the future.
- Identifying behaviours that please or frustrate customers when dealing with the company such as not returning calls, not greeting customers on entry or exit from the shop or chatting with another shop assistant while the customer is waiting at the counter for service.
- Identifying human relations problems in the organisation, such as poor communication, interdepartmental conflicts, personality conflicts and inappropriate decision making and problem-solving skills.

## Conclusion

Flanagan (1954) first described his technique as a set of procedures for collecting direct observations of behaviour to solve practical problems and develop broad psychological principles. Since then the CIT has been used in health care, construction, commerce, education, industry, aviation, space exploration and shipping. An incident is defined as any observable human activity sufficiently complete to permit inferences and predictions to be made about the person who is carrying out the activity. To be critical, an incident must occur in a situation where the purpose and consequences are clear to the observer.

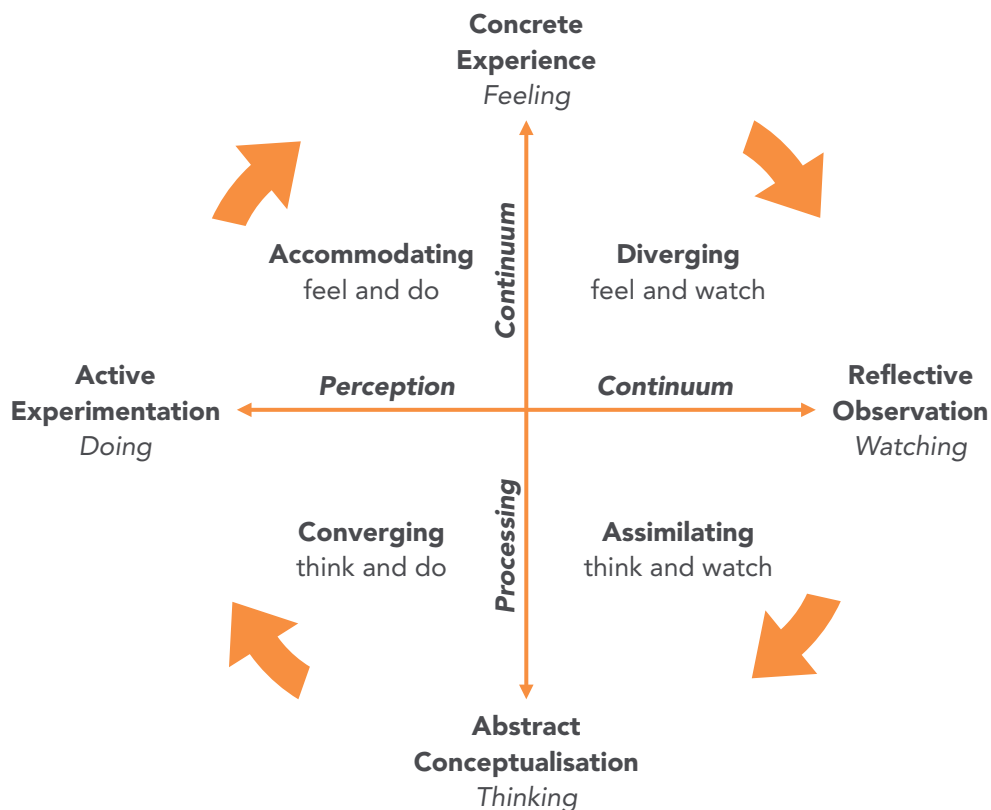
It is particularly valuable when the constraints on training time force the trainer to concentrate on the vital or critical aspects of job performance. When the critical incident is done trainers will have data on appropriate and inappropriate behaviour that can be used for various training exercises. Appropriate behaviour might include returning calls promptly and greeting customers cordially on arrival into the shop. On the other hand, inappropriate behaviour might include not returning calls or greeting customers on arrival into the shop.

The technique can be used to identify and analyse the reason for medical mistakes such as injury or even death to patients in the care of the health service. The results of such inquiries can be used to improve the health care of patients in the hope that such mistakes won't be repeated. CIT can be used in performance appraisal to identify and describe specific incidences where the employee did something really well or something requiring improvement.

