

EVALUATING TRAINING

in WHO



World Health
Organization

Evaluating training in WHO



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Foreword

Training is conducted throughout WHO, targeting internal WHO staff members and external health professionals in countries around the world, yet the follow-up to this training remains a challenge. Evaluation of the impact of training often seems second priority – of far less importance than training design and implementation. Yet donors, partners, participants, as well as the global community increasingly ask: “Was the training effective? Did it make any difference?”

Training can be expensive and this investment has to be made in the right place. Evaluation not only contributes to the quality of the training project but also demonstrates the accountability of training management, the success of the programme and improved performance for the organization. An evaluation plan that is part of the training project from the beginning allows for a more accurate definition of the training needs, goals and specific objectives. The results of the evaluation allow the organizers to improve the training: an evaluation provides evidence for continuing with the training as is, or for improving it where necessary. At the same time it gives the training team and management the confidence to continue with the work.

Training has become an important element in improving the performance of both the individual and the organization. Thus it is crucial to follow up on what has been learned during the training, to assess how much of the new learning is being put into practice, to identify factors that encourage the implementation of the new skills and information (and which factors are barriers), and to ensure that the learners and their programme meet expectations, objectives and results.

This guide provides an approach to evaluating training using Kirkpatrick’s model of four levels of evaluation. The objective of the guide is to offer an easy-to-follow guide that encourages training designers and managers to plan and conduct evaluation based on their needs. Examples of evaluation tools are provided as annexes. As most of these templates have been published previously, designed by members of the working group, or “picked up” during training courses and further developed, no reference is given for individual templates. Many more examples exist, and the *bibliography* provides some references for further reading.

This guide is a work in progress. It will be reviewed – based on feedback received – after one year of utilization by the working group. We welcome comments and suggestions to improve the evaluation of training in the coming years. Comments can be sent to: influenzatraining@who.int.

WHO Training Evaluation Working Group

Introduction

Training is an activity for communicating information and guidance in order to improve trainees' performance. For training to achieve this, it must be clear what level of performance is required and what levels of knowledge and skills are desired. Planning the objectives of training, communicating the information and guidance through a training course, and measuring the results to ascertain the extent of improvement are interdependent elements in this three-stage process.

This handbook provides varied resources for evaluating training carried out by the World Health Organization (WHO).¹ It is based chiefly on experience in evaluating training within the context of WHO programme activities but can also be applied to the training of WHO staff. Some training courses are short, lasting maybe just half a day, while others last several days or a week, and yet others require part-time attendance over months or years. This handbook can be used to help measure the effectiveness of courses of all lengths.

The handbook is not a guide to training, but a resource for evaluating training. It does not explain how to train people, though it does suggest how training should be planned so that it can be more effectively evaluated. This handbook chiefly covers the various ways to assess training according to how much you want to find out – whether you want to know if the trainees are satisfied with the training, if they have learned what they are supposed to have learned, if they are putting what they have learned into practice, or if the effect of their changed behaviour has had the impact it was supposed to have in the trainees' workplace and in their organization as a whole.

To “evaluate” training means finding out what the “value” of training really is – to the trainees, their managers, their colleagues, the organization for which they work, and for the wider community. Thus it is important to define clearly the training objectives so that the results of the training can be measured against them. The training objectives should not be imposed by the agency doing the training but should be defined in collaboration with country representatives to ensure that they fit the local context.

The assumption that training automatically leads to changed behaviour or improved work standards is simply not valid. Not all trainees change their work methods, or their approach to work, after training – even if they say they appreciate and enjoy the training sessions. This handbook shows how, in order to discover the true impact of training, an evaluation should go far beyond ticking one of half a dozen faces that range from smiling happily to frowning. And it offers a selection of methods for doing more far-reaching evaluations.

The evaluation methods suggested in the annexes to this handbook may be freely adapted and used. It should be noted, however, that these are not recommended by WHO in preference to others that may exist. They are reproduced in this manual simply as examples of the kind of tools that can be used.

¹ While the handbook was drafted on behalf of WHO, it may also prove useful to other agencies involved in health-related training in developing countries.

Many other examples exist on the Internet. In order to use proprietary evaluation methods developed by training companies, please contact the company concerned for details of cost and other conditions. Evaluation tools may be used in either paper or electronic format.

Training involves considerable investment of funds, time and people. It is important, therefore, that the evaluation of training should not only be planned but should be budgeted too.

The evaluation framework – of training preparation, in-training evaluation, and post-training evaluation and follow-up (**Fig. 1**) – should be understood by trainees, supervisors and managers alike.

Figure 1. The framework of evaluation

| | Learning objectives | Instructional goals | Competency domain |
|--------------------|---------------------------------------|----------------------------|---|
| Level ^a | During and immediately after training | Post-training (3–6 months) | After training (follow-up circa 1 year) |
| 1 | Fewer resources required | Not applicable | Not applicable |
| 2 | Fewer resources required | Not applicable | Not applicable |
| 3 | Fewer resources required | Fewer resources required | Resource intensive |
| 4 | Not applicable | Fewer resources required | Resource intensive |
| 5 | Not applicable | Resource intensive | Resource intensive |

^a For the definition of evaluation levels, please see pages 11–34 of this manual.

Legend

Not applicable
 Fewer resources required
 Medium resources
 Resource intensive

Good training can yield dividends in terms of improved work performance, efficiency, increased impact, and a healthier community. Training is not a quick fix but rather a basis for sustained development of human resources. Therefore it should be linked to learning needs and the context in which the training takes place. Poor training is a waste of resources. Evaluation that looks at the impact of the training in terms of changed behaviour in the workplace and improved performance of the organization should enable us to better understand what is good and what is poor. And it helps us to ensure that our future training efforts will be good ones.

What is training and why do we do it?

WHO has stressed the need to develop as a “learning organization”.¹ Because of its mission, WHO requires highly professional staff with a range of skills and considerable depth of knowledge who are flexible and able to respond rapidly to new challenges.² At the same time, WHO has a responsibility to assist health workers globally to improve their knowledge and skills in order to provide better health care and services in a changing environment. Consequently, training is an important part of WHO’s global role.

Training is more than just teaching. Training is a means of facilitating learning by those who are being trained so that they acquire new knowledge, skills and even attitudes. In many cases, training may be seen as a “one-off” intervention. However, the goal of training is to create an impact that lasts well beyond the training itself. Training is just one element – albeit an important one – in creating a learning environment in which people can both develop personally and use their new abilities to improve the output of their work and that of their colleagues. Although we talk about training, it is the learning and how we use it that really matters.

New learning is important both to the development of new programmes and the effective progress of existing ones. Many field activities require local staff to achieve specific goals, and WHO is often involved in providing or initiating the training to equip field staff with the skills and techniques they need to achieve those goals. A training session, course or workshop is often the most practical means to provide staff with the competencies they will need in their future work.

Although training may sometimes be obligatory – for security reasons, for instance, or because of the need to adapt to new work procedures – it is usually voluntary. In most cases it tends to be appreciated by trainees. Not everyone likes change, but many people appreciate being part of something new and more modern. For the individual trainee, training offers a chance to see where one stands at present (no matter what the current situation is) and where one will be in terms of one’s performance following the training. Enhancement of performance is the reason why training takes place, and evaluation is the means of assessing whether and to what extent enhancement has taken place.

Training that restricts itself to one course or workshop can never be enough. **Learning does not stop when the workshop ends.** Indeed, one can argue that learning really begins only when practice with the new knowledge and skills starts. Those who have undergone training need support in order for them to put into practice what they have learned. It is critical to have support mechanisms such as supportive supervision and appropriate and meaningful feedback.

¹ Medium-term strategic plan 2008–2013. Geneva, World Health Organization, 2007.

² The WHO Constitution states that the Organization’s objective is “the attainment by all peoples of the highest possible level of health”.

WHO puts the focus on learning as a career-long process. This does not diminish the role of the trainer; indeed, that role is enhanced. An approach that focuses on learning takes into account much more than the training course itself. It requires more interactive contact with trainees both before the training course (to establish the level of knowledge, and to review the context and environment in which work is being done) and afterwards (to ensure that the new learning is being put into practice and is achieving what it is supposed to achieve).

In a situation where training is seen as a longer-term process of facilitating learning – including follow-up coaching and re-training where necessary – evaluation too is much more than a one-off activity.

In addition, the fast growing use of new technologies – such as computers, mobile telephones, the Internet and satellite communications – makes long-term and continuing learning and knowledge-sharing processes possible. Barriers to learning are rapidly being overcome.

Why evaluate training?

All training activities should be evaluated to ensure that they serve the purpose for which they are intended. Training not only costs money but also takes up the time of the trainers and the learners for an hour or two, or a day, or even for a week or several weeks depending on the type of training being given. In the WHO context, and in terms of national health-service staff, this means that people who are often in key positions have to take time away from their normal responsibilities to attend the training. The aim of training is to provide these people with new competencies that will enable them to make an even greater (or different) contribution to the work of WHO, or to health in general, in the future. It is therefore important to ensure that their time spent in training has been beneficial and will have a lasting positive impact.

The reasons for evaluating training include:

- tracking the development of people's knowledge and skills;
- finding out whether the training is appropriate to the trainee and whether the learning is being applied;
- identifying gaps and future needs in training;
- finding out if the investment in training was worthwhile or whether alternative methods to improve performance (e.g. job rotation, incentives) are needed instead;
- obtaining information on which to base future training plans and strategies.

By finding out what impact the training has on participants, one has the chance to find out how well the current training programme works and what modifications may be needed to make it work better. By measuring the outcome of training, one can find out whether any part of the training programme should be modified, what assistance participants may need in order to apply their new competencies when they go back to their jobs, and whether there are any barriers to learning.

What are we evaluating?

Institutional and programme goals and objectives

WHO carries out training in order to enable people to acquire and use specific knowledge, skills and behaviours so that, by doing their job better, or by doing it differently, they will help to improve global health. A training programme will achieve this more effectively if it is clear what knowledge, skills and behaviours the participants are intended to acquire, and what they are expected to do differently after the training is completed.

Unless there is clarity about the changes that are expected as a result of the training, evaluation cannot be successful and it will be impossible to know whether the training has been effective. Attempting to apply the various levels of evaluation after a training programme has been developed and delivered is difficult, if not impossible. Each level of evaluation should be considered as the training is designed and delivered.

This handbook describes in detail four levels of evaluation of training, plus a tentative fifth level. However, before we look at those levels of evaluation, let us consider what it is we are evaluating – progress towards the various goals and objectives of the work context in which the training takes place.

To begin with, all WHO-related training takes place within the context of an institution (such as WHO) or a public health programme. WHO and public health programmes have overarching goals – which may be as broad as furthering health worldwide or eliminating polio or reducing global deaths among the under-fives by two thirds.

Apart from their overarching goals, institutions and programmes have more specific objectives that they are aiming to achieve within particular areas of work. These specific objectives may relate to the work of a department of an institution, or one element of a public health programme (such as epidemiology, or communication), and may be linked to a fixed budget period. These objectives are also likely to be linked to performance or impact indicators in the budget or workplan of the institution or programme. Thus, when we are carrying out an evaluation of training at level 4, we should be trying to find out what impact the training has had on the achievement of the indicators for these (organizational, departmental or team) objectives.

Competencies and instructional goals

To ensure that an evaluation can be undertaken, the design of training should include consideration of elements such as competencies, instructional goals and learning objectives. The evaluation process will be based on the clear description of those elements.

In order to plan effective training, we must identify the area in which we intend to build competence. Building competence in an entire domain such as epidemiology or communication is not WHO's responsibility. However, virtually everyone's job involves a range of responsibilities for which they require various areas of competence.

