Assessing training for successful capacity development: A literature review

Training is an important component of most capacity development initiatives targeting the public sector as well as the community level. However not all training interventions lead to the desired changes. This review of literature explores the different stages of the training process and synthesise research findings in order to broaden understanding of what constitutes good training practice.

1. Training and capacity development

For Horton, Alexaki et al. (2003:158), organizational capacities refer to an organization's potential to perform; to 'its ability to define and realize goals effectively, efficiently, and in a relevant and sustainable manner'. Thus, organizational capacity development is the process by which an organization increases its ability to formulate and achieve relevant objectives. They identify two types of capacities which deserve to be strengthened: operational (needed to carry out day-to-day activities) and adaptive (learn and change in response to changing circumstances).

Capacity development must be purpose-fit to the needs and circumstances of the specific organization. It cannot be done according to blueprints imported from elsewhere because capacity development involves much more than awareness of technical subjects and general organisational principles, it needs to be imbedded in the context where it takes place (UNDP, 2006). Development organizations generally recognize that 'capacity' involves three levels: individual, organisational and the enabling environment (Missika, 2006, UNDP, 2006b, DFID, 2002). These levels are interdependent. Therefore, training aimed at developing organizational capacity must also take into consideration the characteristics of the individuals targeted by training activities as well as the enabling environment in which they function. UNDP's experience shows that 'attempts to address capacity issues at any one level, without taking into account the others, are likely to result in developments that are skewed, inefficient, and in the end, unsustainable' (2006:4).

Training is widely recognised as an important way to strengthen capacities. Donors frequently refer to it in their capacity development/ capacity building approaches and strategies (AusAID, 2004, 2006, Teskey, 2005); and for many development organisations training remains the main approach to address capacity issues in both private and public sectors. However, training cannot respond to all problems and it is not a solution which suits all capacity issues. Other capacity development methods used in development include: provision of technical assistance on-the job, immersions[1], communities of

[1] Immersions are occasions when professionals learn directly from poor and marginalised people by living with them and reflecting on the experience. See Irvine, Chambers and Eyben (2004) for more on immersions.

themselves as they are the best persons to say what they can do and what they think they should be able to do but also the training team. Involving many stakeholders allows triangulating the information received and avoiding the bias which may be caused by focussing too much on one type of respondent. For example managers may think that a poor performance is due to a lack of skills and knowledge from their staff while in fact it may be caused by a lack of incentives.

ORGANIZATIONAL LEVEL[5]

PRIA (1995), an Indian development organization, suggests the following questions to assess learning needs at the organizational level:

- What are the history and the background of the learners' organization?
- What are the work, strategy and focus?
- What structures exist within the organization?
- How has the organization grown?
- What changes does the organization want to bring about?
- Why does the organization do training and what does it expect from it?
- What competencies does it require in learners?
- Is training really needed for implementing the desired changes?
- Is the organization ready to use the new competencies and attitudes the learners will develop?

JOB OR OCCUPATIONAL LEVEL

In order to assess training needs at the occupational level, the foundation for international training (FIT, 1983) and PACT (Banez-Ockelford, 1995) suggest three steps:

1. Identify the tasks that people have to do (task analysis);
   This can be done by interviewing people who already master those tasks (within or outside the organization); by discussing with supervisors and staffs, by observing the tasks being properly done or by doing the task yourself and documenting the process.
2. Identify what they can do, their actual level of skills, knowledge, attitude and beliefs;
   This can be done by asking the learners as well as their supervisors (it is always preferable to ask both as the perceptions may differ). When possible it is also suggested to observe some learners while they perform the tasks as this will help identify frequent mistakes and provide valuable information on what trainers should emphasise.
3. Identify the training needs (what people cannot do or the gap between what they need to perform the tasks and what they can do);

INDIVIDUAL LEVEL[6]

Questionnaires and interviews are often used to assess individual needs. Observation of the work by an analyst and self observation of a job holder (using a diary) is also used. Looking at job descriptions is often really

[5] See Reid and Barrington (1994) for different types of reviews and Bramley (1996) for possible sources of information in a business context.
[6] See Reid and Barrington (1994) for a six steps process of individual needs analysis.

helpful and so is consulting employees profile when they are available. In particular contexts knowing the level of education of different participants may help select relevant material and adapt the level of the presentations and exercises.

2.2 Learning objectives

> A clear objective guides the trainer in planning and developing learning activities, in establishing time tables, selecting facilities and equipment, and in developing standards for evaluation.
>
> FIT (1983:3-3)

Most training has two sets of objectives: general objectives or aims, which usually state the changes which are expected to take place or what competencies will be improve; and specific objectives also called learning objectives which describe what the learners should be able to do at the end of the training course. Those learning objectives are the most useful for evaluators since they can be used as learning indicators.

Good learning objectives are derived from needs assessment and cover all the different areas of learning which the course has to offer (Taylor, 2003; Loos, 1999). They are specific, measurable, achievable, realistic, and take into consideration the context of the learners as well as the time available. (PRIA, 1995; FIT, 1983; Taylor, 2003). Good objectives should also specify what is required in terms of application of the learning to real life situation (Patrick, 1992). For example, book keeping for a small saving and credit organisation is different than book keeping in a ministry.

Taylor (2003:95) suggests four basic rules for learning objectives. They should:

1. be written in terms of the learners. This means that they should express what the learner will be able to do after the course or learning experience
2. identify the desired behaviour by name and specify behaviour which can be observed. It must be possible to assess the activity in some way.
3. state the conditions or restrictions under which the desired behaviour will occur
4. include a criterion or performance standard which the learner must achieve to be considered acceptable"

2.3 Training organisation issues

2.3.1 Identification of the target group and selection of participants

Correct participant selection is important since investment of time and resources is fruitless if participants do not use their learning when they go back to their functions or if the objectives of the training have no relation with the participant's work. The training needs assessment usually provides the necessary information to select participants or to identify the right target group. Stakeholder's analysis is a good point to start to identify who should be involved.

Participant selection, including the number of participants to be trained from any organization, and the diversity of the participant group, must be linked with course objectives and the context in which the change process is taking place (Missika,2006; PRIA, 1995; FIT, 1983). In some cases a whole department has to be trained because of changes in working procedures or the acquisition of new material. In other cases, only the persons involved in specific tasks needs training. TNA will generally provide the information necessary to make these choices. When training is provided to stakeholders from various organizations or to different group of project stakeholders, it might be necessary to target specific individuals. In this case, a profile of participants should be compiled according to who is the most likely to benefit from the learning objectives.

Some considerations while selecting learners include:

- Have the learners voluntarily applied for the programme? Or have they been sent?
- Do they see the programme as suitable for themselves? Does it relate to their work/roles?
- If learners have been chosen by their organisation or their community, on what basis have they been chosen?
- Do the learners have a suitable background?
- Is the timing right? Will learners have other preoccupations? Will they be too busy to attend?

PRIA (1995:41)

2.3.2 Choice of the training mode

For Phillips (1983), it is essential to consider the sheer volume and complexity of the learning task when deciding the type of training (on-site, classroom or distance) that will be provided. Other factors to consider include the number of persons to be trained, their characteristics (previous knowledge and skills, availability, mobility...), the logistic (material or equipment required, transportation, availability of suitable training venue...) and financial issues implied by different training modes and of course, the learning objectives. Skills are developed through practice. The objectives of skills development programmes are therefore more likely to be developed by on-site training than through distance learning. Knowledge, on the other hand, may be developed without necessarily requiring face-to face interactions. The factors mentioned above should therefore be considered when determining what is most suitable given the resources available.

The question of mass[7] vs distributed training must also be answered. Evidence from the research of Briggs & Naylor, 1962 suggests that material learned under distributed practice is generally retained longer than material

[7] Mass training refers to training which is provided intensively in a block of several days. Distributed training involves a number of shorter periods of training spread over time.

learned by massed practice. This is also reinforced by Stammers (1975) who mentions that massed training produces a sort of 'psychological fatigue' which may inhibit the manifestation of true levels of learning.

2.3.3 Selection and sequencing of the content

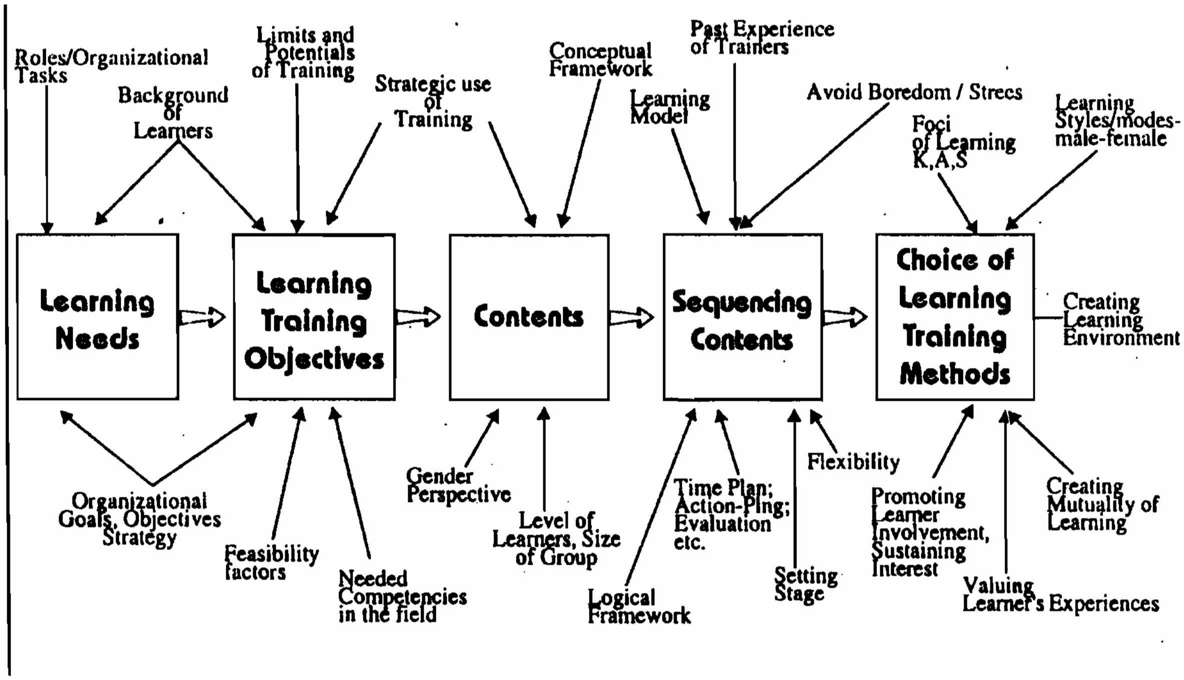
Training content should be decided upon based on the learning objectives and not the opposite. Task and job analysis helps to identify the knowledge, skills, attitudes and beliefs which are required and helps prioritise them in order to assign proper time allocation during training delivery. For each task, the following questions should be answered: Is it difficult? How important is it? How frequently is it performed? Then the answers can be put in a matrix and priorities given to each task in order to select those who need to be included in the training as well as the proportion of time they should be allocated. For example, a task which is easy, moderately important and performed infrequently should not be included in the training while a difficult task which is important and performed frequently should be allocated more time during the training. Once the tasks are prioritized, they can be analysed in terms of the knowledge, skills and attitudes necessary to perform them. Such information is important for designing training events to address capacity issues in the workplace as the methods used to increase knowledge usually differ from those required to develop skills and attitudes.