## References

- Benr, Lenneke. (2015). Framing and reframing critical incidents in hospitals. *Health, Risk & Society*. Vol.17, No.1, pp81-97
- Fitzgerald, Kirsten. (2008). The Critical Incident Technique: A Useful Tool for Conducting Qualitative Research. *Journal of Dental Education*. March. Vol. 72. No.3. pp299-304.
- Gordon, Incorporated. (2014). *Critical Incident Technique. Training Workbook*.
- Malone, Samuel A. (2003). *Learning about Learning*. CIPD London.
- Truly Sautter, Elise & Hanna, Joe. (1995). Instructional Development Using the Critical Incident Technique. *Marketing Education Review*. Vol.5. No.1 Spring 1995.
- Wetjen, John F. (1968). Performance Appraisals. A Study of Systems Used to Appraise Employee Performance, *Training and Development Journal*, March 1968.

# 13 FOUR STYLES OF LEARNING



Activist	Reflector
Theorist	Pragmatist

**Fig. 13.** Four Styles of Learning - Honey & Mumford Model & Kolb's Learning Cycle

"Increased awareness of how you learn opens up the whole process of self-scrutiny and improvement. Learning to learn is your most important capability since it provides the gateway to everything else you want to develop."

- P. Honey

Learning styles were developed by Honey and Mumford based upon the work of Kolb's learning cycle. The four styles of learning are activist, reflector, theorist and pragmatist. It is probably the most widely used learning styles theory in training and development circles.

- **Activist.** As the name suggests, activists have a hands-on approach and enjoy doing things. They are very much involved in the here and now and are happy to be dominated by immediate experiences. They are open minded and enjoy learning new experiences especially if they have a practical use. They tend to be reactive rather than proactive. They thrive on problem solving. They enjoy brainstorming, problem solving, group discussion, role-play and lateral thinking, and love being involved in teams. They are gregarious, attention-seeking and like to be the life and soul of the party. They are more at home in doing things rather than thinking about things. They do not learn well from passive situations such as reading a book, observing somebody else do something, watching a video or listening to a lecture. Instead they prefer to be challenged and learn best on-the-job through experiential learning such as practical exposure, trial and error and direct experience. Activists make good engineers, builders and trades people.
- **Reflector.** Plato said, ‘The life which is unexamined is not worth living.’ Plato believed that learning was a process of inner reflection to discover truth and the knowledge within us. Reflectors tend to pause and ponder about their experiences and view them from different perspectives. They like to consider the facts and weigh options carefully before they conclude. They tend to be cautious and have the philosophy of ‘look before you leap.’ Consequently, reflective people when asked a question need to think about their answer before they provide one. Socially they tend to be quiet, reserved and detached but are good listeners. They prefer to take a ‘back seat’ at meetings and discussions. Part of their approach is to get as many different points of view as possible before making up their own minds. They like to research and reflect before they plan and do things. They do not like being rushed into making decisions. Instead they like to be thoroughly briefed before dealing with a situation or solving a problem. The Lord gave us two ends – one to sit on and the other to think with. Success depends on which one we use the most! Reflectors make good strategic planners, management consultants, coaches and political advisors.
- **Theorist.** Theorists tend to be detached, logical, analytical and rational. They think problems through in a vertical, step-by-step logical way. They are keen on basic assumptions, principles, theories, concepts, models, systems thinking and facts. They learn through observation, discussion, stories, analysis and sophisticated philosophical reasoning. They like to consider numerous viewpoints and theories and analyse situations before generating and selecting alternative approaches to a task. They tend to be perfectionist and thus feel uncomfortable with ambiguous experiences, creative and lateral thinking. They like to organise different facts and synthesise them into coherent theories. They are good people to have around because of their objectivity. In a group situation, they may come up with interesting factually based alternatives and challenge the conventional wisdom. Theorists make good systems analysts and academics.

- **Pragmatist.** As the name suggests, these people have a very good practical bent. They can't wait to try out ideas, theories and techniques to see if they work in practice. Unlike activists, they like to see a link between what they've learned and the situations in which they plan to use it. They are more proactive than reactive. They like to learn through practical demonstrations, hands on experience, problem solving, discussion and case studies. They are the type of people who come back from a learning event bursting with enthusiasm and ideas and very keen to apply them. Abstract concepts, theories and models are of limited use unless they see an application for them in practice. They see problems as opportunities to learn and threats as challenges. They know there is always a better way of doing things. They believe in the philosophy of continuous improvement. Pragmatists make good computer programmers, engineers and work study practitioners.

## Conclusion

Most people have a mix of all four learning styles, with a preference for one or two. There is no one best learning style and what works best depends on the task, the context and your personality. Learning styles can be influenced by aptitudes, past experience, learning preferences, education, work and the learning situation. It is important to know that they are not fixed but may be adapted to the needs of the situation and what is being learned.