The evaluation process will be based on the clear description of these elements in the training design:

1. Competency

Definition: a set of skills, knowledge and attitudes required to perform a job or broad task.

Example: The ability to conduct an economic analysis for a public health programme or project.

2. Instructional goal

Definition: an activity that, with other related activities, would allow a trainee to perform the competency.

Example: Calculate burden of disease measures.

3. Learning objective

Definition: a precise, measurable statement of what a learner will be able to do upon completion of instruction.

Example: List and describe the steps of an outbreak investigation.

Many trainers draw up a “competency statement” to specify which areas of competence a training course will address. For instance, for trainees working in communication, the competency statement might be “to develop written public health communications”. For field epidemiologists, a training course may be planned with the competency statement: “to conduct an economic analysis for a public health project”. Both these competency statements encompass several areas of knowledge and a number of skills.

While your aim may be to build trainees’ competence in conducting analyses of public health projects or in developing written public health communications, the training courses will be much more focused. That’s where the “instructional goal” comes in. An instructional goal states what activity the learner is expected to be able to carry out after completing the training.

If we take the examples of competency in conducting analyses of public health projects or in developing written public health communications that have been used above, instructional goals for the training might be “to calculate burden of disease measures” or “to prepare research findings as an article for a scientific journal”. These instructional goals describe activities that, together with other related activities, would allow a trainee to perform the broader activities in the competency statements. When the training is evaluated at level 3, we aim to find out whether the trainee is indeed putting the instructional goals into practice. In other words, we need to ask: “Is the trainee using the knowledge, skills and behaviours that were the focus of the training, and how are they changing his or her work performance?”

Learning objectives

Once we know what instructional goals we are aiming to achieve, we can define just which knowledge, skills and behaviours we are going to transmit during the training. Acquiring this knowledge, learning how to perform these skills and carry out these behaviours, and probably also adopting certain attitudes become the “learning objectives” of the trainees.

A learning objective is a precise and measurable statement of what specific things the trainee will know and do – and of how he/she will think and behave – during and at the conclusion of the training. The word “measurable”

is important, because learning objectives are what you will test in an evaluation at level 2. There are three basic rules when formulating a learning objective, namely:

1. The learning objective should describe behavioural changes that will result from the training. A behaviour is an overt act or movement by a person.
2. The learning objective should use action verbs that are measurable and visible. This is further explained below.
3. The subject of the sentence should be the participants. This is because in any training the targets of behavioural change are the participants themselves.

As seen above, one of the basic rules of learning objectives is that they must include an action-oriented verb (e.g. calculate, define, analyse) – things that an instructor can see a learner perform. For instance, “to understand the steps of an outbreak investigation” is not a good learning objective because it is not action-oriented and cannot be measured. However, “to list and describe the steps of an outbreak investigation” is a learning objective since it describes what a trainee should be able to do, and it can be measured.

The choice of what action verbs to use must also undergo further discussion based on the training targets. For example, in discussing the steps involved in outbreak investigation, the following represent the hierarchy of learning results that a training course might aspire to:

- IDENTIFY the steps in outbreak investigation;
- EXPLAIN the steps in outbreak investigation;
- ANALYSE the steps in outbreak investigation;
- PERFORM the steps in outbreak investigation.

Annex 1 contains such **a list of action verbs for learning objectives** arranged according to different categories of learning (knowledge, application, analysis etc).

In each of the learning objectives above, there are various levels of learning, as well as contents and processes involved in the training. For example, if the training objective is merely “to identify” the steps in outbreak investigation, this training objective is not as demanding as the training objectives containing the action verbs “to explain”, “to analyse” or “to perform”. Similarly the action verb “to explain” is not as significant as “to analyse” (which requires both explanatory as well as analytical faculties) or “to perform” (which needs not only explanatory and analytical competence but the ability to apply the steps). Thus, the choice of action verbs needs careful scrutiny and judgement.¹

Learning objectives are used to develop both the evaluation of the training programme and the assessment of the learner. A list of **sample indicators for learning objectives** is contained in **Annex 1**.

While the learning objective describes what the trainee should learn and is evaluated at level 2, the way in which the training is carried out is evaluated at level 1. **Fig. 2** shows the links between developing objectives for the training, and the focus for evaluation of training at different levels.

¹ Guia-Padilla MT et al. *I teach, I learn. A manual for gender-responsive training* (unpublished English version, 2001).

Levels of evaluation

The purposes of evaluation

On the basis of learning research by several authors, it is generally accepted that a training programme should ideally have impact at four levels – and possibly five – and that the evaluation of training is therefore possible at these levels.¹ Having clear competency statements, instructional goals and learning objectives will help you to do the evaluations because these are the standards against which you will evaluate.

The five levels of impact and evaluation following training are shown in **Table 1**. Please note that level 5 is tentative.²

Table 1. Five levels of training impact and evaluation

| LEVEL | FOCUS | AREA OF IMPACT | EVALUATION QUESTION |
|-------|----------------------|---|---|
| 1 | Reaction | Immediate reaction of trainees | Are the trainees satisfied? |
| 2 | Learning | Increase in trainees' knowledge and skills | What have the trainees learned? |
| 3 | Behaviour | How trainees apply their new knowledge and skills | What do trainees do differently in the workplace? |
| 4 | Results | How the training affects the trainees' broader area of work | What is the effect on the output of the trainee's team or department? |
| 5 | Return on investment | Wider impact on the achievement of public health programme objectives | How has the training contributed to achieving public health objectives? |

The main focus of each evaluation level is as follows:

- **Level 1:** The purpose of this level of evaluation is to find out how the participants react to the training. Did they feel that it met their needs, was it organized efficiently, were the premises suitable? Basically, trainees should appreciate their period of training and should be satisfied with it.

¹ In 1959, the Journal of the American Society of Training Directors published a series of articles by Donald Kirkpatrick that defined four levels of training evaluation. Kirkpatrick's ideas were later published in book form (the latest edition is: Kirkpatrick DL, Kirkpatrick JD. *Evaluating training programs*, 3rd edition. San Francisco, CA, Berrett-Koehler Publishers, 2006). Kirkpatrick's four levels of evaluation are:

- Level 1. Reaction: To what degree participants react favourably to the training.
- Level 2. Learning: To what degree participants acquire the intended knowledge, skills, attitudes, confidence, and commitment based on their participation in a training event.
- Level 3. Behaviour: To what degree participants apply what they learned during training when they are back on the job.
- Level 4. Results: To what degree targeted outcomes occur as a result of the training event and subsequent reinforcement.

Some authors, including Jack Phillips (see: Phillips JJ. *Handbook of training evaluation and measurement methods*, 3rd edition. Houston, TX, Gulf Professional Publishing, 1997) have proposed a fifth level of evaluation to measure the "return on investment" in training.

² In a commercial setting, evaluation regarding "return on investment" at level 5 is a measure intended to assess whether the training was worth doing financially – i.e. did it lead to savings or additional income that are greater than the cost of the training? Since WHO does not spend money in order to make more money, this kind of return on investment is not relevant to the Organization. For WHO, saving lives, making people healthier, or achieving public health goals represent a return on investment. However, these broad goals are influenced by a wide range of factors, and measuring the specific contribution of training to the health goals is extremely difficult.

- **Level 2:** The purpose of the evaluation should be to assess specific knowledge or skills – i.e. have the learning objectives been achieved?
- **Level 3:** The purpose of a level-3 evaluation is to assess to what extent the trainee is applying the new knowledge and skills in the workplace – in other words, has the instructional goal been achieved?
- **Level 4:** These evaluations focus on the improvements that are expected in the team, programme or other context in which the trainee works.
- **Level 5:** Evaluations at this level should focus on return on investment, and should specify what resources are being saved, or lives saved, or in which way health is being improved.

Fig. 2 shows how the process of defining competencies, learning objectives and instructional goals for training is reflected in the different levels of training evaluation.

To carry out evaluation, a range of different methods and tools can be used. Examples of these are contained in the annexes to this manual.

However, it is important to remember that evaluation should happen not only after the training has been completed. It should also take place during the training.

Figure 2. Training goals as the basis for training evaluation

| Level | Development of objectives | What to ask when developing learning objectives | What to ask when evaluating training | Focus of evaluation | Level |
|--------|---|--|--|----------------------|--------|
| 5 ↓ | Overall goals of the public health programme | What are the overall goals of the programme that we aim to improve? | What has been the impact on the overall goal of the institution or project? What lessons can we learn to improve training? | Return on investment | ↑ 5 |
| 4 ↓ | Specific objective of the public health programme | What are the specific elements of the programme that we aim to improve? | What has been the impact on the objective of the institution or programme? What lessons can we learn to improve training? | Results | ↑ 4 |
| 3 ↓ | Competency statement and Instructional goal | In what area of activity are we aiming to improve the trainee's work performance? On the basis of the new knowledge and skills learned during training, what specific tasks should the trainee know how to carry out after training? | Is the trainee using the new knowledge and skills, and how are they changing his or her work performance? What lessons can we learn to improve training? | Behaviour | ↑ 3 |
| 2 ↓ | Learning objective | What new knowledge and skills will be communicated to the trainee during training? | Has the trainee really learned and understood the new knowledge and skills? What lessons can we learn to improve training? | Learning | ↑ 2 |
| 1 ↓ | | How will the new knowledge and skills will be communicated to the trainee during training? | Was the trainee positive about what was communicated, and how it was communicated? What lessons can we learn to improve training? | Reaction | ↑ 1 |

← TRAINING →

Use the evaluation format that is most efficient

Many WHO courses use computer tools in their training, others use printed resources, and yet others use a mix of media. Evaluation tools can also be written or computer-based. Whatever the medium or tools of instruction, the training should be evaluated. Web-based evaluation forms and e-mail questionnaires are quite commonly used where these are practicable.

Distance learning courses are often fully computer-based. For such courses, an electronic “e-evaluation” is usually the only kind of evaluation that is feasible at levels 1 and 2, though at higher levels it may be worth further investment to bring trainees together for interviews, focus groups or other people-based evaluation methods.

In low-income settings with poor Internet connectivity, evaluation forms that are to be completed on a computer should be short and easy to upload, and an alternative should always be proposed – such as to print out the form and return it by fax.

For follow-up evaluation of trainees in more remote areas, the mobile telephone provides a useful tool for evaluation in the form of SMS messages since almost all trainees are likely to have mobile phones. An evaluation may consist of a series of short (no longer than 140 characters) messages sent separately, each consisting of one question requiring a “yes” or “no” answer (or at most only a short answer), or a multiple choice option which asks respondents to choose items from a numbered list. A final SMS can provide feedback on the evaluation to the participants. Voice messages may also be used.

While training normally takes place in one language, trainees may well apply their new knowledge and skills in another language. In order to make evaluations more accurate and consistent, and to encourage trainees to respond, evaluations should wherever possible be carried out in the working language of the trainees.

Build evaluation into the training itself

Just as learning is a continuum, the evaluation of training should be a process that begins even before the training session or course, and continues afterwards (**Table 2**). It is best to prepare the trainees for this even before the actual training begins. For instance, it is often helpful for the first activity that trainers/facilitators and trainees do together to focus on the trainees’ expectations. Ask the question “What do you expect from this training?” Apart from enabling the trainer to adjust the training approach to this group of trainees, the answers to this question also indicate what kind of impact may be anticipated at levels 1 and 2 – and possibly at levels 3 and 4 as well.

Trainees should be told that the training will be evaluated. If they understand the importance of evaluating training at different levels, they are prepared for the evaluations and are more likely to participate actively.