The current level and background of the learners helps to determine the depth and level of details which is appropriate. This information should come from the TNA. The scope of the content is also dictated by the size and relative homogeneity of the learner group. When topics come after one another in a purely ad-hoc manner, learning is hampered. In certain cases, learners may be emotionally unprepared to deal with certain topics and resist to them. It is therefore important to sequence content areas carefully and insure linkages between the different topics as it helps to minimize blocks to learning and makes the process smoother. Proper sequencing creates emotional and intellectual readiness for each succeeding content area while avoiding monotony, boredom and stress (FIT, 1983).

It is difficult to give universal guidelines on selecting the more efficient training schedule. It depends upon the nature of the specific task trained. A common mistake in training design is to put too much content and overload learners. Whether the focus of the training is on developing skills or on fostering knowledge makes a difference on the proportion of content that can be included. Generally, some form of distributed practice appears desirable, although the optimal duration of the rest interval depends upon how important memory, warm-up and 'psychological fatigue' are to any specific task (Stammers, 1975). Ammons' research (1947)[8] shows that performance efficiency may rise from 18 to 43 percent if a rest of 5-20 minutes follows an intensive work period.

[8] Mentioned in Stammers (1975)

The following diagram summarises the process of the training design and indicates factors that should be taken into consideration at each step.



Steps in designing training programme (PRIA, 1995:60)

3. Training activities and didactic methods

Instructional strategies are defined as a set of tools, methods, and content that, when combined, create an instructional approach. Most effective strategies are created around four basic principles: They present relevant information or concepts to be learned; they demonstrate the knowledge, skills and attitudes to be learned; they create opportunities for trainees to practice the skills; and they provide feedback to trainees during and after practice (Salas & Cannon-Bowers 2001).

There is no single best method for all learning situations. The trainer must choose the strategy which is the most appropriate according to the learning objectives, the facilities and equipment available, as well as the background and the abilities of the participants. The key is to use a variety of training methods in order to maintain interest and reach the different learning styles of the trainees. Adults learn what they want to learn and learn best by doing and working in an environment that is non-threatening and respectful, informal, and involves their participation (PRIA, 1995, Chambers, 2002).

3.1. How to improve performance?

Training Principles

The following six principles are key features of most mainstream models for successful adult learning[9]. They integrate the various insights provided by the main theoreticians and practitioners of adult learning such as Knowles, Freire, Kolb and Mezirow, drawing on commonly recognized key factors for effective learning.

PARTICIPATION[10]

People learn better and remember more when they are actively engaged in the learning process. Skills are best developed by 'doing'. Practical exercises, discussions, group work, role plays, simulations and games are all ways of increasing participation in the course. Participation can also be encouraged by fostering a collaborative environment, by sharing roles and responsibilities in planning and operating learning activities with the participants and by using dialogue to encourage learners to share their knowledge and experiences. Participation goes beyond particular teaching methods it is also a matter of attitudes and learning atmosphere.

UNDERSTANDING

Making sure that training starts at the level of the participants by conducting training needs assessment before the training helps to increase understanding. Measures that makes understanding easier include: letting participants express themselves in their own language when possible; using a vocabulary which is appropriate to their level of knowledge and avoiding unnecessary jargon; reformulating ideas or asking participants to reformulate them; and using various examples[11]. Understanding can also be improved by fostering learning processes which relate to and make use of learner's experience. Participants' understanding should not be assumed. It can be checked by asking questions, listening to discussions or giving practical tasks and exercises.

FEEDBACK[12]

[redacted] Feedback helps learners to get a sense of their progression towards the learning objectives and what they need to do to reach them. Feedback should be provided shortly

[9] Those principles were adapted from the Canadian School of Cadets Instructors by the Canadian Centre for International Studies and Cooperation and the Rural Development Services Centre in Vietnam. They draw on insights from andragogy (Knowles, 1980), popular education (Freire, 1970, 1973, 1994), experiential learning (Kolb, 1984) and transformative learning (Mezirow, 1990, 1991, 2006).

[10] Chambers (2002) provides a whole range of ideas that can be used in training and workshops to stimulate participation ranging from games and energisers to evaluation methods and tips for the preparation of the trainer. VSO's (2004) facilitator's guide for participatory approaches is also a good reference for basic guidelines on how to use different participatory tools.

[11] Shore and Sechrest found that using a moderate number of different examples that were repeated a few times each was more effective in enhancing learning than using one example repeatedly (1961 mentioned in Baldwin & Ford, 1988).

[12] Extensive research was done on feedback for example; evidence shows that feedback is a critical element in achieving learning and that timing and specificity are critical variables in determining its effects (e.g. Wexley & Thornton, 1972). See Stammers and Patrick (1975) for a discussion that summarise those researches.

after a task or an exercise is realised in order for participants to make the necessary relation with the process that they used. It should be provided in a way which does not discourage the learners from trying again and which provides enough information for them to modify what was wrong. When learning a skill, feedback from the trainer should be provided early in the process and withdrawn later on when participants had the chance to practice sufficiently in order to allow learners to use other sources of feedback such as the one inherent to task or available in the working environment.

INTEREST

When learners feel a need to learn and when they perceive the goals of the training as their own, they are likely to be more engaged, and thus to learn more. The relevance of the training objectives to the needs of the participants is therefore crucial. Participants should know why they are learning what they learn and what the content can bring them. People remember more what they consider useful for them but they also learn for pleasure. Interest may be aroused by providing examples, cases and activities which are close to the context in which the content is to be applied and by encouraging experience sharing. Varying activities and methods and seeking participation of trainees also help to arouse and maintain interest.

> Adult learners' interests are embedded in their personal histories, in their visions of who they are in the world and in what they can do and want to do. For these adults, learning methods that combine work and study, theory and practice provide a more familiar and therefore more productive arena for learning.
>
> Kolb (1984:6)

EMPHASIS

In a training session, some points are more crucial than others in order to achieve the learning objectives. Focussing the attention of the learners on the most important points will help them to remember. Emphasis can be put verbally by repeating, reformulating, asking questions, providing examples or summarising but can also be done by using didactic aids and exercises. Spending more time on important topics and allowing sufficient time for learners to practice new skills is also essential to increase performance and help them to remember.

> The two factors of long-term and short-term memory have serious implications for the lecturing technique. Any matters which listeners cannot recall shortly after a lecture are unlikely to have entered the long-term memory and will therefore not be retained.
>
> Reid and Barrington (1994:82)

RESULTS

Participants should have a feeling of success at the end of their efforts and be able to foresee or even plan how they will apply their learning in their work environment. The confidence of a participant in his or her ability to cope with the learning tasks influences performance. Moreover, if learners have the feeling that they are not ready to use the training or that they haven't learned, it is likely that they will not try to apply the content of the course. By keeping participants informed of their progress and by congratulating them for work well done it is possible to increase their feeling of getting a result and their will to apply their learning at work. In some cultures, providing a certificate at the end of the course is also important.

3.2 How to improve the probability that what is learned is applied adequately on the job?

What is learned during training have to be used in the work environment in order for any change to take place and for training to be worthwhile. In other words, training participants must *transfer* the knowledge, skills and attitudes they developed in the training situation to the tasks they are expected to perform at work in order for their capacity and/or their performance to increase.

3.2.1 The notion of transfer

According to the Manpower Services Commission's *Glossary of Training Terms*, transfer of training "occurs whenever the existence of a previously established habit or skill has an influence upon the acquisition, performance or relearning of another habit or skill" (1981:66). For transfer to occur, knowledge and skills must be learned and retained. Behaviour must be generalized[13] to the work context and maintained over a period of time. As Stammers and Patrick (1975) put it, in learning situations, the notion of abilities refers to the fact that some previously learned pattern of behaviours may transfer positively or negatively to the new situation. For him, since the original development of any skill depends upon cultural, environmental and biological factors it is important to keep in mind, when discussing transfer, that cultural and environmental demands and opportunities differ between societies and between individuals within a society. Thus, possibilities of transfer are not equal for everyone and must be fostered. There is no empirical evidence that some groups of persons such as poor or unschooled persons have more difficulties transferring what they learned to work environment. However, since transfer is closely linked with previous experiences it is likely that persons who did not develop habits of generalizing what is taught in a classroom to a real life context (because they have a background which is not related to the training topic or because they were less exposed to similar events in the past) will experience more difficulties in transferring from off site training than from on-the-job trainings.

Transfer can be either positive or negative. The degree to which trainees effectively apply the knowledge, skills and attitudes gained in a training context on their job is called positive transfer of training (Baldwin and

[13] Generalize means to be able to use outside the specific context in which it has been taught. More specifically, for transfer, it means that the knowledge, skills, behaviours of beliefs can be related to and used in different contexts thus from the training environment to the workplace.