You can determine your learning styles by taking one of the questionnaires on Google. These only take about 20 minutes to complete and they will give you a fair idea of your learning preferences. The results of such tests should be used as a guide rather than accepted as definitive. The notion that there are four learning styles of activist, reflector, theorist and pragmatist is widely disputed and has received little validation in scientific research. Most of the proof seems to be anecdotal rather than scientific.

It is important to find out your learning preferences so that you can take corrective action on your weaker styles. Draw up an action plan specifying the actions you need to take to improve your weaker styles. Also, when going for jobs, it might be a good idea to find out your particular preferences in order to match the style to the requirements of the job. If you coach or mentor people try to find out their learning styles so that you can match your learning style to their particular style. It is claimed that learners absorb information quicker if the teaching style is matched to the learner's style, although in practice this matching can be quite difficult to achieve and, in any event, has never been empirically proven.



**References**

[www.cyberphysics.co.uk/MBTI/Honey&Mumford1.htm](http://www.cyberphysics.co.uk/MBTI/Honey&Mumford1.htm)

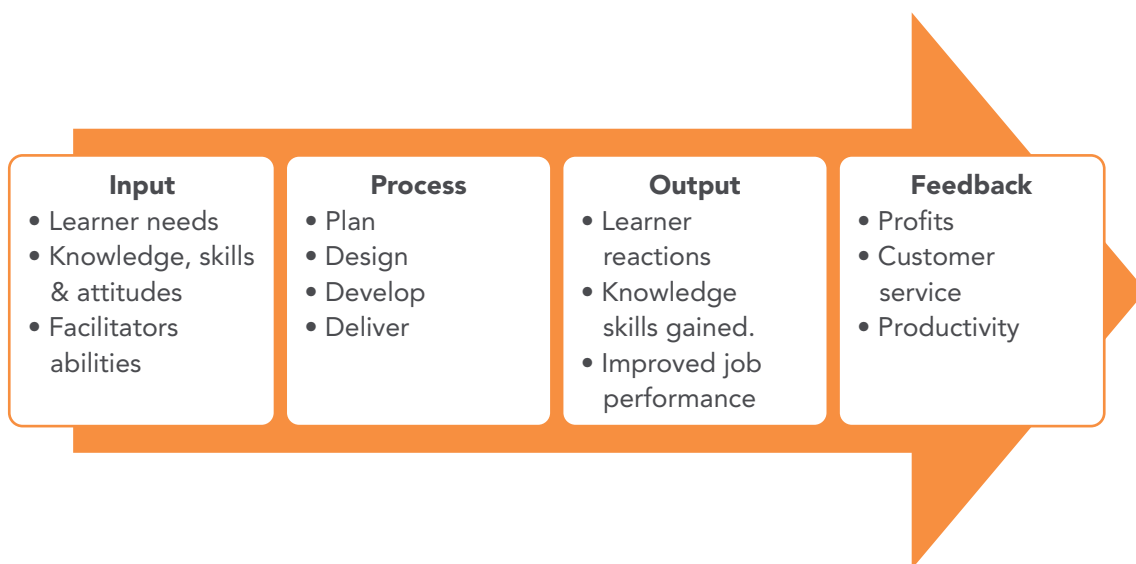
Malone, Samuel A. (2000). Learning Skills for Managers. The Liffey Press, Dublin.

Malone, Samuel A. (2003). Learning about Learning. CIPD London.

Malone, Samuel A. (2005). A Practical Guide to Learning in the Workplace. The Liffey Press, Dublin.

Rosewell, Jon (2005). Learning Styles. The Open University.

# 14 INPUT, PROCESS, OUTPUT, FEEDBACK TRAINING MODEL



**Fig. 14.** Input, Process, Output, Feedback (IPOF) Model of Training

*“You are your greatest asset. Put your time, effort and money into training, grooming and encouraging your greatest asset.”*

– Tom Hopkins

The input, process, output, feedback model of training is a systems approach to training.

- **Input.** An important part of the input stage is identifying the training needs of learners and matching them to the corporate objectives of the company. You then need to design an appropriate cost-effective learning experience to meet those needs using the appropriate resources. You also need to consider the existing skills, experience and education of the learners so that the learning facilitators can pitch

the well-conceived instruction at the right level. In addition, the learning facilitators need to have the appropriate presentation skills and knowledge about learning to do their job acceptably and effectively. Companies should consider whether they do the training themselves or buy in the expertise from outside.