It is important to ensure that the trainees receive feedback about the evaluation (e.g. how many respondents said this, how many liked that, what suggestions were made for improvement or change). The lack of feedback may often be a reason why trainees neglect to complete evaluation forms – especially when the person asking for the forms is far away.

Table 2. The continuum of training evaluation

| TIMING | DESCRIPTION |
|---------------------------|---|
| Before training | |
| | Know the overall goals of the institution or public health programme. |
| | Know the objective of the departments or teams from which the trainees are drawn. |
| | Decide on the competency statement and instructional goal. |
| | Define the learning objective for the training. |
| | Specify the experience and level of knowledge that the trainees should have. |
| As training begins | |
| | Explain the evaluation framework to the trainees so that they are prepared for it and understand that it is an integral part of the training process. |
| | Have trainees explain what they expect to get out of the training and what impact they expect it to have OR |
| | Have trainees fill out the first part of a “before and after” evaluation. |
| During training | |
| | Verbally evaluate trainees’ learning by regular questioning. |
| | Evaluate learning through exercises and role plays. |
| | Have trainees fill out reaction/learning evaluation forms at the end of each day (for a training course of more than a day) or at the end of the first half-day (for a one-day course). |
| | If appropriate, agree workplans with trainees. |
| | At the end of the training course, have trainees fill out a level-1 reaction evaluation form. |
| | Test trainees’ knowledge with a level-2 learning evaluation test or exercise. |
| | Have trainees complete the second part of the “before and after” evaluation. |
| After training | |
| <i>Within 2 days</i> | Have trainees complete a level-2 knowledge evaluation form. |
| | (Ideally) ensure there is mentoring for trainees back in the workplace. |
| <i>After 1 month</i> | Contact each trainee (and mentor) to ask how they are progressing and to give advice. |
| <i>After 6 weeks</i> | Make contact with supervisor to check on progress and to make arrangements for a level-3 evaluation. |
| <i>After 2 months</i> | Carry out a level-3 evaluation (either in person or through a reliable local evaluator); this may be done in connection with a follow-up training session |
| | Obtain feedback from trainees (and from mentors and supervisors) on their progress and on reasons why parts of training may not be applied. |
| | Assess whether continued mentoring is required. |
| <i>After 6 months</i> | Carry out a level-4 evaluation, preferably through an independent evaluator who was not involved in the training. |
| <i>After 1 year</i> | Contact each trainee to ask about progress, give advice if needed, and recommend further training courses. |
| <i>After 2 years</i> | If appropriate, carry out a level-5 evaluation. |

While the training is being carried out, the trainer should regularly ask questions to check that trainees have understood the issues that have been dealt with so far. When trainees return following a break in the training session, it is useful quickly to assess their understanding of what has been covered before moving on to the next topic. This is usually done verbally so as not to take too much time. If the trainees’ answers indicate they do not have a clear understanding of the topics covered, the trainer should review the topics before moving on to the next one.

If the training lasts for a full day, take 5 or 10 minutes after the lunch break to recap what was covered during the morning and to assess the learning so far. If the training extends over several days, always briefly review the previous day's training each morning.

Apart from assessing how well the trainees are learning, the trainer should regularly assess the progress of the course. If there are two or more trainers, during breaks they can help each other with honest and constructive feedback. Trainers should consider, for instance, whether the trainees are interested in the sessions, whether there has been any confusion that needs to be clarified, whether more time is needed to explain a particular issue, whether the momentum of the training suits the trainees (i.e. is the trainer moving through the topics too quickly or too slowly), and whether there are good group dynamics with the trainees interacting with each other.

For a training course that lasts more than half a day, it can be useful to hand out a short questionnaire at the end of the morning session to make sure that the training is meeting the trainees' expectations and to find out if any issues are unclear. The questionnaire should be short since you need the feedback before the trainees leave the room so that you can work on improvements to the training during the lunch break if necessary. An example of a **brief lunch-time questionnaire** to assess progress so far can be found in **Annex 2**.

If the training extends over several days, it is helpful to hand out a daily feedback form at the end of each day's training so that you can see what the trainees think of the training so far and whether any element of the training or the facilities needs improvement. An example of a **daily feedback form** is included in **Annex 2**. If the training has to do with the development of skills, return demonstrations should be integrated into the training. Peer assessments also offer students an opportunity to assess each other.

At the end of the training – whether it lasted one hour or one week – evaluations at level 1 and level 2 can be carried out.

LEVEL-1 EVALUATION: REACTION AND SATISFACTION

EVALUATION AT LEVEL 1

The purpose of this level of evaluation is to find out how the participants react to the training. Did they feel that it met their needs, was it organized efficiently, were the premises suitable? Basically, trainees should appreciate their period of training and should be satisfied with it.

LEVEL-1 EVALUATION METHODS MAY INCLUDE:

- Questionnaires
- Scorecharts
- Simple written exercises
- Feedback forms
- Interviews.

SOME TIPS:

- Always plan for evaluation when drawing up your training schedule.
- Take care not to make this final session too short.
- Keep the evaluation simple.
- Focus on issues that you can change or improve.
- Make sure the evaluation focuses on the learner.
- Avoid relying on one-word responses.

Evaluation of trainees' reactions is the most common form of training evaluation. It is the easiest way to collect information on the appropriateness of the training, and it is usually easy for the participants to complete. It also incurs little extra cost since it is normally incorporated into the training session.

Ideally, the end-of-training evaluation should simply be one part of an ongoing evaluation process that has continued throughout the training and that will be followed up when the trainees are back at their workplaces.

Any level-1 evaluation should consider not only the relevance of the training that has been given but also how it was organized, whether the facilities – and the facilitation – were appropriate, and whether the trainees were comfortable. This information is useful in identifying problems with the design or organization of the training programme and the facilities and methods used, and for making improvements. It is not likely to yield adequate feedback on which to make judgements about the value of the training course in changing or improving working methods.

The level-1 evaluation is also helpful in getting trainees to recall the different elements of the training that they have completed and reminding them that they are intended to apply what they have learned in their work.

Evaluation tips

Always plan for evaluation when you draw up your training schedule. The final session of a training course should be devoted to completion of the evaluation questionnaire or exercise, and this time should be marked on the agenda. Even a brief and rapid evaluation can be important. It gives immediate feedback on whether the training methods were appreciated, whether trainees' questions were answered, whether the content of the course was appropriate, and whether the course was organized properly. This level of evaluation also has strong potential (if the questions or statements are chosen carefully) to indicate whether parts of the training need improvement – particularly in terms of presentation style or clarity of explanation. People who respond positively to a training experience are more likely to sign up for training in future, and are more likely to speak positively of the experience to others.

Care must be taken not to make this final session too short. Evaluation consists not only of filling out a questionnaire. This session can also be a time for debriefing trainees, for open discussion and dialogue, and to share impressions and future plans. This period at the end of the training helps to ensure that a community of practice among trainees can be implemented for further sharing of experiences.

Focus on issues that you can change or improve. Evaluation feedback is intended to help you change things for the better. Consequently there is no point in collecting feedback if you are unable to do anything about it. For instance, it is valid to ask trainees whether they felt that the training room was suitable, but only if you can change the room if they say it wasn't suitable. If you have only the one room and no possibility of altering the layout or finding an alternative, you don't need feedback that you are going to have to ignore.

Keep the evaluation simple. It is important not to make the evaluation too complicated. Trainees should be able to complete it rapidly and hand it in before they leave the room. A form that requires more time to complete and is taken away may never be returned. Even simple online forms that can be completed later may require numerous reminders to be sent before they are submitted.

Make sure the evaluation focuses on the learner. The evaluation feedback at level 1 comes from the learner. Design the evaluation tool so that it is learner-friendly and enables trainees to express their own views. Thus, if you are writing an evaluation sheet or scorechart that has statements for trainees to agree or disagree with, or to give scores to, make sure that the statements reflect on the individual. For instance, rather than asking a trainee to score a statement such as “The course explained all the issues clearly”, use “The course enabled me to understand all the issues clearly”.

Avoid relying on one-word responses. Evaluation forms that ask “In one word, say what you felt about this session” are of limited help. Terms such as “Great”, “Brilliant”, “Helpful”, “Instructive” and “Worthwhile” may mean the same, or may not. It is usually better to provide a measurement scale from, say, 1 to 5 to enable trainees to express some sense of relative value.

Questionnaires/scorecharts

Because level-1 evaluation usually takes place at the end of a training session when the trainees are getting ready to leave, they must be designed to be completed quickly.

Questionnaires ask a series of questions about the training. A typical question would be “Was the training appropriate to your needs?” However, since there may be little time left at the end of the session, questions should be as focused as possible and not too open-ended. For instance, an open-ended question that asks “What are your views on this kind of training?” is too vague and either will be answered without any reflection or will not be answered at all. It is better to ask questions such as “Which part of the training did you like best?”

Include a question on the relevance of the training. This evaluation of trainees’ satisfaction is based on their initial reactions following the training. Nevertheless, even though it is too early to assess whether, and how, the training will change their job performance, it is worth asking at least one question about the relevance of the training to their work. For instance, ask them to answer the question “What will the training contribute to your work?” in no more than five or six words.

Always invite “any other comments” on the training. It is important to give trainees a chance to express their views if they feel strongly about an issue – such as the noise from the room next door or the lack of air-conditioning. However, many trainees will have nothing to say or may simply write “Great course” or “Thanks”. Do not expect much qualitative information from the comments – but get the air-conditioning fixed if it doesn’t work properly.

Although evaluation forms are often referred to as questionnaires, you do not need to include only questions to which trainees provide a written answer. Indeed, many evaluation forms consist of a variety of techniques for obtaining information. For instance, rather than always asking questions that require yes or no answers, you can use a measurement scale for responses. The measurement scale gives trainees a range of options from strong disagreement to strong agreement, including several stages in-between. A response on this kind of scale tends to give a better idea of what people really thought of the training.

You do not always need to name the intermediate stages between the two extremes. For instance, you might ask a question such as “How useful did you find the video presentation?” or “Was the video presentation useful?” The

answer scale could give a measure from 1 to 5 with only the two extremes named, as follows:

| | | | | | |
|----------------------|----------|----------|----------|----------|--------------------|
| No use at all | | | | | Very useful |
| 1 | 2 | 3 | 4 | 5 | |

The trainee indicates his/her response by circling one of the numbers on the scale.

You can also use measurement scales to assess responses to statements. For instance, rather than asking a question as to whether the slide presentation was useful, use a statement such as “I found the slide presentation useful” and ask the trainees to indicate their level of agreement with this statement on a scale of 1 to 5. In reality many so-called evaluation questionnaires are combinations of questions requiring brief answers, questions and statements requiring scores on a measurement scale, and space for trainees’ comments.

Scorecharts use measurement scales extensively. On a scorechart, a trainee is asked to assign scores in response to questions, statements, or different elements of the training (including its organization and facilities). Making a statement and asking trainees if they agree with it is a common approach on scorecharts. For instance, statements such as “The training will help me to do my work better” or “I enjoyed the role-playing exercise in session 2” can be scored according to a measurement scale.

Each option on the measurement scale has a number to give a sense of the range between the extremes of strong disagreement and strong agreement, as follows:

| | | | | |
|--------------------------|-----------------|----------------|--------------|-----------------------|
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |

Measurement scales should have an odd number of points (3, 5, 7 or 9) so that there is an obvious mid-point. More than 5 options is often too many, 3 is usually too few. Use 1 as the low rating and 5 (or more) as the high rating in all your measurement scales. Introducing a scale that goes from 1 (the best) to 5 (the worst) will only confuse people.