Ford, 1988)[14]. Within the learning process, positive transfer takes place when previously learned skills, knowledge and attitudes are used to develop new ones. Negative transfer can occur when the skills, knowledge and attitudes are applied in a context which is not suitable or when previously learned behaviours interfere with new ones. An example of negative transfer frequently mentioned is a driver unconsciously changing side of the road when driving in a country where the circulation is opposite to where he learned. In the development context, where consultation and coordination between different actors is sometimes lacking, it is not rare that beneficiaries of different projects be trained on similar topics by different organisations. This also can lead to negative transfer such as farmers using the type of seeds and techniques recommended in one training course while calculating the amount of fertilisers with the method taught by another organisation for another product. Checking the learner's previous experience of similar tasks and pointing out the differences and possible consequences of negative transfer is a good precaution to take to avoid irreparable mistakes. [15]

> "Whenever the training (and leaning) takes place away from the job, the problem of transfer arises. There are many cases where trainees learn correctly during training, but fail to apply their learning on the job".
> Hamblin (1974:21)

Fleishman's study of supervisors' training provides a good example where the changes realised during training failed to transfer on the job. Fleishman (1953) found that a group of supervisors had changed significantly in line with the training objectives during the training itself, but that when they went back on the job they were actually worse (in terms of the objectives) than a control group of supervisors who had not been trained. For him, these findings suggest that people learn different attitudes for different situations and that the attitudes which are 'right' in the training situation are not necessarily the ones that 'pay off' back in the work environment[16]. This illustrates that failure to change is not necessarily indicative of a failure to learn.[17]

3.2.2 Training strategies which improve the probability of positive transfer:

Research suggests a wide variety of both training and work-place related strategies to improve the possibility of transfer. This sections details classroom strategies that can improve the probability of transfer. The following section (4.2.3) will discuss workplace-related factors.

[14] See also Newstrom (1984) and Wexley &Latham (1981).

[15] For further discussion on transfer see Reid (1994), Hamblin (1974) or Haskell (2001).

[16] See Hamblin (1974) for a deeper reflection on Fleishman's study

[17] For this reason, when evaluating training, if we look only at behaviour, we may not know if a problem is caused by a lack of learning or by a failure to transfer the learning to the job. Similarly, if we look only at learning, we cannot know to what extent job performance will be influenced by the training. As Hamblin (1974) pointed out, if evaluation is not conducted both at learning and behaviour levels, it is not possible to know if the cause-and-effect chain has snapped and at what point.

Strategy	Evidence
Choose training activities which provide the opportunity to learn a variety of relevant tasks and make participants practice these tasks step by step.	Provision of a variety of tasks, reflecting what the trainee is expected to cope with after training improves transfer (Patrick, 1992). In situation where the acquisition of several similar skills may create confusion, less negative transfer will occur if the learner obtains a really good grasp of the first step before proceeding to the others (Reid and Barrington, 1994).
Use real-life problems which are relevant to the context in which participants are expected to apply the training	Transfer is more likely to take place when training activities provide information that is easily evoked in the workplace and can be generalised to the job situation (Baldwin & Ford, 1988). Real-life problems provide that opportunity while encouraging reflection. For this strategy to be successful, adequate needs assessment and course-specific preparatory work is essential. Knowing the resources available to participants before training and the contexts in which they work helps to select problems which are closer to their reality.
Use different examples	Shore and Sechrest (1961) found that using a moderate number of different examples that were repeated a few times each was more effective in enhancing learning than using one example repeatedly[18].
Encourage trainees to set goals, provide them feedback and ensure that they are aware of the range of use of the skills, knowledge and attitudes they are expected to learn by specifying transfer requirements in the training objectives.	Wexley and Nemeroff (1975) found that trainees who assigned themselves goals after a management development program were significantly better at applying their learning than trainees from a control group[19]. Reber and Wallin[20] (1984) showed that combining both feedback and goal-setting produced higher levels of skills transfer to the work setting than did either approach separately.
Encourage discovery learning, use structured exercises, case studies and histories	The transfer of learning will be assisted by structured exercises, case studies and histories as they help trainees to associate and integrate new learning with other learning which has already taken place. (Reid, 1994).
Encourage group discussions, assignment, projects and other	Learning transfer relates to the reflection and conceptualisation stage of Kolb's learning cycle (Reid, 1994). Therefore discussions,

[18] For example, in the identification of the concept of triangle the mean of successful trial moved from 3.57 to 6.57 when increasing the number of examples from 3 to 9.
[19] Mann-Whitney U tests showed that group 1 (U=431.50, p<.05) and group 2 (U=488.50, p<.05) were both significantly lower in absenteeism than the control group (U=759.00, p>.05).
[20] Mentioned in Baldwin & Ford (1988)

methods which encourage trainees to take responsibility over learning.	assignments and projects, by making participants think and conceptualise, contribute to transfer.
Make sure that the training content is relevant to real life situations.	When training is relevant to real life situations and responds to the participants needs they are more likely to involve fully during the training and make the necessary efforts to apply their learning afterward. Baumgartel et al. (1984) showed that managers who believed in the value of training for their work were more likely to apply skills learned in training. For Baldwin and Ford, "job relevance[21] of the training context is a critical factor affecting what is learned, retained, and transferred to the work setting" (1988:99).
Use training stimuli (illustration, diagram, example, demonstration, movie, simulation, etc.) that can be linked easily to the environment where training is to be applied.	A training stimulus which is not identical to the work environment can be effective in producing transfer if it provides the trainee with the essential elements to link it with the working environment and the tasks to be performed. In other words, training should provide hints on how a task should be properly performed that the learner can use to remember and apply on the job. Training stimuli with less potential for re-evoking the desired behaviour, on the other hand, can be modified or eliminated without substantial loss of transfer (Cormier, 1984; Baldwin & Ford, 1988).

3.2.4 Workplace factors that influence the transfer of training:

The importance of factors beyond learning for transfer was illustrated in a study of training effectiveness by the Marks Group[22]. The study revealed that nearly one quarter of the participants of management training had made no attempt to apply anything they had learned from their course to their own organisations. The main reasons cited preventing transfer were the power structure of the organisation, entrenched attitudes and lack or resources. Most of the respondents had, however, been satisfied with the training.

It was long believed that in order to enhance transfer, training design should include elements identical to the work place situation (Thorndike and Woodworth, 1901). However, Flexser & Tulving's research (1978) demonstrated that it is not physical or psychological fidelity[23] per se that contributes to high positive transfer but the presence of retrieval information that has a high capacity to re-evoke or cue a certain behaviour (*redintegrative* capacity). For example, the signs on the road are different from one country to

[21] The extent to which the training content is relevant for the work of the participants.
[22] Reid and Barrington (1994)
[23] The fidelity of training interventions usually refers to their degree of realism or their degree of representation of the real task. (Stammers, 1975)

another but they can re-evoke similar signs from the country where a person has learned to drive. Thus a Canadian driver in Europe will reduce speed when seeing a sign announcing a bumpy road even when this particular sign is seen for the first time. The same phenomenon happens when a person uses new emailing software.

Research identifies the following factors as having an influence on transfer:

- Opportunity for the trainees to perform trained task in their work place[24];
  Ford and Quinones' (1992) research showed a relation between the opportunity to perform tasks on the job and transfer thus on training effectiveness. Baumgartel and his colleagues (1972; 1984) have conducted a line of research indicating that managers in favourable organizational climates (with freedom to set goals and an environment supportive to the application of the training content) are more likely to apply new knowledge to work settings. In Axtell, Maitlis and Yearta's research (1996), autonomy of work (trainees having responsibility for their own work and deciding how to carry out their jobs) was found to facilitate transfer of sales and human relations skills.

- Delays between training and actual use on the job;
  Participants should attend the program at a time when they need the skills or knowledge otherwise it may create significant skill decay and necessary information may be forgotten. Phillips (1983) observes that, too often, participants attend programs and acquire knowledge or develop skills before they are allowed to use them. His research has shown that a significant gap between the time the knowledge or skills are acquired and when they are put into use can diminish the transfer of training. Arthur et al. (1998) have demonstrated that there is an increase in skill loss as the length of non practice increase. After 365 days on non use of a skill, the average participant performed up to 92% less than before the non practice interval[25].

- Feedback provided by peer, subordinate, and supervisor;
  Evidence from Wexley & Thornton (1972) indicates that feedback provided to learners on how they perform a task (either from a supervisor, a peer, a subordinate, a client, etc) is a critical element in achieving learning and that feedback which is specific and provided timely have better effects on positive transfer (Baldwin & Ford,1988).

- Possibility of generalization from one context to another;
  For Baldwin and Ford (1988), generalization is essential to transfer. For example, leadership training will have an impact on work performance only if the participants understand how the attitudes which were appropriate during the simulations and exercises which took place in the training can also be employed when dealing with the staff of the organization. To increase the likelihood that this will be the case, the knowledge, skills and

[24] Ford, Quinones et al. (1992) define the opportunity to perform as the extent to which a trainee is provided with or actively obtains work experiences relevant to the tasks for which he or she was trained.

[25] Specifically, the amount of skills loss ranged from d of -0.1 one day after the training to a d of -1.4 after 365 days without using the skills.

behaviours expected to be transferred needs to be clearly identified and considered during the training design. Moreover, the results from training needs assessment must be linked with the training objectives and evaluation criteria.

- Support and reinforcement from supervisors or team leaders;
  Encouragement and support from supervisors and team leaders are essential for successful on-the-job application of learning. These people are needed to remove any barriers and obstacles that participants may face when they come back to work. Huczynski and Lewis (1980) found that a management style that included pre-course discussion with one's boss and subsequent boss support of new ideas contributed most to the transfer of skills (71% of the beneficial results occurred when the transfer was supported in the work environment and 70% of these were found to be supported by superiors)[26]. According to Phillips (1983), even some of the best participants go back to their old habits and forget what they have learned when new knowledge, skills and attitudes are not reinforced. Axtell, Maitlis and Yearta (1996), found in their study that managerial support (encouraging the use of new skills, tolerating mistakes when new skills are practiced) is a key environmental variable affecting transfer of knowledge, skills and attitudes (it was found to correlate with transfer at $p<0.05$). Hand, Richard, and Slocum (1973) concluded from their research that positive changes in skills 18 months after human-relations training were in part due to organizational decisions such as salary and promotions that reinforced the attitudes learned in training.