- **Process.** This is the delivery system used for the training. You need a mix of approaches in order to keep the learners engaged – lectures, case studies, demonstrations, simulations, role play, project work and group discussions are some of the usual techniques used. You might also consider an appropriate blend of online and live learning as well as equipment and training materials. Part of the delivery process can now be effectively delivered through electronic media. Blended learning combines electronic and traditional methods for more effective and accessible learning. The ideal context will be a non-threatening environment providing a stress free, participative and enjoyable experience for participants.
- **Output.** This is what you hope to achieve. What will the learners know and be able to do as a result of the training? Hopefully their skills, knowledge and attitudes, and on- the-job performance will have improved as a result of the learning experience. Other important issues include the learner's increased interest in the subject area covered and a positive change in the desire of the trainee to learn and continue to learn into the future. Ideally the training will maximize individual performance and have a positive effect on the productivity and profitability of the company, and prove to have been money well spent. In addition, customer service and satisfaction may be positively impacted.
- **Feedback.** This is the task of finding out if the training has achieved its objectives or what it set out to achieve. Participants' subjective views and opinions about the training and the instructors' performance, including teaching techniques, behaviours, counselling and organizational skills, can be obtained at the end of the training through questionnaires, tests or structured interviews. Ideally, this should be combined with measuring any change in job performance after the training through performance assessments, records and observation checklists. An alternative approach might be to engage in ongoing evaluation during the training process so that immediate adjustments to improve the training can be taken while the training is in progress. The type and sophistication of the evaluation depends on the needs of the company and a cost versus benefits analysis. With this information consider what could you do differently the next time to improve the training and learning experience of learners? Has the company got value for money in respect of their investment in the training or could the money have been spent more effectively on something else?

## **Conclusion**

The input, process, output, feedback model is an integrated approach to training ensuring that you take a systems approach to the task of training. The systems approach covers all aspects of training from start to finish. Organisations want to ensure that their training is relevant, well-conceived and delivered, cost effective and meets employee and corporate objectives. The training needs of an organisation are an on-going requirement to meet the needs of new hires and upskilling the needs of existing employees, including the training and development needs of managers.

## **References**

Busnell, David S. (1990). Input, Process, Output: A Model for Evaluating Training. *Training & Development Journal*. March 1990.

# ACKNOWLEDGEMENTS

The artwork in this text was produced by the author with the aid of Microsoft's 'SmartArt' creatively combined with the clipart facility in the word package. Some of the artwork was accessed through Google. Known copyright material accessed through Google has been acknowledged. I will gladly acknowledge any other copyright material brought to my attention in future editions.

# ABOUT THE AUTHOR

Samuel A Malone is a self-employed training consultant, lecturer, moderator, examiner and author. He has published numerous journal articles in the fields of learning, study skills, personal development, motivation and management. He is the author of 21 books published in Ireland, the UK and worldwide on learning, personal development, study skills and business management. Some of his books have been translated into foreign languages including Russian, Spanish, Danish and Norwegian, and gone into second editions. His most recent book (2014) is titled *Awaken the Genius Within – A Guide to Lifelong Learning Skills* (Glasnevin Publishing, Dublin). He has a M.Ed. with distinction (in training and development) from the University of Sheffield and is a qualified Chartered Management Accountant (ACMA), Chartered Global Management Accountant (CGMA) and a Chartered Secretary (ACIS) and a member of the Irish Institute of Industrial Engineers. He is a Fellow of the Irish Institute of Training and Development (FIITD).

Previous books published by the author include *Why Some People Succeed and Others Fail* (Glasnevin Publishing, Dublin), *Learning about Learning* (CIPD, London), *A Practical Guide to Learning in the Workplace* (The Liffey Press, Dublin), *Better Exam Results* (Elsevier/CIMA, London) and *Mind Skills for Managers* (Gower, Aldershot, UK) and *How to Set Up and Manage a Corporate Learning Centre* (Gower, Aldershot, UK). The last two books become best sellers for Gower in their training and business categories. *Better Exam Results* proved to be a best seller for Elsevier/CIMA and is still in print 30 years after its earliest incarnation. Most of his books are available online from Amazon.co.uk.

The author's latest books have been published online by bookboon.com in 2018 namely:

- The Role of the Brain in Learning
- How Adults Learn
- Learning Models and Styles
- Experiential Learning
- Learning with Technology
- The Ultimate Success Factor
- Series of Books on People Skills for Managers
- Series of Books on Creativity Skills for Managers.