A scorechart may be used to see which sessions of the training, which topics, and even which facilitators, were most helpful (see **scorechart for trainees (1)** and **scorechart for trainees (2)** in **Annex 3**). As is the case with questionnaires, it is important to give trainees the opportunity to add “any other comments” if they wish. **Annex 3** also includes a **scorechart for facilitators** that was used at the end of a week-long residential course to see how their judgements matched those of the trainees.

Scorecharts do not necessarily have to use a numerical scoring system. Trainees can also assign stars (scoring from ★ to ★★★★★, for instance) or may indicate their preference by choosing a smiling face (☺) or a frowning one (☹). An example of an **evaluation scorechart using cartoon faces** is included in **Annex 3**.

Written exercises

To gather information in a little more depth, it is possible to ask trainees to complete a short written exercise based on their experience of the training. It would be wise not to make this too open-ended. Giving people a blank sheet of paper and asking them to write down their reactions to the training is likely to lead to more questions (What am I supposed to write? Can I write this, or that? What if I can't think of anything?) than answers.

Make the exercise as focused as possible. For instance, you might ask participants to write a brief description of the training for a colleague who is considering taking the same training and wants an honest opinion. However, it is important not to make the exercise too long or complex.

Feedback forms

Feedback forms usually include a variety of feedback techniques. They may include questions such as “Which part of the training did you like the best?”, or statements that trainees have to complete such as “The part of the training I liked the best was ...”, or statements that trainees agree or disagree with according to a measurement scale. **Examples of feedback forms** are included in **Annex 3**.

Trainees conducting the evaluation

Sometimes it is easier and more efficient to have the trainees conduct the evaluation. Have trainees assigned to groups and make them responsible for conducting the end-of-day evaluation. This way they are more engaged in the evaluation activity and provide fairer feedback to their peers. Another approach could be to have one trainee analyse and present the results of the feedback form. This makes evaluation more interactive and transparent.

Interviews

It is also possible to carry out interviews with trainees – with each one in person, with a random selection, in focus groups, or by telephone – using an interview guide that is based on the same sort of questions as you would have in the questionnaires, scorecharts or feedback forms. However, such an evaluation takes time and may not be justified solely to obtain trainees' reactions. Interviews are, of course, important at other levels of evaluation.

LEVEL-2 EVALUATION: LEARNING

EVALUATION AT LEVEL 2

The purpose of the evaluation should be to assess specific knowledge or skills – i.e. have the learning objectives have been achieved?

LEVEL-2 EVALUATION METHODS MAY INCLUDE:

- Verbal questions during the training
- Exercises to be completed during training, including role play and work-related exercises
- Written tests at the end of the training
- “Before and after” exercises
- Interviews.

SOME TIPS:

- Learning tests are appropriate to longer training courses.
- Focus on the learning objectives.

- Focus on what was covered by the training.
 - Ensure that the test is a valid measurement.
 - Do not use the test to rank participants.
 - Consider what to do in cases of failure.
-

Moving on from whether trainees liked the training, the second level of evaluation aims to find out what they learned. WHO is a knowledge-based organization that depends heavily on knowledge to do its work and achieve its goals. It is important to evaluate whether participants in WHO's training are indeed learning (and to review the training if they are not).

Ensuring that training does indeed result in learning is essential since knowledge, competence and expertise are very important – some would say the most important – assets of any company or organization. Additionally, in any situation of change – which is the case in most progressive organizations – learning is a core factor in making sure that change occurs and that it brings positive results. And, of course, learning is about overcoming problems and improving the efficiency of the work environment and the effectiveness of the work.

People who feel they have learned something useful during training are more likely to feel positively about the organization that provided that training, and are more likely to recommend the training to others.

Evaluation of learning can – indeed should – be done during the training by, for instance, asking questions to check for correct or incorrect answers, or by having the participants complete exercises. These exercises, whether verbal or printed, become a part of the training itself – ensuring that trainees understand one point before moving on to the next.

Evaluation at this level can of course also be done by means of a questionnaire or various exercises at the end of the training. And it is often done by a “before and after” exercise that assesses participants' knowledge of the training topic before the training begins and then assesses it again when the training is over. Trainers may wish to ask trainees to complete work-related exercises, including role play, to emphasize the relevance of the new knowledge to the work situation and to assess whether trainees have understood how the knowledge can be used.

Evaluation of learning is essential following training courses aimed at conveying skills or knowledge that the trainees must use in their jobs, courses that lead to certification or promotion, and courses that open up opportunities to pursue other courses. The written tests and exercises can be completed either in writing or electronically.

Evaluation tips for learning tests

Learning tests are appropriate to longer training courses. There is little point trying to evaluate learning after a two-hour training session. However, learning tests can be effectively used after courses that last at least half a day and are definitely recommended for courses that last for several days or that take a few hours each week over an extended period.

Focus on the learning objectives. This has double value in that it tests not only the trainees' learning but also whether the learning objective was adequately covered in the training. If you are unable to devise a test to measure a learning objective, consider changing the objective to one that can be measured.

Focus on what was covered by the training. This may seem an obvious statement, but it is important to remember that what is being tested is not overall knowledge of a particular topic or experience in a particular skill but whether the training on that topic or skill was effective. We are not testing how well informed the trainees are but whether they have learned from the training they have received.

Ensure that the test is a valid measurement. Make sure that the test really does measure what it is supposed to measure, that your expected responses are correct and that the marking is accurate. This is especially important if success in the test may lead to a promotion or pay rise, or if the results may be challenged.

The test is not intended to rank participants. The purpose of the test is to find out whether or not trainees have reached the desired minimum standard of learning as a result of the training they have received; it is not intended to rank the trainees from best to worst.

Consider what to do in cases of failure. However good the training, it is always possible that some trainees may not learn what they are supposed to. What do you do if a trainee has poor marks in a learning test following a training course? Will there be consequences for that person, was the trainee unsuited to the training, was the course inappropriate or flawed, or was your evaluation faulty? The reason for the failure should be identified and if there is a problem with the course or the evaluation it should be corrected. Special attention should be paid to gearing courses to the persons who attend them, and conversely to selecting trainees carefully for the courses they attend. Training evaluations are not intended as an excuse for firing unsuitable staff.

Written tests

The commonest form of learning test is a written test that is completed by means of a form that may be either on paper or on a computer. Many written tests include questions that require brief responses (usually just one or two words), questions with multiple-choice answers from which the trainee is asked to choose one, or questions that require the answer “yes” or “no”.

Annex 4 includes a **written test in questionnaire format** for evaluating at level 2.

If a written test is the evaluation method that you choose (and it is probably the easiest to administer) make sure that the test is not too complex. This does not mean you should ask only easy questions, but rather that the questions should be easy to understand and should not require complicated answers. It also means that the test should not take too long to complete. For a course stretching over several days, a level-2 evaluation of 30 minutes should be long enough. For a short training session of half a day, it should take no more than 10 minutes to complete the test.

It is important to ensure that there is one clear answer to each question. In other words, one should avoid questions that could potentially have more than one answer and make sure that multiple-choice answers include choices that are not too similar to each other.

It may also be necessary for the trainees to have supervision as they take the test. This will help to ensure that they work on the test individually and not in pairs or groups. This may seem a heavy-handed approach to some, so it may be necessary to explain that the aim of the test is not to judge anyone but to assess what each individual has learned for the purpose of evaluating

the training and improving it if necessary. Once again, it is important that the trainees understand the evaluation framework and that they are told before the training begins that they will be tested on their learning once the training is over.

It is also possible to use a “self-report” written test that requires the trainees to describe what they have learned and how they intend to put it into practice in their work. **Annex 4** also includes **a brief (5-point) questionnaire** that can be used to get trainees to put down in writing what they have learned, what value it has for them, and how they intend to use it. While the main purpose of a level-2 evaluation is to assess what trainees have learned during the training, a self-report description of how they will use their learning is a helpful guide for evaluations at levels 3 and 4 as well.

Pre- and post-testing (“before and after” exercises)

These are also written tests, but the difference is that these tests are administered both before and after the training. The idea of a “before and after” exercise is to find out what trainees know about a topic before training begins, and then to establish how much they learn from the training. While trainees may have differing levels of knowledge before the training about the topic or task to be addressed, the aim of the training should be to bring them all to a similar level of knowledge or skill by the time the training ends. Trainees often find that a “before and after” exercise is useful to them personally as it shows how their knowledge has grown and how their attitudes to certain issues have changed.

The questions in the pre-test and the post-test should be identical, but displayed in a different order. The test may consist of a list of questions to which the trainee provides the answers, or a series of questions with multiple-choice answers. One popular way to do pre- and post-testing is to give the trainees a brief case study (such as a description of a patient with certain symptoms, or an outline of a difficult personnel situation) and ask them how they would deal with the situation. The intention should be that the training will have given the trainees additional skills or knowledge to enable them to provide the correct response afterwards. An **example of a pre-and post-test** can be found in **Annex 4**.

Interviews

Interviews are more often used in level-3 and level-4 evaluations than at level 2. However, interviews can in principle be used at any level. The **brief (5-point) questionnaire** in **Annex 4**, referred to above as the basis for a self-report written test, may also be used as the basis for an interview. Interviews may of course include more specific questions than those given in the example in **Annex 4**.

When conducting learning evaluation interviews with trainees, it is important to ensure that the same basic questions are asked of all interviewees. Depending on the initial responses, probing questions may need to be asked to elicit more information about what has been learned. Learning evaluation interviews will need to be conducted by a skilled interviewer.

Role play

Role play enables trainees to practice a new skill or technique that they have learned. During a training course, role play is often used to enable trainees to experience first-hand how the new skill is applied. Role play may also be used after the training to evaluate how trainees put into practice their new skill.

In a role play, a trainee acts out a role according to specific instructions in order to achieve a required conclusion. Other participants (usually other trainees) in the role play respond or react in a variety of ways and the test is whether – and how – the trainee uses the new skill or technique to handle the situation and reach the specified conclusion.

The idea of the role play is to simulate a real situation in a non-threatening way. Involving trained role-players can make the situation more real. Role play is mostly used for situations that involve supervisory skills, communication and personal relations. Topics for role play might include a manager who has to apply specific newly-learned techniques in dealing with a personnel problem, or a health worker who has to demonstrate the use of new procedures when providing advice or treatment.

If role play is to be used as a means of evaluation at level 2, the accuracy and comparability of the results can be improved by using a standardized assessment grid. In this way, all trainees are evaluated according to the same standards.

Other work-related exercises

While role play attempts to create a situation that a trainee may have to face with the new skills that he or she has learned, a more realistic environment can be achieved by asking the trainee to apply the new learning in the workplace – or at least in a simulated workplace. For instance, a health worker may be asked to demonstrate how he or she would apply new procedures (though with patients who know that this is a test), or an administrator may be asked to show how behavioural skills can be used with staff.

In other cases, a trainee may be given a case study to deal with. In the case of health workers, this could mean that they are asked to demonstrate or explain how – using a volunteer patient – they would deal with a patient with a particular case history. A written version of this exercise may involve the written case study being given to the trainee who then has to write an explanation of what his or her response would be.

In yet other case – particularly when the training involved management skills – a trainee may be given a set of tasks to perform (using the new skills) within a specific timeframe. Sometimes this exercise is started by sitting the trainee at a desk with an in-tray that holds a series of memos or documents for the trainee to deal with. In these work-related exercises, a standardized assessment grid for marking the results will help make the evaluations comparable.