4. Follow-up to training activities

The main focus of follow-up activities is to assist positive transfer. Follow-up permits identification of the barriers to transfer in the working environment, helps address those issues and contributes to maintaining participant motivation to apply new learning. In addition, it supports trainees in their efforts to understand how theories and skills learned in training can apply to their specific job environments

> "Training should not be seen as an end, but as a means to achieving the organisational objective. The changing of behavioural patterns is a long-term undertaking which, to be successful, need to be continually monitored and reinforced. It became obvious that it is necessary to look beyond training by establishing a coaching and mentoring period to follow the training".
>
> (Taylor, 2001:37)

4.1 Why is follow-up important?

Even when training is carefully designed and takes into account the specificity of the trainees' work environment, moving from a learning

[26] They also found that factors such as overload of work, unplanned work and failure to convince older workers of the value of the new ideas were inhibiting the transfer of training.

environment to a real-live situation is never straightforward. First, because attitudes adopted by participants in training situations are often different from the ones they adopt in real life (see Fleishman,1953); second, because it is not possible to foresee every barrier to change and thus to equip all trainees to overcome them; and finally because every person is different and comes to training with a different range of experience and that make transfer possibilities vary from one individual to another. Moreover, as Patrick (1992) mentions, strategies and methods for performing tasks are highly context-specific and will inevitably vary when applied to new situations.

Stammers (1975) asserts that training should, where possible, be followed by on-the-job training or supervision because the simulations and exercises realised during off-site training cannot reflect the diversity of issues faced in the work environment and what is learned often needs to be adapted to particular situations. Similarly, according to Missika (2006), follow-up support in organisations where trainees are employed should be built into programmes. She draws on USAID's experience which has showed that maintaining contact with returned trainees can help those who encounter difficulties in introducing changes in their workplaces, a situation reported particularly with women. For Salas and Cannon-Bowers (2001), events that occur after training are as important as those that occur before and during training. Thus, follow up activities can highly enhance the possibilities of transfer and help to remove institutional blocks which may limit the extent to which new knowledge and skills are actually used in the work place.

Studies carried out for the Xerox Corporation showed that, in the absence of follow-up coaching, 87 per cent of the skills change brought about by the program was lost (Rackham, 1979; Phillips, 1983), leading the researcher to conclude that "However good your skills training in the classroom, unless it's followed up on the job, most of its effectiveness is lost" (Rackham 1979:13). Rackham mentions, however, that in the Xerox case, training whose purpose was enhancing knowledge generally showed a much smaller loss due to lack of follow-up than skills-building and asserts that these two types of learning are different in this regard and need different interventions.

In learning most skills, people go through an awkward period where using the skills doesn't feel natural and isn't giving results. This phase is called the "results dip" or the "incorporation lag". When learners persevere with the new behaviour, the skill becomes more natural and starts to lead to results and better performance. However, when learners do not receive reinforcement or are not encouraged to keep using the new skills when they are in the difficult period of the "result dip", many of them go back to their old behaviour and new skills are abandoned and lost. Training follow-up should support the learners during that period, particularly until the dip is passed and new skills produce results, thereby becoming self-reinforcing (Rackham, 1979; Phillips, 1983).

Cognitive science has showed that consolidation[27] is essential for long-term retention (Abadzi, 2006). Just as homework is an essential component in memory consolidation of students, follow-up activities help training participants to consolidate their learning and that enables them to retain new skills, knowledge and attitudes longer. In their study, Axtell et al. (1997), found that trainee-rated transfer of training after one month was a significant predictor of trainee-rated transfer after one year (they correlated at $p<0.01$), and as such plays an important role in the sustained use of these skills. Other studies, such as Baldwin and Ford, 1988 and Noe, 1986 had similar findings. Those results imply that the period immediately after the course is critical for laying the foundations for future skills use. It is therefore at this moment that initial follow up should take place.

Follow-up can also contribute to two other factors which research has shown to impact skill maintenance: self-efficacy (faith in one's ability to perform successfully) and motivation (Gist et al. 1991; Marx, 1982). Trainees experiencing difficulties in applying the training content in their work should have the opportunity to seek advice and support in the first month after training when learning is still being consolidated.

4.2 What sort of follow-up is useful?

There are different types of follow-up. Some take place directly in the work-environment and are done by the training team, technical advisors, co-trainees or someone from the organisation such as a supervisor; others are done face to face but offsite, such as refresher courses, workshops, meetings etc. and some even take place at distance through Internet or other communication channels. The choice of an appropriate follow-up method depends on the training objectives and the type of learning that should be transferred, as well as the availability of resources and the characteristics of the environment where learning needs to be applied.

4.2.1 Coaching

For Rackham (1979), coaching is the only cost-effective way to reinforce new behaviours and skills until a learner is through the results dip. He supports his statement with research conducted in Honeywell Europe as well as the Xerox Corporation where results have been significantly higher with follow-up interventions than with training only. The following figures show what happens to a new skill in terms of behaviour and results with and without reinforcement after the training event.

[27] Consolidation is the process by which recently acquired information is associated with past experiences and organised in the memory.

Figure 1
WHAT *SHOULD* HAPPEN WITH A NEW SKILL

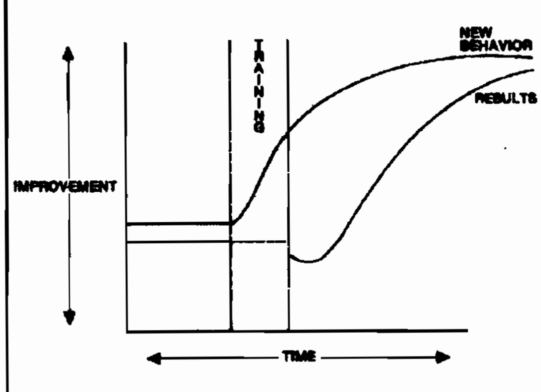
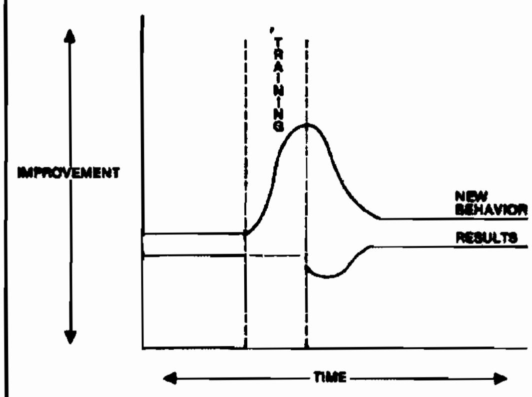


Figure 2
WHAT *ACTUALLY* HAPPENS TO A NEW SKILL WITHOUT COACHING



Rackham (1979)

Coaching is usually provided on-site either by a trainer or a technical advisor (either internal or external to the organisation concerned). Distance coaching is used in some cases but results from those methods are not yet documented. The person who provides the coaching should have a good understanding of the context in which training is to be applied and a relation of trust should be established in order for the participant to freely share the difficulties and sometimes frustrations met. Supervisors and team leaders can also act as coaches if they already master the desired knowledge, skills and attitudes but when they do, they should be careful not to confuse judging and coaching.

4.2.2 Support groups, networks and 'buddy systems'

Support groups and 'buddy systems' have been used in the area of counselling and psychotherapy for a long time. Researchers in those areas have demonstrated that they can facilitate positive transfer of learning.[28] A buddy system refers to two trainees being paired to reinforce each other in order to maintain learning, provide advice, and be alert for signs of relapse in themselves and the buddy.

The ILO Work Improvement in Neighbourhood Development (WIND) programme as well as the Participatory Action Oriented Training (PAOT) programme implemented by organisations such as Bread for the World, NAV and the Institute for Science and Labour are examples of training programmes developed around follow-up through support groups. Following the training, groups of participants from a same community visit one another, providing advice and support to enable learning from each other and development of innovative ways to apply the training content using available resources. In both of these programs, families commit to take specific actions in a certain time frame and the support group makes sure that they do.

[28] Baldwin (1988) mentions for example Barret (1978) as well as Karol and Richards (1978)

4.2.3 Refresher courses and 'booster' sessions

Refresher courses and 'booster' sessions may take many forms. Both interventions usually involve face-to-face contact between trainees and trainer, either periodically or on a one-off basis. Refresher courses usually review what has been learned previously; helping participants to keep the content in their memory and to cope with the difficulties they experienced in trying to apply the content. They are especially useful in cases where knowledge and skills are not used frequently and can easily be forgotten. 'Booster' sessions are usually an extension of training. They are particularly useful when the training topic is complex and requires precisions as well as when a sector is evolving and knowledge and skills need to be updated. Refresher and booster courses can be planned from the beginning of a programme but needs can also emerge from the situation observed during other kinds of follow-up, project monitoring or needs assessment.

4.3 Characteristics of good follow-up

- The follow up is carefully planned. A plan of follow-up interventions should be developed that specifies who provides follow-up to whom; what should be looked at (the most important points to verify); where follow-up will take place; when and how often it will take place as well as how it will be done.
- The follow-up should try to determine why the participant did not get results when transfer is not satisfactory and encourage participants to continue their efforts when they get results. There may be many obstacles to performance improvement such as lack of support from superiors, restricting policies and procedures, or lack of interest on the part of the participant.
- The follow-up is provided at the right moment. The time period for the follow-up is critical. It should be long enough after the course so that the desired improvement can take place[29], yet short enough so that material is still relatively fresh.
- The follow-up is expected by the participants. The intention to conduct follow-up should be clearly communicated during the program, preferably at the end. Also, participants should know what involvement is expected from them in the follow-up.
- Follow-up activities should be documented and the information collected used to improve further training events. Follow-up interventions also provide valuable information to the trainers as well as the persons who invested in the programme, determining training success and identifying success factors and obstacles which may be taken into account in the design of future training activities.

(Adapted from Phillips, 1983)

[29] Learners will benefit more from follow-up if they had the chance to experiment with new skills and knowledge and have tried to use the content of training. Allowing a certain amount of time between training and follow-up alows learners to identify possible barriers and difficulties that the follow-up intervention will help to address.

5. Evaluating Training Activities

Though a lot has been written about training evaluation (Kirkpatrick, 1959, 1998, Bramley, 1996, Hamblin, 1974, Phillips, 1983), most of the literature on training has been written in the context of human resource development for enterprises and businesses from developed countries. The extent to which it may be adapted to the reality of poorer countries and its relevance for training events taking place in a capacity development setting remains poorly documented. Acknowledging this gap, it is important to consider the different approaches to training evaluation and reflect on the relevance of major training assessment methods to the development context and to the public sector in particular. The present section is based on literature and research from the following sectors: capacity development/ capacity building practice and evaluation; organizational training and training assessment; monitoring and evaluation as well as education evaluation.