The evaluation tools described above can be adapted for use in electronic form. Low-cost softwares (e.g. Eluminate, Skype, Adobe) allow online participation with several trainees in different locations. Trainees may be given a limited time in which to solve a problem, or they can share a simulation exercise with real-time interaction, find common solutions, or develop joint strategies. The format of the exercise and questions should be adapted to the local infrastructure (power, computer, Internet connectivity) and delivered in an alternative format (CD, USB key, paper) in case of a failure of the system.

The analysis of evaluation results will be carried out much faster if done electronically, thus providing the feedback to trainees much faster too.

LEVEL-3 EVALUATION: BEHAVIOUR

EVALUATION AT LEVEL 3

The purpose of a level-3 evaluation is to assess to what extent the trainee is applying the new knowledge and skills in the workplace – in other words, has the instructional goal been achieved?

LEVEL-3 EVALUATION METHODS MAY INCLUDE:

- Surveys and questionnaires
- Follow-up interviews (with both the trainee and the supervisor)
- Focus groups
- Follow-up training sessions
- Work assignments based on the training
- Action plans for change
- On-the-job observation by an independent observer.

SOME TIPS:

- Before you evaluate, make sure you know what you are looking for.
- Give yourself time to evaluate.
- Make the trainee feel at ease.
- Seek objective, not subjective, feedback.
- Give the trainee time to explain if new skills are not being applied.
- Trainees responses should be given in confidence. Make sure the evaluation feeds back into the training.
- Be ready to find some changes you were not expecting.

While work-related exercises may be used in a level-2 evaluation, here at level 3 the focus is on the real work environment. Level-3 evaluations look at the extent to which the knowledge, skills and attitudes acquired during the training are being put into practice.

Evaluations at levels 1 and 2 happen at the time of the training (or sometimes immediately afterwards). At level 3, the evaluation takes place at a later time (possibly several months later) when the trainee is doing those things that the training was intended to help him or her do better. Trainees should of course already be prepared for this level of evaluation.

The framework of evaluation should have been explained to trainees before the training began, and during the training itself – as information, skills and behaviours were taught – there should have been discussion of how these would be put into practice on the job. The training should also have included practice exercises.

Because this evaluation is done separately from the training, it requires a separate intervention. This takes time and money, which is perhaps why on-the-job evaluation is performed less often than the evaluations of levels 1 and 2. However, finding out whether learning is being put into practice (which was the purpose of the training in the first place) is essential.

While the delivery of the training may have been satisfactory, and while trainees may have shown at the end of the training course that they had learned what they were supposed to, it is important to assess to what extent the learning has been translated into changed behaviour.

The easiest way to obtain data on whether the training has led to change in practice is to ask those who are involved – i.e. the trainee who is supposed to be putting the learning into practice and the supervisor who is responsible for ensuring that it is done. Asking the trainee alone is probably not sufficient. A focus group can gather together the participants of the training at a later date at which they can discuss their progress in implementing their new knowledge and skills (and the obstacles to doing so).

A follow-up training session is another option. In this case, the original training programme is scheduled as having two parts – the original (main) training part plus a refresher/follow-up session perhaps three months later. The fact that the follow-up session is scheduled as part of the training right from the beginning means that trainees will be expected to attend, their supervisors will be expected to allow them to do so, and the evaluation becomes an integral part of the training (as at levels 1 and 2).

Some employers have tried evaluating at level 3 on the basis of specific work assignments that have to be completed (with forms filled out by the trainee and the supervisor). A more common approach is to draw up an “action plan” with the trainee and supervisor for implementation of the new knowledge and skills, or their integration into the work processes, again with forms to be completed as stages of implementation are passed.

On-the-job observation by an independent observer is a less popular method – not because it does not work but because it can be costly and may create an artificial situation for observation. Of course, the observer does not have to be physically present if there are good video facilities and Internet connectivity. This happens currently for call platforms where quality evaluation is in place to ensure that responses are correct and users are satisfied.

In surgery practice training, evaluation is conducted at the workplace using robots and video systems. This lowers costs drastically and ensures that the situation is as real as possible. Observation can thus take place during the practice (real time) or afterwards, depending on the availability of the evaluators. Another advantage is that trainees can benefit from the guidance and instructions of the best specialists and experts even if they are at a distance.

Annex 5 includes samples of a variety of tools for evaluating changes in behaviour and performance in the workplace after training. The questionnaires and reports on work assignments can be completed either in writing or electronically.

When supervisors and managers are being trained, useful sources of information are interviews with, or questionnaires completed by, their subordinates. These are the people who can tell you if supervisors have got better at supervising and managers have got better at managing. However, this method is rarely used since it is often considered that the feedback may be influenced by bias.

Tips for evaluating behaviour

Before you evaluate, make sure you know what you are looking for. Effective behaviour evaluation, which will be carried out some months after the training, should look for very specific behaviours based on the instructional goals and/or competency statements.

Give yourself time to evaluate. A rushed evaluation is often a waste of time. Behaviour often varies according to other work pressures, and even the time of day. A brief snapshot of behaviour may give you a false picture of reality.

Make the trainee feel at ease. Although the evaluation is looking at how the trainee performs at work, the purpose is not to judge the trainee but to measure the effectiveness of the training in changing behaviour. Make this point clear to the trainee and his/her colleagues and supervisor.

Seek objective, not subjective, feedback. This is easier said than done and obtaining 100% objective feedback may rarely be possible. However, questions should as far as possible be designed to eliminate subjective responses and encourage objective ones.

Give the trainee time to explain if new skills are not being applied. Sometimes an evaluation may reveal that a trainee is not using some (or even all) of the knowledge, skills or behaviours that have been communicated during the training. Allow time for the trainee to explain why. Possible reasons may include insufficient mastery of what has been taught in the training (though if this is the case it should have become clear during the training itself), lack of practice, the previous methods work better (this should have been checked in a pilot-test of the new methods), a change in work priorities since the training, or various other personal reasons.

Trainees' responses should be given in confidence. If questionnaires are given to a group of trainees in one location, it is usually best to make them anonymous unless there are specific reasons for the individuals to be identified.

Make sure the evaluation feeds back into the training. When evaluations of reaction and learning are carried out just after training, this is often done by the trainers and facilitators who learn immediately about problems and find it relatively easy to adjust the content and approaches of the next training session. Because of the time lapse after training, feedback on behaviour may often be obtained by someone else. Make sure that the feedback is used to improve the training.

Be ready to find some changes you were not expecting. New skills acquired and new knowledge may lead to changes in behaviour and performance that were not foreseen. Such changes are often positive, but not always. Unforeseen changes are not necessarily directly due to the training event in itself; they may be due to the social environment, the culture, the work environment or a range of other factors. But the feedback about unforeseen changes is important because training must always take those other background factors into account if it is to be effective.

Surveys and questionnaires

Even a simple questionnaire sent out as follow-up to a training session can yield information that will be useful for improving training in future. **Annex 5** contains, for instance, a **six-point questionnaire** sent to participants in a training course six weeks after they attended a training workshop. It is far from ideal in assessing how work performance may have changed, but the feedback was useful in making adjustments to future workshops and to the documentation provided to trainees.

Annex 5 also contains a more **detailed “self assessment” questionnaire** focusing on work-related behaviour and performance following training. This particular questionnaire was designed to evaluate trainees' competencies in field epidemiology. The trainees were part of a relatively long (two-year) structured programme that involved both formal training sessions and on-the-job practice. The combination of formal training, post-training coaching

and follow-up is not only more likely to produce better results than a one-off workshop but can also be evaluated more accurately.

Any questionnaire or feedback form that relates to behaviour and work performance should be based on the original instructional goals and/or competency statements: are they being put into practice and what results are they having? At the same time, the questionnaire must give the trainee the chance to report on behaviours that were not included in the learning objectives. A detailed **questionnaire that was designed to test the effectiveness of management training in changing work behaviours** is included in **Annex 5**.

Follow-up interviews

Interviews tend to gather more information than questionnaires. It is sometimes the case that questions in questionnaires may be misunderstood, or the response may be poorly expressed, but it is too late to do anything about this when the responses are analysed later. If a response in an interview is vague or unclear, the interviewer can probe for more detail until there is a clear answer.

The disadvantage of an interview is that it can be time-consuming. In some cases, interview responses may be more subjective than questionnaire responses, so interviewers need to guard against this. While interview responses may include opinionated comment, and even trainee attempts to evaluate the training, the initial questions should focus on obtaining factual answers. (Probing questions may seek more qualitative information.) A list of **sample questions for a level-3 interview evaluation** is included in **Annex 5**.

It is also possible to ask a trainee's supervisor to provide feedback on the extent to which training has had an impact on performance at work. If all the trainees are supervised by the same person, there is a reasonable chance that similar measures of success or failure will be used. However, if trainees have different supervisors it may be difficult to compare results. An example of **a performance evaluation form for completion by supervisors** is included in **Annex 5**.

Focus groups

While interviews take up time since they are repeated with each trainee, focus groups are a more economical way of finding out how trainees are performing (or how they say they are performing). A focus group also has the advantage of being a forum for sharing experiences and views. Thus, one participant in a focus group may mention a specific change that the training has helped bring about, and another participant – who may not have considered that change – realizes that it is possible. Focus groups are a convenient evaluation technique to use during follow-up training sessions, though otherwise they may not be easy to organize.

One disadvantage of a focus group is that it may not be possible to ask a lot of probing questions because of the number of people in the group. Also, sometimes a person who might have spoken at length during an interview may be inhibited from expressing his or her views in the presence of others in a focus group.

This is not a manual on focus groups, but it must be remembered that moderating a focus group requires certain skills and techniques for essentials such as keeping the group on track, ensuring that shy personalities participate and

that strong ones do not dominate, and summarizing what has been said so that everyone is clear about it.

Follow-up training sessions

Follow-up training sessions probably should be much more than an option. Since learning is an ongoing process that does not stop when the training workshop ends, many training specialists recommend that training courses should by default have at least two parts or even more.

Follow-up training, coaching on the job, and behaviour evaluation are all known to be key to effective learning yet are often neglected because of the time, effort and money it takes to organize them. It is strongly recommended to plan training in terms of multiple sessions with, say, three-month work periods in-between. While the initial training workshop might be the longer formal training, the second (and subsequent) sessions should be considered as integral to the overall training course and essential to the overall learning experience.

If the knowledge and skills that are learned during the initial training are subsequently put into practice in the work environment, trainees will share their experiences during the second training session and will learn from each other's successes and mistakes. It will also be an opportunity to review some of the initial training (especially if trainees report that some of the skills have not worked as well as they would have liked), to examine obstacles to implementing the new skills, and to learn advanced techniques. During follow-up training sessions it is relatively easy to organize a focus group discussion to explore these issues.

Work assignments and action plans

When trainees have been practising their new skills for a few weeks or months, specific follow-up assignments can be given to them. Such assignments should be based on the training they have received and on the learning objectives of that training. Trainees thus apply their new knowledge and skills to a specific task in the workplace and then report back according to an agreed format. Reports from all the trainees can be summarized if they are each given the same assignment. Work assignments, of course, need the approval – and involvement – of supervisors. Such assignments tend to be more appropriate when there is going to be further training, possibly a follow-up session, in the future.

While work assignments usually consist of completing a task or reaching a goal, action plans are more detailed in that they lay out the steps to be followed. Action plans are usually developed within the context of the training programme, with the trainee agreeing how he or she will change behaviour and achieve a certain measure of success in the work environment. The supervisor's involvement is essential in drawing up the action plans and is a key factor in applying the learning objectives in the workplace. At a later stage, a review of work records and reports on implementation of the action plan can provide more information about the trainee's behaviour in the workplace

Annex 5 includes a sample of a **short form used for drawing up action plans** during a training workshop. A further example in **Annex 5** is **an action plan (or workplan as it is called in this case) used in a field epidemiology training programme**.

On-the-job observation

This kind of evaluation is not limited to industrial settings. It can be used in any setting where people have to carry out a set of actions, or duties, as a part of their job. Following training in new procedures in a medical setting, for instance, on-the-job observation could be an appropriate evaluation tool.

Some people dislike on-the-job observation because it may seem like snooping on what a person is doing. Some people say this method is most effective when the observer cannot be seen, but secret observation is not recommended due to potential legal problems. There are, however, two ways in which on-the-job observation can be carried out without too much difficulty – continuing performance evaluation by the supervisor and a dedicated observation session carried out by an independent observer.

Continued performance evaluation by the supervisor is usually the better of these two options. The trainee and supervisor can meet regularly to discuss progress and to complete a progress form that both of them sign. This approach should ideally be seen in the context of coaching by the supervisor. It can be supplemented, if appropriate, by data from record sheets relating to the job – such as the number of consultations with patients.

Observation by an independent observer should also be supplemented by in-house records if they are available. Above all, the trainee should be advised in advance that the observation will take place and should be assured that it is being carried out as an evaluation of the effectiveness of training and not of the suitability of the trainee for his or her job. A disadvantage with this method is that some trainees may become particularly nervous when they know they are to be observed and may not function optimally.

LEVEL-4 EVALUATION: RESULTS**EVALUATION AT LEVEL 4**

These evaluations focus on the improvements that are expected in the team, programme or other context in which the trainee works.

LEVEL-4 EVALUATION METHODS MAY INCLUDE:

- Follow-up questionnaires at programme level
- Follow-up training sessions
- Programme assignments
- Programme performance monitoring
- Action plans
- Focus groups
- Simulation exercises.

SOME TIPS:

- Have realistic expectations.
- Not all training can be evaluated at level 4.
- Remember that you are evaluating the training that was given.
- Some of the data you need may already be in the files.
- Be honest with yourself.
- Look for evidence, not for proof.
- Baseline data are essential.

Evaluation at level 4 does not look only at the effect of training on one person; rather, a level-4 evaluation means assessing the effects of the training (of one or more trainees) on the work or output of the team, the project or the area of work of an organization. Assessing what the effect of training is and what significance it has at this level is often neglected, although there is no need for it to be. Although not all training courses need to be evaluated at this level, it is necessary to plan for this level of evaluation for strategic training that involves a large number of trainees and a considerable amount of budget.

If training improves an employee's performance, then once a critical mass of employees has been trained one should be able to show an improvement in the performance of the team or project. But how?

In a commercial setting one can look at sales figures, customer complaints, operating costs, or workflow efficiency. In the WHO context, these factors might still apply in terms of training for the staff of its publishing programme or its management support services. However, when the technical programmes of WHO provide training to country-level personnel, one may need to focus evaluation on other outputs. For instance: has the number of children vaccinated increased in the trainee's project area, have the team's new procedures led to more young people seeking contraceptive advice, has the new approach of the ministry's department led to greater public pressure for smoke-free environments? These are typically the kind of indicators that the related public health programmes are monitoring.

In WHO, training usually takes place within the context of a department or programme which has performance indicators. Consequently an evaluation at level 4 should aim to assess the impact of the training in relation to the achievement of those indicators (see **Fig. 2**). Any such evaluation should be conducted by persons who are objective and have not been involved in the training.

Annex 6 includes examples of several feedback forms that focus on evaluating the effects of training at organizational or project level. Questionnaires and other evaluation tools can be completed either in writing or electronically.

Some of the tools that can be used in an evaluation at level 4 are similar to those used at level 3 but here they are applied to wider impact on the team or project rather than to one person's work performance. However, since level-3 and level-4 evaluations frequently use similar tools, and since the focus of evaluation is a trainee's work performance (level 3) and the trainee's team's work performance (level 4), it is often practical to use the same tools to gather information for both levels of evaluation. Although we distinguish between evaluations at levels 3 and 4 in order to be clear about what impact we are looking for, it may be practical for a follow-up questionnaire or other evaluation tool to include questions that gather feedback at both levels.

The question may be asked as to whether a level-4 evaluation is always worthwhile. After all, if the training has been evaluated at level 3 and the trainees are putting their new learning into practice, isn't that enough? Sometimes yes – particularly, for instance, if the training is intended to introduce a new administrative or personnel procedure that has already proved its worth elsewhere.

A pilot training course certainly needs full evaluation at as many levels as possible, as does continuing training (over a period of weeks or longer). It has to be remembered that all training costs money, so if the outcome of the training

does not help a department or programme to produce better results and meet its indicators – or at least provide staff with opportunities for more efficient or more economical ways of producing those results – its purpose could be questioned.

Evaluation tips

Have realistic expectations. Evaluation at this level is normally helpful only when a majority of staff in a particular team or organization have received the same, or similar, training.

Not all training can be evaluated at level 4. For instance, training that aimed to change attitudes may improve employee relations but may not affect organizational output.

Remember that you are evaluating the training that was given. Evaluation exercises at level 4 can be broad-ranging. There may be a tendency to examine all kinds of organizational or project inputs and outputs. This is all very well, but the aim is to assess what impact training has had on the specific competency domain that was identified during the planning process.

Some of the data you need may already be in the files. Level-4 evaluation often involves compiling numbers – on productivity, expenditure control, number of treated patients, outreach to new populations, and a range of other topics that the project aims to achieve. Many of these numbers may already have been compiled by the monitoring tools of the programme.

Be honest with yourself. By the time a level-4 evaluation is carried out – maybe 12 months after the training took place – the area you are looking at will have undergone impacts of many kinds. For all kinds of reasons, there may be no discernible impact of the training at this level. As at level 3, it is important to give trainees an opportunity to explain why some of their training has not been put into proactive.

Look for evidence, not for proof. Bearing in mind the previous point, priorities may have changed, old staff may have left and new ones arrived, and even organizational policies may be different. However, the evaluation is not looking for cast-iron proof that training had an impact. What you are seeking are pieces of evidence that together indicate that an impact is likely.

Baseline data are essential. If you are looking for changes in organizational or project output due to training, you will need data on the area of focus prior to the training. This applies whatever means of evaluation you choose.

Follow-up questionnaires

As at other levels of evaluation, questionnaires and feedback forms can also be used at level 4. It is important to make these as objective as possible, though there is often likely to be an element of subjectivity. After all, a questionnaire given to a former trainee will elicit responses from a trainee's perspective of organizational impact. An example of a **business-oriented trainee evaluation questionnaire for use at level 4** is included in **Annex 6**.

Questionnaires about the impact of the training can also be given to supervisors or to others who are familiar with the content of the training – particularly if they were also involved in the level-3 evaluation.

Follow-up training sessions

These are appropriate if a group of people working on the same project or in the same area of an organization have all completed the training. As at level 3 for the individual trainee, such follow-up training will be a combination of reviewing what was learned during the original training and sharing feedback on how programmatic impact was (or was not) achieved. It will also be an opportunity for proposing ways to achieve it in the future.

Programme assignments/action plans

Just as one can give work assignments to an individual trainee, there can also be a programme assignment given to a group of trainees who work on the same project. Specific level-4 goals can be set during the initial training, or during the level-3 follow-up training when the trainees gather to discuss their individual progress.

Programme performance monitoring

Performance monitoring of an organizational department may be easiest to achieve in an institution with sophisticated personnel and management structures in place and where institutional progress is constantly monitored. However, it can also be done quite effectively with even isolated projects so long as there are baseline data available, monitoring of results takes place and adequate records are kept.

One way to assess this kind of impact is to take a measure of the programme's performance before training and to assume that, without training, the pre-training trends will continue. Then, after training, the same measure of performance is used and any improvement in performance is attributed to the training. Interviews may also be conducted with partners of the programme.

While performance monitoring at level 3 can in principle be carried out with any trainee to see whether the learning is being put into practice, level-4 performance monitoring is best carried out after training that was specifically intended to increase output or efficiency. Level-4 performance monitoring can also be carried out where one project team receives training and another team in a similar situation does not (control group). The performance of the two groups (one trained and one untrained) is then compared to assess the possible impact of the training. Comparison with a control group is probably the most effective way to estimate the effects of training on results at project level.

Focus groups

During an evaluation at level 4, a focus group of persons with different responsibilities within the project or organization is useful to try to identify the effects of the training on results as contrasted with the effects of other influences. Trainees, supervisors, team leaders and managers with a broader knowledge of the organization can give their views on the different elements that have had an impact on results over the past year.

In a focus group for a field project at this level, there will need to be persons who understand the local context and environment in detail – including social, cultural and political factors that may have influenced the results in some way.

Simulation exercise

Training in certain skills and techniques can be assessed at level 4 with a simulation exercise. While a level-3 evaluation may involve observing one trainee putting his or her skills into practice, a simulation exercise involves the entire team or project staff. Appropriate observers need to be found who understand the topic well and who are familiar with performing the tasks that are to be evaluated in the exercise.

LEVEL-5 EVALUATION: RETURN ON INVESTMENT

EVALUATION AT LEVEL 5

Evaluations at this level should focus on return on investment or return on expectations, and should specify what resources are being saved, or lives saved, or in which way health is being improved.

SOME TIPS:

- An evaluation at level 5 is not appropriate for all training.
- An evaluation at level 5 depends on data from lower levels.
- Before evaluation, ask why the training was needed?
- The training must be applied and supported in the workplace.
- Networking and information-sharing are also outcomes of training.
- Do not ignore return-on-investment evaluation, even if results are not 100% conclusive.

In a commercial environment, an evaluation at level 5 relates to the financial return on the investment in training. Since the ultimate goal of a company is to make a profit, the level-5 evaluation measures whether the company is better-off financially as a result of the training. The question is not whether the training has covered its costs but whether it has contributed to the company's profitability (or will do so in the future).

Such an evaluation does not apply to training organized by WHO – either for its own staff or for persons in health-related occupations. (Training in fundraising for health could certainly be expected to yield a financial return on investment, but that is not the prime concern here.) However, WHO has an overall goal. The WHO constitution defines this as “the attainment by all peoples of the highest possible level of health”.

If level-3 evaluation assesses whether the trainee is putting the training into practice, and if level-4 evaluation assesses to what extent the changed or improved practice is enhancing the work of the team or department, then the level-5 evaluation should be looking at whether these behaviours (level 3) and results (level 4) are actually making a difference to the achievement of the overall organizational goal.

WHO's technical departments have objectives relating to the reduction of various diseases and disabilities, or to the promotion of health and healthy living. But is it possible for WHO training to be evaluated in terms of health gains? Some suggest that, rather than looking for a return on investment, there is an argument for trying to measure the “return on expectations”¹. After all,

¹ The “foundational principles” of Kirkpatrick's evaluation model assert that “return on expectations is the ultimate indicator of value” (see <http://www.kirkpatrickpartners.com/OurPhilosophy/tabid/66/Default.aspx>).

if training does not ultimately contribute to the attainment of better health – by making actions that achieve it more likely, more effective, more accessible, more frequent, or more efficient – then the question must be asked as to whether the training is worthwhile.

Training is intended to improve trainees' work performance which then helps achieve team or departmental objectives which in turn helps reach institutional or programmatic goals. Thus, when seeking a return on expectations, the training could be measured in terms of the extent to which it helps meet the indicators for that goal. For instance, training carried out by WHO's influenza programme should be able to show in a level-5 "return on expectations" evaluation that it contributes in some way and in some places to the reduction of ill-health from influenza.