5.1 Why evaluate training?

Just as there are many reasons to provide training, evaluation may also serve different purposes. Since the type of evaluation chosen varies according to the purpose, it is useful to answer the following questions before designing an evaluation: Who is the information for? Who is going to use the results and for what reason? Bramley (1996) presents five main categories of evaluation purposes: feedback, control, research, intervention and power games. Though power is rarely openly disclosed as a purpose, the potential use of evaluation information for political use within an organisation cannot be ruled out even in development practice[30]. In the context of training for capacity development, feedback and control (decision making) are the most frequent reasons to evaluate.

Feedback evaluations (also called formative evaluation) help to monitor the quality of the design and delivery of training activities. They provide opportunities to learn from what is being done. When provided in a timely manner to trainers and training coordinators, information gathered through feedback evaluation such as the effectiveness of the methods used, the achievement of the training objectives or the appropriateness of management and design issues (selection of participants, time allocation, relevance and repartition of the content, etc.) will help to improve the current programme and to design future ones.

Control or decision making evaluations are concerned with the value and contribution of the training for an organization or a project. They relate training policies and practices to the goals of the organization or project in which training take place. Evaluation reports are intended to provide the type of information needed by managers, team leaders and donors to make decisions regarding training activities.

[30] For more readings on power and development see Veneklasen and Miller (2002), Gaventa (2001, 2004) or Kabeer (2000)

Those two purposes can be seen as the two poles of a continuum which determines the questions, the stakeholders, the tools and the type(s) of evaluation. Notwithstanding the question of whether it is possible to collect evaluation data which would simultaneously satisfy both trainers and managers; even well designed evaluations are only as helpful as the use that is made of the information they provide. In other words, a training evaluation whose results are not used is little more than a waste of time and funds.

5.2 What should be evaluated?

The interrelation between the three levels of capacity discussed earlier (individual, organisational and the enabling environment) has implications for assessing training in a capacity development context. First, training evaluation must look at those three levels and see the relevance of the training objectives for each of them. Second, it has to see to what extent the training interventions took into account their interconnectedness - for example, were the skills and knowledge taught in line with the working context and the resources available to learners after the course. Finally it must reflect on the whole process and see to what extent training effectively contributed to capacity development.

Several models have been put forward to evaluate training. Among them, Kirkpatrick's four level approach (reaction, learning, behaviour, results) is probably the most well known. The main limitation of Kirkpatrick's approach is that it focuses only on what happens after training delivery and does not consider the whole training cycle. Thus, it cannot take into account design and delivery factors which influence learning and skills acquisition. Many of the models of training evaluation that emerged from Kirkpatrick have added levels or dimensions in order to take into account the context in which the training and the evaluation are taking place as well as the input and process of training. Those dimensions, which are absent from the 4 levels model, are considered as an integral part of training evaluation by several specialists[31].

Another critique of Kirkpatrick is the misleading assumption of the model that a good reaction e.g. training satisfaction implies better learning and so forth. Research on the model has showed that a lower level evaluation cannot necessarily predict likeliness of behaviour change. For Alliger and Janak (1989), the assumption that each level is caused by the previous one is problematic because research has not demonstrated that there is a relationship between the different levels.[32] They reviewed training evaluation studies conducted between 1959 and 1989 and analysed the correlations mentioned in those research. Despite a relatively small sample of appropriate correlation studies between the different levels they conclude that level 1 is

[31] See for example Warr, Bird and Rackham (CIRO model, 1970); Bushnel (IPO model, 1990); Fitz-enz (Training Valuation System, 1994); Bernthal (1995); Brinkerhoff (1987) and Sleezer et al. (1992)

[32] They base their argument on educational classroom research (Remmers, Martin & Elliott, 1949; Rodin &Rodin, 1972) which has found negative correlation between reaction and learning and on Kaplan & Pascoe (1977) who demonstrated that humorous lectures are liked better (Level 1) but do not cause more learning (Level 2).

unrelated to the other levels, Level 2 to some degree is important in the causality of Levels 3 and 4, and levels 3 and 4 are causally interdependent.

Other evaluation experts[33] have highlighted that evaluation should vary according to its purpose. The type of evidence gathered and the tools used may be appropriate in some situations but not in others and should therefore vary as a function of the goals and objectives of evaluation. For example, collecting participant's perspectives may be enough if the objective is to improve training delivery but may lack of validity when assessing effectiveness. Table 1 summarises the components of five different evaluation models. Those components are briefly discussed in the following sections[34].

Table 1: Components of training evaluation models

Kirkpatrick (1959)	**Warr et al. (1970)**	**Stufflebeam (1971)**	**Bushnell (1990)**	**Kaufman et al. (1995)**	**Moment**
	Context	Context			Before training
	Input	Input	Input	Input	
Level 1 Reaction	Reaction	Process	Process	Process	During training
Level 2 Learning	Outcome	Product	Outputs	Micro (Acquisition)	
Level 3 Behaviour				Micro (Performance)	After training
Level 4 Results			Outcomes	Macro (Results)	
				Mega /Societal outcomes	

5.2.1 Reaction (Level 1) evaluation:

"As an immediate assessment following training programs, reaction evaluations are designed to measure participants' attitudes and feelings toward the interest and usefulness of the content, effectiveness of the instructor, and quality of the materials" (Keller 1996: 7). Reaction measures are based on attitude, not on behaviour change. They relate to trainees' satisfaction and can be affected by factors such as the amount of per diem provided, personal characteristics of the trainers, discrepancies between personal expectations and training objectives (the training may be good but some participants badly selected), etc. Therefore, the value of 'level one' evaluations generates much debate among evaluation experts. For Kirkpatrick (1983), whose work addressed training in private sector environments, evaluating reactions is important to insure that the customers are happy, will come back to future programmes and will recommend the training to others.

[33] such as Stufflebeam et al. (1980), Newby (1992), Pulley (1994) as well as Preskill and Torres (1999)
[34] For a comprehensive discussion of the different models see Tamkin et al. (2002)

This argument has little relevance in the context of capacity development for the public sector where trainings are rarely delivered in a market perspective. For Esterby-Smith (1985), reaction evaluations serve little more than a ritual function for course closure; their results are usually subjective and even trivial. Extensive studies on the '4 Levels' evaluation model have found no correlation between reaction and learning outcomes. Allinger and Janak (1989) have conducted extensive reviews of the research conducted on Kirkpatrick's model. They found that reactions are not linearly related to learning but instead may act as a moderator or mediator of learning. For example participants who feel that the course is relevant may engage more in the discussions and pay more attention in class. The perception of the course does not necessarily trigger change in behaviour during the training but when it does it can affect the learning. Holton (1996) shares their view and presents evidence from Dixon (1990) as well as Warr and Bunce (1995) whose research divides reactions into three components: enjoyment, usefulness, and perceived difficulty. They found no significant correlation between any of them and learning outcomes.

For 'level 1' proponents, the strength of reaction evaluations lies in the feedback it provides to evaluators on how to improve future programs. For Kirkpatrick, it is a way to tell the trainees that the trainers are there to help them. However, it is questionable whether ticking a series of boxes on a sheet can replace the participation and interaction of feedback sessions initiated by the instructor. There is, nonetheless, a general consensus that participant's feedback is desirable to get a full picture of a programme and can be helpful to monitor individual capacity development and improve the course. Nevertheless, when the principal goal of training is organisational capacity development, such as training for the public sector in developing countries, reaction evaluations, (especially when used alone) are of limited utility. This is because the main evaluation concern is the extent of improvement of the trainees' capacity to work effectively toward organisational goals, which requires information on behaviour and attitude changes that reaction evaluations cannot provide.

Trainees' reactions are complex. In order to obtain meaningful information from reaction evaluations, trainers and evaluators must be careful in questionnaire design. For data to be relevant; decisions on what aspects of reactions should be investigated and what the reaction objectives[35] should be must be made consciously (Hamblin, 1974; Newstrom, 1978; Lee and Pershing, 2002). For example, according to Dawson (1995), reaction evaluations should aim to improve the course process and questions should include items about the pace of the course, sequencing, training aids as well as course administration.

Another problem of *reactionnaires*[36] is that they are often extractive (pressuring respondents to provide answers without fully thinking them

[35] According to Hamblin (1974) if we fail to think about our reactions objectives, we might, for instance, obtain data about trainees' enjoyment on a course which enjoyment was not a principal reactions objective.
[36] Questionnaire used to measure participants' reactions.

through) and designed in an inappropriate way. The data they provide is frequently misinterpreted or mistakenly used as an indicator of the value of training when it should be used to improve training content and delivery (Lee and Pershing, 2002; Bramley and Newby, 1984). Ways of improving *reactionnaires* are proposed in section 5.3.2 of this review.

5.2.2 Learning (level 2) evaluation:

Learning, as far as training evaluation is concerned, usually refers to changes in knowledge, skills or attitudes of the training participants as the direct result of training activities. For Kirkpatrick, achievement of one or more of these learning objectives is prerequisite for any change in workplace behaviour. Others argue that in certain cases, pressures coming from the environment (fear of losing job, change of manager, etc) may make a person act differently (behaviour change) without involving any increase in terms of knowledge, skills or attitude.

Warr et al. (1999) documented the range of methodologies commonly used to evaluate learning and identified problems in the way they are used. Level two evaluations may use pre- and post-tests, or may solely rely on post-test scores. Since there are often differences between the levels of competence different trainees bring to the course, a good understanding of the process of learning requires to look at the difference between pre-test[37] and post-test. However, many organisations are more interested in knowing to what extent the required competencies have been achieved than on the learning thus they rely on post-training scores only or worse, they use theoretical questionnaires to measure skills.

Neglecting pre-testing deprives trainers of valuable information on the level of participants and their prior knowledge. Such information, while not sufficient as a training needs assessment, can be used to complement one and can help set a suitable pace for training activities. For example, pre-tests can be used to identify unnecessary training events. On the other hand, there are some concerns that the use of pre-testing may affect the validity of the post-test by focussing participants' attention on important elements during the training or by allowing some participants to remember the items from one test to another. On the other hand, when a test is conducted at the end of the training only it is not possible to differentiate between what participants already knew before the training and what they actually learned. Ideally, a third test is provided one month after training to measure the retention of learning.

When they are well designed, appropriately conducted and properly analysed, learning evaluations can provide valuable information on training efficiency while allowing evaluators to identify poorly achieved objectives and parts of the programs that should be modified[38]. Such feedback may be very

[37] It is important to underline that a pre-test is not a need assessment. It is a test to measure the level of knowledge or skills that actual participants have before the training event. Its purpose is to provide a comparison base to evaluate learning.

[38] For good guidance on those aspects see Bramley (1996)

important for trainers. The problem, however, is that a good analysis takes time and questionnaires are often misused or underused, particularly when they are compiled without sufficient regard to training objectives, or to the effects on learners of using pre- and post- tests.

5.2.3 Behaviour/ transfer (level 3) evaluation:

Level 3 evaluations aim to assess changes in job behaviour which have occurred because people attended a training programme. Information collected allows assessment of the relevance of training for the organisation as well as its efficacy. It is complex, however, because behaviour changes are affected not only by the quality of the training program, but also by trainees' personal characteristics and environmental factors. Moreover, it is impossible to predict when the behaviour change will happen as participants need an opportunity to apply what they have learned and, when the moment has come, it may take time until the change is manifest. Finally, when transfer does happen, it is not always maintained. In particular, when new behaviour is not positively reinforced (by improved results, recognition from supervisor, etc.), old behaviours are likely to return. Figure 1 illustrates the variables which affect behaviour change as a result of training.

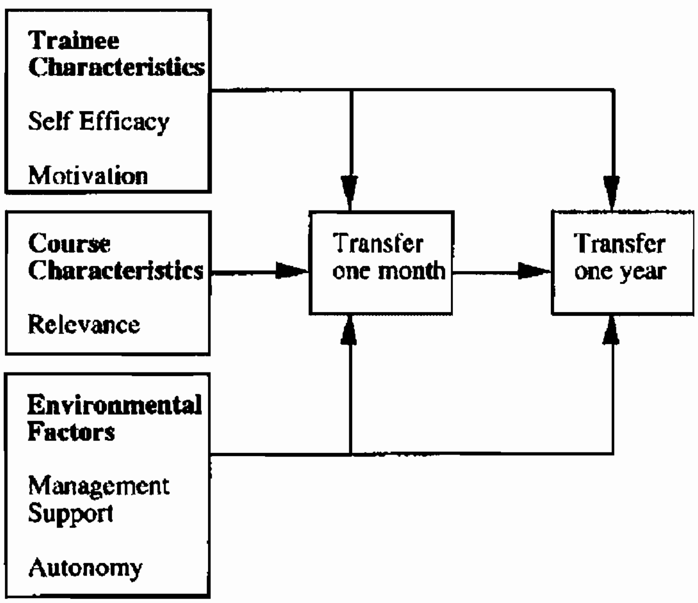


Figure 1: Transfer of training framework (Axtell et al., 1996)

In certain cases, transfer can be observed easily but in others it is necessary to ask people who are frequently in contact with the persons who were trained. Participants themselves are good sources of information but they may be reluctant to say that nothing has changed. Supervisors, subordinates and co-workers are also good sources but their perspective may be affected by their attitude toward the participants or the training programme. Therefore, it is always better to ask a range of stakeholders rather than relying only on one source of information.

5.2.4 Results/ outcome/ impact (level 4) evaluation:

Results or outcome evaluation aims at measuring the changes generated by the training program. In the development field it is referred to as impact evaluation[39]. It is an assessment of the direct and indirect effects of activities and programs on individual, institutional, and sectoral performance and/or on policies and the consequences for the welfare of the larger community (Tashereau, 1998). They are often expressed in terms of benefits and improvements due to training however outcomes may also be negative. For Warr et al., obtaining sound measures at level four (especially in comparison with a previous period) is difficult and the identification of a single training activity as the cause of any changes observed is dubious.

For Stymulo (2001) and his colleagues from IDRC, the very nature of the development process makes it almost impossible to attribute impacts to particular activities. For them, what is important is to demonstrate a progression towards impact and improvement in terms of effectiveness of interventions, rather than the impact itself. They suggest re-interpreting the concept of results to focus on outcomes, which they see as desired changes indicating progress towards large-scale goals which also depend on the contributions of other actors and may be influenced by unexpected and/or uncontrollable factors[40].

Because of the nature of training and the likelihood that participants will forget about the event, impact evaluation of training events should be conducted sooner than traditional impact assessment. The appropriate timing for a results evaluation depends on the training and what can be expected in a certain period of time. Tashereau suggests the following: "If the evaluation deals with skills development activities (the short-term outcomes), it could be done as soon as three to six months after the activity. If the evaluation is assessing the impact of activities or programs on policy or institutional development processes, any time longer than eighteen months may make it difficult to separate out the effects of the training program from other intervening factors" (2001:21).

5.2.5 Context and Input evaluations:

Context and input evaluations are absent from Kirkpatrick's model. However, for authors such as Warr et al. (1970) and Stufflebeam (1980) they have a lot of importance. Context evaluation looks at the environment in which a program takes place and the different variables related to training objectives. It describes existing and desired conditions and diagnoses problems and barriers which may affect the program. For Holton (1996), no evaluation can be validated without measuring and accounting for intervening variables that effect outcomes and transfer processes.

[39] Most evaluation models do not use the term impact. Therefore this section uses the terms results and outcomes when they are the ones employed by the authors.
[40] They developed Outcome Mapping, an approach to evaluation which consists of mapping the changes in the behaviour, relationships, activities, or actions of the people, groups, and organizations with whom a program works directly (boundary partners). This approach measures the contribution of a program to outcomes. It does not attribute the achievement of development impacts to particular interventions. More information can be found at http://web.idrc.ca/uploads/user-S/10899909431CROUCHING_IMPACT.pdf

Context evaluation supports other types of evaluation and is particularly important to understand whether inadequate or inappropriate transfer should be attributed to problems with training or with intervening variables (Allinger and Janak 1989). When conducted at the beginning of a programme, context evaluation completes training needs assessment and helps set adequate training objectives. Looking at the context helps situate training activities within a project or a country strategy; and allows identification of opportunities that can be seized to improve a program and avoid pitfalls. When conducted at the end of a programme, it helps to get other evaluations in perspective and to assess the relevance of training objectives and interventions.

Another way of usefully evaluating training is through input evaluation. The objective of input evaluation is to provide information to determine how resources were employed and whether they were adequate to achieve the goals of the program. It is concerned with issues such as design elements, logistics, timing, sequencing, training material, human resources, venue, etc. It also takes into consideration the costs of different procedures and the benefits they have. It can be done to elaborate or improve a capacity development strategy as well as to design or assess a single training. Input evaluation helps to identify factors which affected the training and can provide information to support results evaluation. (Stufflebeam et al., 1980)

5.2.6 Process evaluation and Monitoring:

Process evaluation is part of Stufflebeam, Bushnell and Kaufman models. For Stufflebeam, it aims at providing periodic feedback to the persons involved in the implementation of the training program. In this form, it can be seen as monitoring with three specific objectives: to detect and predict difficulties and flaws in the training process and plan; provide information for decision making and training improvement; and document the process as it unfolds. (Stufflebeam et al., 1980). This last objective should not be neglected because unless they are linked with the process that took place, evidence of poor learning or transfer difficulties cannot be used to modify the training or the capacity development strategy.

Process evaluation is important to determine why certain objectives have been achieved or not, since failure to learn is not necessarily attributable to the training process. Information on process can therefore go beyond monitoring and be used as a component of any complete training evaluation.

Table 2: Types of training evaluation

Type of evaluation	Purpose	Related questions
Context	To define the program environment and the variables affecting training objectives	What characteristics of the environment relate to training? What variables need to be taken into consideration? What barriers may be faced or were faced? What training objectives are appropriate to the context? Were the training objectives appropriate to the context? How do different activities relate to one another and the context?
Input	To provide information on how the resources were used to achieve the program's goals	What resources are/ were available? Is resources allocation adequate? How can resources be maximised? What are/ were possible strategies? What are/ were the costs involved? What are/ were the design issues? Was the training design appropriate? Was training material appropriate? What are/ were the logistical implications?
Process (Monitoring)	To provide periodic feedback to the persons implementing the training program	How are participants progressing toward achieving the objectives? What are/ were the difficulties faced? Is/ was the learning cycle followed? Are/ were training activities appropriate? Is/ was the pace of the training appropriate? Is/ was there enough local/ national focus? Are/ were there logistic/ management issues? How can the training be improved?
Reaction (Level 1)	To measure participants' satisfaction of the training program	How satisfied are the trainees? How relevant was the training for participants? Were the activities proposed relevant for trainees? What can be improved? How do participants see their personal achievement?
Learning (Level 2)	To assess the changes in participants' knowledge, skills and attitudes	What did participants already know? What changes took place? What objectives have been achieved? What content remain unclear? What follow up is needed? Was training efficient?
Behaviour/ Transfer (Level 3)	To assess changes in job behaviour which occurred because of training	Are participants doing their job differently? Do they apply new knowledge, skills and attitudes in their work? What are the barriers that prevent change to take place? Was training relevant to organisation? Should training be modified to increase transfer?
Results/ Outcomes/ Impacts (Level 4)	To measure benefits, improvement and possible negative outcomes generated by the training program	How did the training affect the overall organisation? How did the training affect different stakeholders? Were there impacts outside the organisation? Which ones? What were the benefits of the program for the organisation? Were the negative impacts? Which ones? Did the quality of services increased? How? Was training effective?

5.3 What tools are appropriate?

5.3.1 Evaluation sheets:

Among the different tools used for evaluating training, the evaluation sheets, or questionnaires, are the most popular. Dawson (1995), on the basis of a study of evaluation sheets used by 15 local authorities in UK, suggests ten ways to enhance the effectiveness of evaluation sheets.