Of course, to show that training has resulted in a "return on expectations", one needs to know what was expected. Thus evaluation at level 5 – as at levels 3 and 4 – depends on careful planning of the training design, with clear definitions of competencies, instructional goals and learning objectives.

Evaluation at level 5 is not a precise science. Evaluating the effects of training on an individual's performance is not especially difficult, but to assess the effects across an entire organization or a global health campaign is much more challenging. Variations in management, structural changes, variations in responsibilities and roles – these and external factors complicate the process of assessing accountability.

Nevertheless, a number of organizations have attempted to evaluate training at level 5. For instance, an article in *Eurosurveillance* showed the results of an analysis of the activities and outputs of fellows of the European Programme for Intervention Epidemiology Training (EPIET) and revealed the extent to which these contributed to the public health workforce in the European Union and Norway.¹ The study showed that a high proportion (90%) of the fellows took up positions and remained employed in applied public health at regional, national or international levels.

No tools are recommended here for evaluation at level 5 in a WHO context. However, a number of general evaluation tips are given in case such an evaluation should be foreseen.

Evaluation tips

An evaluation at level 5 is not appropriate for all training. If better health is the return on investment we are looking for, disease-related programmes (backed up by reliable statistics) are more likely than others to show whether it has happened or not.

An evaluation at level 5 depends on data from lower levels. There is no point trying to evaluate the return on investment if you haven't already assessed how much trainees learned, how their behaviour has changed and what impact there has been on the team's performance.

Why was the training needed? Evaluation at this level is unlikely to show a return on investment unless the training was designed to meet a need, solve a problem, fill a gap or introduce a new requirement.

¹ Bosman A, Schimmer B, Coulombier D. Contribution of EPIET to public health workforce in the EU, 1995–2008. *Eurosurveillance* 2009, 14(43):Article 4.

The training must be applied and supported in the workplace. A course of a few days with no follow-up coaching, advice, support from the supervisor, or reviews to ensure that things are on track is unlikely to yield a return on investment.

Networking and information-sharing are also outcomes of training. They can provide a powerful return on investment in the long term as professionals often use networks to facilitate their future work, tasks and activities. New communication tools facilitate online networking and information-sharing. They shorten delays in finding appropriate information, responses, specialists and articles, and therefore contribute to work performance.

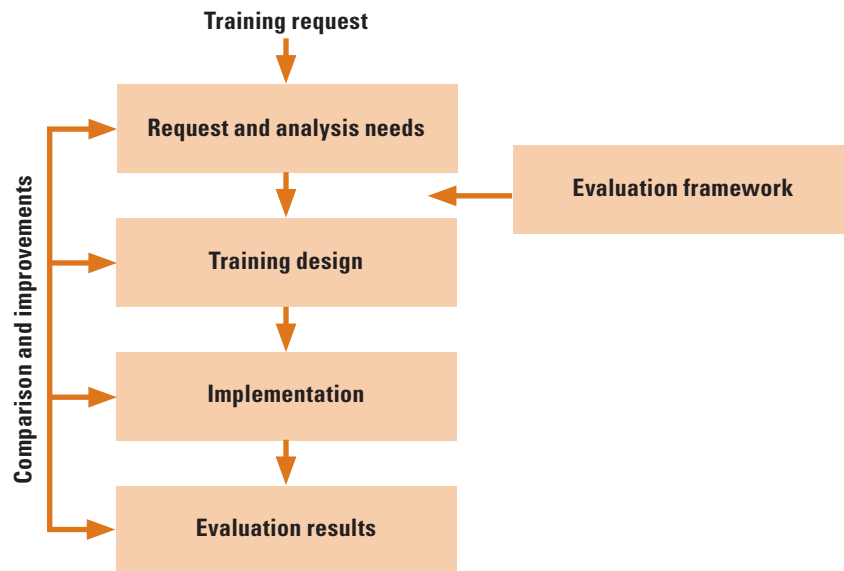
Do not ignore return-on-investment evaluation of training. It may not be easy, and the outcome will never be 100% conclusive, but conducting such an evaluation shows a willingness to be accountable for what you are doing. That willingness alone will earn trust and support.

Enhancing the impact of training

The best way to enhance the impact of training is to plan it well, organize it well, facilitate it well, and follow-up well.

For instance, before starting the training, there should be a careful analysis of needs and demand in order to define just what is required and what is appropriate. The training should be designed to meet specific needs and the trainees selected according to their ability to achieve the instructional goal and apply the competency following training.

Figure 3. Training design flow



A good “training design” is important. The training should both facilitate learning and promote the application of that learning. Training is more likely to have an impact if the trainees’ competencies are targeted. If a trainee does not have the competency required, then the instructional goal is much less likely to be reached.

As the overall goals and specific objective of the public health programme are noted, as the area of competency and instructional goal are defined, and as the learning objectives are specified, the framework for evaluation should also be planned. Having the evaluation framework in mind at the stage of training design helps one to assess what needs may arise as the training is implemented. In other words, if you know what you will be looking for when the trainees are back at work applying their new knowledge, skills and behaviours, you will be better able to ensure that the training helps them to succeed.

Learning activities should be:

- based on trainees’ previous knowledge and experience,
- learner-centred,

- relevant to trainees' work context,
- practical and goal-oriented.

Learning that is based on learning principles such as these has a greater chance of being retained by the trainee and applied in the work situation.

Implementing a training session requires good facilitation skills (i.e. the ability to get trainees involved in a learning exercise rather than just to teach them information). Trainees should understand what competencies are being targeted, what the instructional goal is, what the learning objectives are, and how the evaluation will take place – so that they can see the links between these elements.

Early in the training, trainees should be given an opportunity to consider – and explain – why they are following the training. Afterwards they can be asked to explain what they have learned, how they will use it, and how it may have an impact. They can even be asked to suggest what barriers to change they may encounter as they try to put their learning into practice.

Always evaluate the training – not just the trainees' reactions and learning but also their behaviour change on the job and the impact on the programme. Evaluation at different levels often inevitably focuses on the person who has been trained and the extent to which that person learns and then transfers that learning to the task in hand. Levels 2 and 3 of evaluation look specifically at these elements, and they are implicit in the other levels too.

However, some research suggests that as little as 8% of a training programme's outcome (in terms of transfer of knowledge to the workplace) is determined by the individual and what that person learns in the programme.¹ A much greater percentage (46%) of the outcome is determined by the organizational culture that trainees return to, and whether or not managers and peers are supportive of trainees making use of their new skills and knowledge.

The authors of the study concluded: "...training members of the organization to provide a supportive organizational transfer climate is just as important as training the trainee in the skills needed for the job."

A similar study states that "...interventions that target supervisors, coworkers, and other people who interact with trainees may yield the greatest dividends".²

Post-training evaluation at levels 3 and 4, with mentoring and follow-up training as appropriate, should be understood to be essential to any training programme. It is not possible to do this effectively without involvement of supervisors for, in effect; it is they who truly enhance the impact of training on the workplace.

¹ Rouiller JZ, Goldstein IL. The relationship between organisational transfer climate and positive transfer of training. *Human Resource Development Quarterly*, 1993, 4(4):377–390.

² Tracey JB, Tannenbaum SI, Kavanagh MJ. Applying trained skills on the job: the importance of the work environment. *Journal of Applied Psychology*, 1995, 80(2):239–252.

Conclusion

Most trainers and facilitators enjoy doing training. They like to know from their trainees whether they have learned things they didn't know before, whether the training was relevant to their work, and whether they appreciated it. Trainers and facilitators have a vested interest in improving a training session so that the trainees understand the subject better. Evaluation of training is one of the responsibilities of trainers.

Of course, evaluation – apart from that which takes place during a training session or immediately after it – does not always have to be done by the trainers themselves. Unfortunately, when training is understood to be a one-off session or workshop, the only evaluation to be done is usually that done by the trainers.

For a learning organization, learning is an ongoing process. A training workshop may be an intense learning experience but it should never be the only learning that is happening. People continue to learn throughout their working lives, but they will learn far more readily and more relevantly if they are trained, coached, given feedback, advised, encouraged, and if it is acknowledged that they are improving their work performance, that their team is improving its output, and that they are contributing to the achievement of a valued goal.

This manual is about evaluating training, and it contains a range of tools and suggestions for doing that evaluation at different levels. But unless training is seen as a continuing learning process that begins before the training session and continues long afterwards, there will never be much to evaluate. After all, a three-day training workshop with no follow-up is unlikely to have much impact on a programme goal five years later. However, an ongoing learning process, guided by evaluation at key stages, very likely will.

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Annexes

ANNEX 1

Learning objectives and competencies

Action words for learning objectives¹

| | Categories of learning | Action words |
|---|---|---|
| Simple  Complex | Knowledge Recall and memorization | list, define, tell, describe, identify, show, label, collect, examine, memorize, name, mention |
| | Comprehension Understand information; interpret information; order information and infer causes | classify, describe, discuss, explain, express, identify, indicate, locate, organize, recognize, report, restate, review, select, summarize, translate, narrate |
| | Application Use the knowledge to solve problems; use methods, theories in new situations | apply, choose, dramatize, employ, illustrate, interpret, modify, operate, practice, schedule, draw, solve, use, write |
| | Analysis See patterns; identify components | analyse, calculate, categorize, compare, contrast, criticize, diagram, differentiate, discriminate, distinguish, examine, experiment, question, support, test |
| | Synthesis Use old ideas to make new ones; relate knowledge from several areas | arrange, assemble, collect, compose, construct, create, design, develop, formulate, integrate, invent, manage, organize, plan, predict, prepare, propose, set up, write |
| | Evaluation Make judgements; compare ideas; make choices | argue, assess, choose, compare, conclude, convince, decide, defend, estimate, judge, predict, prioritize, rate, support, evaluate |

¹ Bloom B, ed. *Taxonomy of educational objectives. Handbook I: Cognitive domain*. New York, David McKay Company, Inc., 1956.