1. Using three evaluation sheets: Pre-course, immediate post-course, and later enquiry sheets to give an indication of the degree of change. Sheets should be collected right after completion to avoid comparison and possible changes to the answers.
2. Tailoring evaluation sheets to a particular course. It is crucial to ask questions based on the course to gain an indication of the extent to which it succeeded in passing on information or skills and to get an idea of attitude and behaviour changes that took place. A few carefully chosen questions are sufficient.
3. Getting information on training needs and planning.
4. Making the questions logically inclusive and specific.
5. Measuring the value both for the organization and for the individual.
6. Insuring that evaluation sheets are returned to the trainers promptly, so that they may be of use: Pre-course sheets must be returned to course planners and implementers sufficiently early to permit adjustments to the course; post-course responses have to be obtained before memories fade and be taken into account for the next similar course.
7. Using later enquiry sheets and carrying out interviews with a sample of participants.
8. Getting all the information into a database to facilitate reporting and analysis.
9. Enabling open access to data while guaranteeing anonymity of respondents.
10. Settling on a format and then sticking to it so as to permit longitudinal comparison.

5.3.2 Reactionnaires[41]:

Through in-depth studies of *reactionnaires*, Lee and Pershing (2002) identified criteria to design quality reaction evaluations. They suggest eleven dimensions that should be included in reaction evaluations for training program:

- program objective(s)/ content;
- program materials;
- delivery methods/ technologies;
- instructor/ facilitator;
- instructional activities;

[41] The term *reactionnaire* refers specifically to questionnaires administered after a training course to collect participants' reactions. Evaluation sheets, on the other hand, are used for assessing learning, transfer, etc. and can be distributed not only to participants but to all the stakeholders of the training programme.

- program time/ length;
- training environment;
- planned action/ expectation of application;
- logistic/ administration;
- overall evaluation;
- recommendations for program improvement.

In order to obtain a valid measure of reaction from training participants, *reactionnaire* designers should use several items to represent each dimension. They also need to pay a particular attention to introductory and closing statements; directions; response format; question construction; layout and data analysis. For Lee and Pershing (2002), the appearance and arrangement of the *reactionnaire* are as important as the nature and wording of the question items. Layout should be simple, clear and easy to follow. Good *reactionnaires* are spread out and not cluttered; their question items are clustered with dimension labels; they include only one concept or issue in a question; the wording of their questions does not lead or influence the answer and adequate room for comments is included.

5.3.3 Questionnaires and Interviews:

Most of the information used by evaluators is gathered through questionnaires and interviews. Both methods are similar and can easily be combined, for example by administering questionnaires on more quantitative issues and completing with interviews to gather qualitative information. Questionnaires are usually cheaper to use and can be administered to a larger sample of participants. When they are carefully designed, the processing of the answers can be simple and efficient. On the other hand, their analysis needs to be careful and systematic as first degree readings or misused statistical calculations may lead to erroneous conclusions. Interviews are more flexible since they allow evaluators to probe and clarify by asking further questions. They can give more depth to evaluation than questionnaires. They are particularly useful when reassessing previously identified training needs, exploring the extent of transfer, or investigating the effectiveness of particular training methods (Bramley, 1996). The main limitation of interviews is the time needed to conduct and to analyse them.

5.3.4 Direct observation:

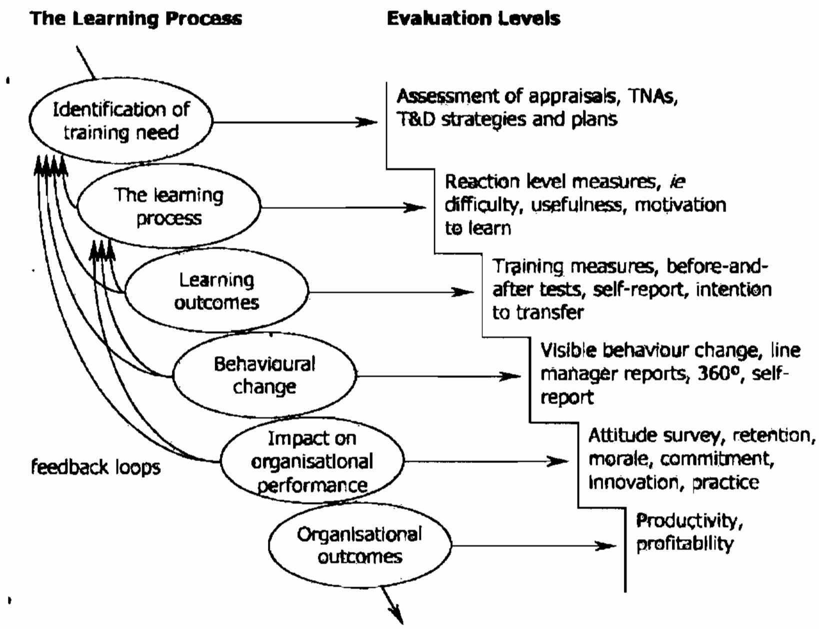
Evaluation information can be obtained by observing people in their working environment before or after a training event and by observing training sessions. Observations help to avoid self-reporting and perception bias as sometimes people don't really know how to assess their performance and rank themselves either too high or too low. This is especially true before a training session when participants may not really know what constitutes a good performance or a task well done. However, the presence of the observer may distort the performance being observed. Observers should speak with the persons observed prior to beginning observation, clarify their role and explain them how the observation report will be used. They must also pay special attention to being as unobtrusive as possible. Observation can be more or less structured depending on the particular information needed but observers should be well prepared and the key aspects to be observed for the evaluation clearly identified. The use of an observation grid is helpful but it should also include some space for spontaneous observations to be recorded.

The following table summarises possible sources to gather evaluation information.

Table 3: Sources of information

Information Needed	Possible Sources of Data												
	Organisations' documents	Training Needs Assessment	Pre-test	Course material	Course observation	Reactionnaires/ Feedback forms	Trainer's comments	Post-test	Participants' Interviews	Managers' comments	Test after 1 month	On-job follow up	Performance after x months
Relevance to organisation's needs		X		X	X	X			X	X		X	
Relevance to organisation's goal	X	X		X	X					X		X	X
Participant's satisfaction						X			X			X	
Necessary changes to training		X	X	X	X	X	X	X	X	X	X	X	X
Individual learning			X					X			X	X	X
Transfer to work									X	X		X	X
Benefit to the organisation	X	X							X	X		X	X
Benefit to broader environment	X	X							X	X		X	X

As a synthesis, the Institute of Employment Studies proposes the following model of learning and evaluation:



Tamkin et al. (2002:29)

Conclusion

The first part of this document has pointed out different elements that should be taken into consideration to increase the quality of training while the second part has highlighted different ways of conducting training evaluation in a context of capacity development.

Key messages from the literature reviewed include:

- Training needs assessment should look at three levels: organizational, occupational and personal needs;
- Learning objectives must be clear, derive from the results of the training needs assessment and serve as a basis to assess training effectiveness;
- Both needs and learning objectives should guide the design process;
- Training performance can be enhanced by using the following principles: participation, understanding, feedback, interest, emphasis and result;
- Transfer can be increased by using certain training strategies and by taking into consideration the characteristics of working environment;
- Follow-up activities increase transfer and contribute to training effectiveness;
- Training evaluation can take many forms and the components it includes should be selected according to the information needed and how those information are expected to be used;
- Training evaluation should look at the whole training cycle and not just at the course itself, including needs assessment, design, delivery and follow up.

References

Abadzi, H. (2006). Efficient learning for the poor. Washington, The World Bank

Alliger, G. M. and E. A. Janak (1989). "Kirkpatrick's levels of training criteria: thirty years later." Personnel Psychology **42**(2).

ANTA (1999). Training Package for Assessment and Workplace Training. Melbourne, Australian Training Products.

Arthur, W., W. Bennett, W. et al. (1998) "Factors that influence skill decay and retention: a quantitative review and analysis". Human Performance, **11,** 57-101.

AusAID (2004). Capacity Development Principles and Practices, AusAID.

AusAID (2006). A Staged Approach to Assess, Plan and Monitor Capacity Building, AusAID.

Axtell, C. M., S. Maitlis, et al. (1996). "Predicting immediate and longer-term transfer of training." Personnel Review **26**(3).

Baldwin, T. T. and J. K. Ford (1988). "Transfer of training: a review and directions for future research." Personnel Psychology **41**(1): 63-105.

Banez-Ockelford, J. (1995). Partners in Creative Trainings. Phnom Penh, PACT.

Baumgartel, H. and F. Jeanpierre (1972). "Applying new knowledge in the back-home setting; A study of Indian managers' adoptive efforts". Journal of Apllied Behavioral Science. **8** (6), 674-694.

Baumgartel, H., Reynolds M., Pathan, R. (1984). "How personality and organizational-climate variables moderate the effectiveness of management development programmes: A review and some recent research findings". Management and Labour Studies, **9**, 1-16.

Baumgartner, L. and S. B. Merrian, Eds. (2000). Adult Learning and Development. Malabar, Krieger Publishing Companie.

Bramley, P. and A. C. Newby (1984). "The evaluation of training part 1: clarifying the concept." Journal of European Industrial Training **8**(6): 10-16

Bramley, P. (1996). Evaluating Training Effectiveness. London, McGraw-Hill.

Brennan, M. (2003). Blended learning and business change: Key findings. IDC

Briggs, G.E. and J. C. Naylor (1962), "The relative efficiency of several training methods as a function of transfer task complexity". Journal of Experimental Psychology, **64**, 505-512.

Brinkerhoff, R. (1987). Achieving results from training. San francisco, Jossey-Bass.

Bushnell, D. S. (1990). "Input, process, output: a model for evaluating training." Training and development journal **44**(3): 41-43.

Chambers, R. (2002). Participatory workshops. London, Earthscan.

Chambers, R. (2005). Ideas for development. London, Earthscan.

Cormier, S. (1984). Transfer of training: An interpretative review. (Technical Report No. 608). Alexandria. VA: Army Institute for the Behavioral and Social Sciences.

Dawson, R. (1995). "Fill this in before you go: under-utilized evaluation sheets." Journal of European Industrial Training **19**(2): 3-7.

DFID (2002). Capacity Development: Where do we stand now? DFID Governance Department.

Dixon, N. M. (1990). The relationship between trainee responses on participation reaction forms and posttest scores. Human Resource Development Quarterly. **1**, 129-137.

Esterby-Smith, M. (1985). "Turning course evaluation from an end to a means." Personnel management **17**(4): 25-27.

FIT (1983). Training of trainers. Markham, Foundation for International Training for Third World Countries.

Fitz-enz, J. (1994). "Yes, you can weigh trainer's value." Training **31**(7): 54-58.

Fleishman, E. (1953). Leadership climate, human relations training, and supervisory behaviour. Personnel Psychology, **6**, 205-222.

Flexter, A. J. and E. Tulving (1978). "Retrieval independence in recognition and recall." Psychological Review **85** 153-171.

Ford, J. K., M. Quinones, et al. (1992) "Factors affecting the opportunity to perform trained tasks on the job". Personnel Psychology, **45,** 511-527.

Freire, P. (1970). Pedagogy of the oppressed. New York, Continuum.

Freire, P. (1973). Education for Critical Consciousness. New York, Continuum.

Freire, P. (1994). Pedagogy of Hope. New York, Continuum.

Gaventa, J. (2004). Towards participatory governance: Assessing the transformative possibilities. Participation: From tyranny to transformation. G. M. S. Hickey.

Gaventa, J. and A. Cornwall (2001). Power and Knowledge. Handbook of action Research Participative Inquiry and Practice. P. Reason and H. Bradbury. London, Sage.

Gist, M., C. Stevens et al. (1991) "Effects of self efficacy and post training interventions on the acquisition and maintenance of complex interpersonal skills". Personnel Psychology, **44,** 837-61.

Goldstein, I. L. (1993). Training in organizations: needs assessment, development, and evaluation. Pacific Grove, CA:Brooks/Cole.

Hamblin, A. C. (1974). Evaluation and Control of Training. London, McGraw Hill.

Hand, H. H., M. D. Richards, et al. (1973). "Organization climate and the effectiveness of a human relations program." Academy of Management Journal **16**: 185-195.

Haskell, R. E. (2001). Transfer of Learning. London, Academic Press.

Hirsh, W. and P. Tamkin (2005). Planning training for your business. Brighton, Institute for Employment Studies.

Holden, L. and Y. Livian (1992). "Does strategic training policy exist? Some evidence from ten european countries." Personnel Review **21**(1).

Holton, E. F. (1996). "The flawed four-level evaluation model." Human Resource Development Quarterly **7**(1).

Horton, D., A. Alexaki, et al. (2003). Evaluating Capacity Development: Experiences from Research and Development Organizations around the World, ISNAR, CTA, IDRC.

Huczynski, A. A. and J. W. Lewis (1980). "An empirical study into the learning transfer process in management training." The Journal of Management Studies **17**: 227-240.

Irvine, R., R. Chambers, et al. (2004). Learning from poor people's experience: immersions. Lessons for change in policy & organisations. Brighton, Institute of development studies.

Kabeer, N. (2000). Resources, agency, achievements: Reflections on the measurement of women's empowerment. Gendered Poverty and Well-Being. S. Razavi. **30**.

Kaplan R. M. and G. C. Pascoe (1977). "Humorous lectures and humorous examples: Some effects upon comprehension and retention". Journal of Education Psychology. **69**, 61-65.

Kaufman, R., J. M. Keller et al. (1995) "What works and what doesn't: evaluation beyond Kirkpatrick'. Performance and Instruction, **35,** 8-12.

Keller, J. M. (1996). Evaluating diversity training: 17 ready-to-use tools. San Diego, Pfeiffer.

Kirkpatrick, D. L. (1959) "Techniques for evaluating training programmes". Journal of the American Society of Training Directors, **13,** 3-9 and 21-26.

Kirkpatrick, D. L. (1998). Evaluating training programs: The four levels. San Francisco, Berrett-Koehler.

Knowles, M. S. (1980). The modern practice of adult education from pedagogy to andragogy. Englewood Cliffs, Cambridge Adult Educator.

Kolb, D. A. (1984). Experiential Learning. New Jersey, Prentice-Hall, Inc.

Lee, S. H. and J. A. Pershing (2002). "Dimensions and design criteria for developing training reaction evaluations." Human Resource Development International **5**(2): 175-197.

Loos, G. P., T. Fowler, et al. (1999) A Model for Research on Training Effectiveness. Cincinnati, NIOSH.

Mager, R.F. and P. Pipe (1970) Analysing Performance Problems, Fearon, California.

Mager, R. F. (1997). Analyzing performance problems or You Really Oughta Wanna. Atlanta, GA. Center for Effective Performance.

Manpower Services Commission (1981). Glossary of Training Terms.

Marx, R. D. (1982) Relapse prevention for managerial training; a model for maintenance of behaviour change, Academy of Management Review, **7** (3) 433-41.

McGehee, W. and P. W. Thayer (1961). Training in Business and Industry. New York, Jonh Wiley & Sons, Inc.

Mezirow, J. (1990). Fostering Critical Reflection in Adulthood A Guide to Transformative and Emancipatory Learning. San Francisco, Jossey-Bass.

Mezirow, J. (1991). Transformative Dimensions of Adult Learning. San Francisco, Jossey-Bass.

Mezirow, J. (2006). An overview on transformative learning. Lifelong learning. P. Sutherland and J. Crowther. London, Routledge.

Missika, B. (2006). The challenge of capacity development: working towards good practice. DAC Network on Governance capacity paper, OECD.

Newby, A. C. (1992). Training evaluation handbook, Gower.

Newstrom, J. W. (1978). "Catch-22: the problems of incomplete evaluation of training." Training and development journal **32**(11): 22-24.

Noe, R. (1986), Trainee's attributes and attitudes: neglected influences on training effectiveness. Academy of Management Review, **39**, 497-523.

Patrick, J. (1992). Training: Research and Practice. London, Academic Press Limited.

Phillips, J. J. (1983). Handbook of Training Evaluation and Measurement Methods. Houston, Gulf Publishing Company.

Preskill, H. and R. T. Torres (1999). Evaluative inquiry for learning in organizations, Sage.

PRIA (1995). A Manual for Participatory Training Methodology in Development. New Delhi, Society for Participatory Research in Asia.

Pulley, M. L. (1994). "Training 101 Navigating the Evaluation Rapids." Training & Development **september**.

Rackham, N. (1979). "The coaching controversy." Training and Development Journal: 12-16.

Reber R. A. and J. A. Wallin (1984) The effects of training, goal setting, and knowledge or results on safe behaviour: A component Analysis. Academy of management journal, **27**, 544- 560.

Reid, M. A. and H. Barrington (1994). Training Interventions. London, Institute of Personnel and Development.

Remmers, H. H., D. Martin and al. (1949). Student achievement and instructor evaluations in chemistry: Studies in higher education. West Lafayette, Purdue University.

Rodin, M. and B. Rodin (1972). Students evaluations of teachers. Science. **177**, 1164-1166.

Salas, E. and J. A. Cannon-Bowers (2001). "The Science of Training: A Decade of Progress." Annual Review of Psychology **52**: 471-99.

Shore, E. and L. Sechrest (1961). "Concept attainment as a function of number of positive instances presented." Jouranl of Educational Psychology **52**(6): 303-307.

Sleezer, C. M., D. Cipicchio, et al. (1992). "Customizing and implementing training evaluation." Performance Improvement Quarterly **5**(4): 55-75.

Stammers, R. and J. Patrick (1975). The psychology of training. London, Methuen & Co Ltd.

Stufflebeam, D. I., W. J. Foley, et al. (1980). L'évaluation en éducation et la prise de décision. Ottawa, NHP.

Stymulo, T. (2001). Crouching Impact, Hidden Attribution: Overcoming Threats to Learning in Development Programs. Workshop on Across Portfolio Learning. Block Island, IDRC.

Tamkin, P., J. Yarnall, et al. (2002). Kirkpatrick and Beyond: A review of models of training evaluation. Brighton, Institute of Employment Studies.

Taschereau, S. (1998). Evaluating the Impact of Training and Institutional Development A collaborative approach. Washington, The World Bank.

Taylor, P. (2001) 10 key stages towards effective participatory curriculum development. Zurich, Helvetas.

Taylor, P. (2003). How to design a training course. London, Continuum.

Teskey, G. (2005). Capacity Development and State Building Issues, Evidence and Implications for DFID, DFID.

Thorndike, E. L. and R. S. Woodworth (1901). The influence of improvement in one mental function upon the efficiency of other functions. Psychological Review, **8**, 247-261.

UNDP (2006). Capacity Assessment Practice Note. UNDP Practice Note, UNDP.

UNDP (2006). Capacity Development Practice Note. UNDP Practice Note, UNDP.

VAT project (2001). Systematic Approach to Training Design and Delivery. Hanoi, AusAID.

Vella, J. (1989). Learning to Teach Training of trainers for community development. Washington, Save the Children.

VeneKlasen, L. and V. Miller (2002). A new weave of power, people and politics. Oklahoma City, World Neighbors.

Voluntary Service Overseas (2004). Participatory approaches: a facilitator's guide. London, VSO.

Warr, P., C. Allan, et al. (1999). "Predicting three levels of training outcome." Journal of Occupational and Organizational Psychology **72**(Sep 1999).

Warr, P. and Bunce, D. (1995). Trainee characteristics and the outcomes of open learning. Personnel Psychology. **48**, 347-375.

Warr, P., M. Bird and N. Rackam (1970) Evaluation of Management Training. London, Gower Press.

Wenger E (1998), Communitites of Practice, Cambridge, CUP

Wexley, K. N. and G. P. Latham (1981). Developing and training human resources in organizations. Glenview, Scott Foresman.

Wexley, K. N. and T. T. Baldwin (1986). "Post-training strategies for facilitating positive transfer; an empirical exploration." Academy of Management Journal **29**: 503-520.

Wexley, K. N. and W. Nemeroff (1975). "Effectiveness of positive reinforcement and goal setting as methods of management development." Journal of Applied Psychology **64**: 239-246.

Wexley, K. N. and C. L. Thornton (1972). "Effect of verbal feedback of test result upon learning." Journal of Educational Research **66**: 119-121.

Wilson, J. B. (1995). Mapping A Winning Training Approach, Kogan Page Ltd.

World Bank Operations Evaluation Department (2005). Capacity Building in Africa An OED Evaluation of World Bank Support. Washington, The World Bank.