Sample indicators for learning objectives

| Competency indicators | | | |
|---|--|---------------------------------------|---|
| Domain | Learning objective/activity | Deliverable | √ |
| <ul style="list-style-type: none"> ■ Epidemiologic methods ■ Biostatistics ■ Computer technology | Field investigations of at least 2 acute problems such as an outbreak or an acute natural or human-caused disaster where protocols cannot be developed ahead of time | 2+ outbreak reports | |
| <ul style="list-style-type: none"> ■ Epidemiologic methods ■ Biostatistics ■ Computer technology | Participate in the design, management, data analysis and reporting of results from at least one field survey | Survey report | |
| <ul style="list-style-type: none"> ■ Epidemiologic methods | Develop and carry out a protocol-based field study using the appropriate design to approach the problem to be solved | Problem identification study protocol | |
| <ul style="list-style-type: none"> ■ Biostatistics ■ Computer technology | Determine sample size for a study | Study protocol | |
| <ul style="list-style-type: none"> ■ Public health surveillance ■ Computer skills | Analyse data from a surveillance system and write a surveillance summary for at least one disease or risk factor | Data analysis summary report | |
| <ul style="list-style-type: none"> ■ Public health surveillance | Conduct an evaluation of a surveillance system | Surveillance evaluation report | |
| <ul style="list-style-type: none"> ■ Laboratory & biosafety | Determine appropriate tests for a field investigation, including the type and quantity of specimens to collect | Field investigation report | |
| <ul style="list-style-type: none"> ■ Laboratory & biosafety | Participate in the appropriate collection & transportation of laboratory specimens and in the interpretation of their testing | Field investigation report | |
| <ul style="list-style-type: none"> ■ Communications | Present briefing to a decision-maker (MOH or politicians) on a health problem | Briefing summary | |
| <ul style="list-style-type: none"> ■ Communications | Prepare a manuscript suitable for publication in a peer-reviewed journal | Manuscript | |
| <ul style="list-style-type: none"> ■ Communications ■ Computer skills | Present a paper at a scientific conference | Abstract | |
| <ul style="list-style-type: none"> ■ Communications ■ Computer skills | Publish an article in a national or regional epidemiology bulletin | Bulletin article | |
| <ul style="list-style-type: none"> ■ Computer skills | Use the computer to graph and map the data from a surveillance system, survey, or other field investigation | Outbreak, surveillance report | |
| <ul style="list-style-type: none"> ■ Management | Design an epidemiologic study or survey to assess a health concern of public health importance to the country (gap analysis) | Problem statement | |
| <ul style="list-style-type: none"> ■ Management | Manage a field project such as an outbreak investigation or survey that is time limited and situational | Project workplan & budget | |
| <ul style="list-style-type: none"> ■ Management ■ Prevention effectiveness | Conduct or participate substantively in planning and development of scientifically sound community-based interventions | Project summary report | |
| <ul style="list-style-type: none"> ■ Prevention effectiveness | Conduct economic analysis of public health programme or project | Economic analysis report | |
| <ul style="list-style-type: none"> ■ Prevention effectiveness | Evaluation of community-based interventions | Evaluation report | |
| <ul style="list-style-type: none"> ■ Teaching, training, mentoring | Help teach a basic course in epidemiology (this could involve giving lectures, facilitating case studies and/or organizing and supervising a field exercise) | Summary of class evaluations | |
| <ul style="list-style-type: none"> ■ Epidemiology of disease & injury | Describe the epidemiology and control of diseases of national importance | Presentation or report | |

ANNEX 2

Tools for assessment as the training takes place

Lunchtime questionnaire

1. What have you learned so far in this training course that you did not know before it?
2. Of the topics dealt with so far in the training, what would you like to know more about?
3. What about the speed of the training? Is it:
 Too slow Too fast Just right
4. What did you like best about the morning session?
5. Is there anything the trainers can do to make the rest of the training more effective for you?

Daily feedback form (*for use when the training lasts several days*)

| Daily Feedback Form | |
|---|---|
| [Insert name of the training course] | |
| Name (<i>optional</i>) Date | |
| The important things I learned today were ... | The topics or issues that were not clear to me today were ... |
| Today, what impressed me or interested me deeply was ... (<i>please explain why</i>) | I should like the following topics to be discussed in this training or in future training ... |
| Today, what facilitated my learning was ... | Today, what hindered my learning was ... |
| My recommendations for tomorrow's training are ... | |

ANNEX 3

Level-1 evaluation tools

Level-1 scorechart for trainees (numerical) (1)

TRAINING WORKSHOP EVALUATION

Please indicate your agreement/disagreement with the statements below using the following scale:

- 1 = Strongly disagree 3 = Somewhat agree
2 = Somewhat disagree 4 = Strongly agree

| DESCRIPTION | YOUR SCORE |
|--|------------|
| ABOUT THE TRAINING | |
| 1. The training objectives set were made clear at the beginning of each activity | |
| 2. The training objectives have been achieved | |
| 3. The presentations were helpful for the participants' learning | |
| 4. The methods of training used during the workshop were appropriate | |
| 5. Training materials were consistent with the training objectives | |
| 6. Training materials were adequate | |
| 7. The training flowed in such a way that learning was enhanced | |
| 8. Time provided during the training to share trainer's experiences was adequate | |
| ABOUT THE PARTICIPANTS | |
| 9. Most participants were active in the discussion | |
| 10. Most participants enhanced my learning process | |
| 11. There was good collaboration in my group | |
| 12. Most of the participants were open to new ideas | |
| 13. I have had the opportunity to ask questions | |
| 14. I learned new things in the workshop | |
| 15. I shall be able to use the skills I have gained for improving my performance | |
| 16. My expectations were met | |
| ABOUT THE FACILITATORS | |
| 17. Good knowledge of the topic | |
| 18. Enough content presentation | |
| 19. Objective in discussing topics | |
| 20. Immediate response to changes in situation based on participants' needs | |
| 21. Appropriate teaching methodologies | |
| 22. Effective in motivating participants | |
| 23. Skilled in relating with participants | |
| 24. Good listener | |
| 25. There was good time management | |
| 26. Comments, insights, lessons learned on the whole training including how to improve future training: | |
| Thanks a lot!!!! | |

Level-1 scorechart for trainees (numerical) (2)

PARTICIPANTS' TRAINING EVALUATION

Instructions: For each component of the course, please select the score which best fits your rating. Comments are welcome. Thanks!

| COURSE | | | | | |
|--|-------------------|----------|-----|-------|----------------|
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| I had the prerequisite knowledge and skills for this course | 1 | 2 | 3 | 4 | 5 |
| The content is relevant to my work | 1 | 2 | 3 | 4 | 5 |
| The course met my expectations | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the course:</i> | | | | | |
| | | | | | |
| COURSE CONTENT AND ACTIVITIES | | | | | |
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The course content is consistent with the objectives | 1 | 2 | 3 | 4 | 5 |
| The course activities stimulated my learning | 1 | 2 | 3 | 4 | 5 |
| The content of the documents is clear | 1 | 2 | 3 | 4 | 5 |
| The content of the documents is adequate with the course content | 1 | 2 | 3 | 4 | 5 |
| The content of the documents is sufficient | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the content and the activities:</i> | | | | | |
| | | | | | |
| FACILITATION | | | | | |
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The facilitators were helpful for my learning process | 1 | 2 | 3 | 4 | 5 |
| The facilitators performed a good facilitation of the course | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the facilitation:</i> | | | | | |
| | | | | | |

| COURSE ENVIRONMENT AND ORGANIZATION | | | | | |
|---|--|----------|-----|-------|----------------|
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The training room was comfortable | 1 | 2 | 3 | 4 | 5 |
| The administrative support was helpful | 1 | 2 | 3 | 4 | 5 |
| The travel arrangements were well done | 1 | 2 | 3 | 4 | 5 |
| The venue and accommodation were comfortable | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the organization:</i> | | | | | |
| | | | | | |
| OVERALL COMMENTS | | | | | |
| In general, what worked well? | | | | | |
| In general, what didn't work well? | | | | | |
| What did you think about the length of the course: | <input type="checkbox"/> Too long <input type="checkbox"/> Just right <input type="checkbox"/> Too short | | | | |
| <i>Any other comments or suggestions you have will be gratefully appreciated:</i> | | | | | |
| | | | | | |

Level-1 scorechart for facilitators (numerical)

FACILITATORS' TRAINING EVALUATION

Instructions: For each component of the course, please select the score which best fits your rating. Comments are welcome. Thanks!

| COURSE | | | | | |
|--|-------------------|----------|-----|-------|----------------|
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The participants had the prerequisite knowledge and skills for this course | 1 | 2 | 3 | 4 | 5 |
| The content is relevant to their work | 1 | 2 | 3 | 4 | 5 |
| The course met their expectations | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the course:</i> | | | | | |
| | | | | | |
| COURSE CONTENT AND ACTIVITIES | | | | | |
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The course content is consistent with the objectives | 1 | 2 | 3 | 4 | 5 |
| The course activities stimulated the learning | 1 | 2 | 3 | 4 | 5 |
| The content of the documents is clear | 1 | 2 | 3 | 4 | 5 |
| The content of the documents is adequate with the course curriculum | 1 | 2 | 3 | 4 | 5 |
| The content of the documents is sufficient | 1 | 2 | 3 | 4 | 5 |
| The reading level of the curriculum is adapted to the audience | 1 | 2 | 3 | 4 | 5 |
| FACILITATION | | | | | |
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The facilitators were well prepared | 1 | 2 | 3 | 4 | 5 |
| The facilitators were helpful for the learning process | 1 | 2 | 3 | 4 | 5 |
| The facilitators performed a good facilitation of the course | 1 | 2 | 3 | 4 | 5 |
| COURSE ENVIRONMENT AND ORGANIZATION | | | | | |
| | STRONGLY DISAGREE | DISAGREE | +/- | AGREE | STRONGLY AGREE |
| The training room was comfortable | 1 | 2 | 3 | 4 | 5 |
| The administrative support was helpful | 1 | 2 | 3 | 4 | 5 |
| The travel arrangements were well done | 1 | 2 | 3 | 4 | 5 |
| The venue and accommodation were comfortable | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the organization and environment:</i> | | | | | |
| | | | | | |

| OVERALL COMMENTS | |
|---|--|
| In general, what worked well? | |
| In general, what didn't work well? | |
| What did you think about the length of the course: | <input type="checkbox"/> Too long <input type="checkbox"/> Just right <input type="checkbox"/> Too short |
| <i>Any other comments or suggestions you have will be gratefully appreciated:</i> | |
| | |

Level-1 scorechart for participants (faces)

Apa kabar Anda hari ini?

| Nama | Hari 1 | | Hari 2 | | Hari 3 | | Hari 4 | | Hari 5 |
|-----------|--------|-------|-------------|-------|--------|-------|--------|-------|--------|
| | Pagi | Siang | Sangat Baik | Siang | Pagi | Siang | Pagi | Siang | Pagi |
| Haha | - | 😊 | 😊 | 😊 | | | | | |
| Orang I | 😐 | 😊 | 😊 | 😊 | | | | | |
| bedu | - | 😊 | | | | | | | |
| BATMAN | 😊 | 😐 | 😊 | | | | | | |
| Me | - | 😊 | 😊 | 😊 | | | | | |
| Cimol | 😊 | 😊 | 😊 | 😊 | | | | | |
| UTA | 😊 | 😊 | 😊 | 😊 | 😊 | | | | |
| alias | 😊 | 😊 | 😊 | 😊 | 😊 | | | | |
| ABU NAWAS | 😐 | 😐 | 😐 | 😐 | | | | | |
| BARBIE | 😐 | 😐 | | | | | | | |
| DORA | 😊 | 😊 | 😊 | 😊 | 😊 | | | | |
| LOVE | - | - | 😊 | 😊 | | | | | |
| Meme | 😐 | 😊 | | | | | | | |
| L | 😐 | 😊 | 😊 | | | | | | |
| C | | | 😊 | 😊 | | | | | |

Sangat Baik
 Baik
 Biasa Saja
 Ngantuk
 Marah

Apa
 Nama Alias
 ANADITA

Level-1 feedback form (1)

END OF WORKSHOP EVALUATION

Date:

On a scale of 1–4, circle the one best answer that indicates your level of agreement.

| | | | | |
|--|-----------------|---|---|---------------------|
| 1. To what extent, before coming to the workshop, were you informed about the purpose of this workshop? | Not at all 1 | 2 | 3 | Completely 4 |
| 2. Was the workshop content consistent with the stated objectives? | Not at all 1 | 2 | 3 | Completely 4 |
| 3. To what extent did the workshop meet your expectations? | Not at all 1 | 2 | 3 | Completely 4 |
| 4. To what extent do you expect this workshop will make a difference in the way you do your job? | Not at all 1 | 2 | 3 | Big difference 4 |
| 5. Overall, how would you rate the usefulness of this workshop? | Not useful 1 | 2 | 3 | Very useful 4 |
| 6. To what extent did the workshop provide the following? | Very poor | | | Excellent |
| A. Applicable theoretical information | 1 | 2 | 3 | 4 |
| B. Practical examples | 1 | 2 | 3 | 4 |
| D. Time for discussion | 1 | 2 | 3 | 4 |
| F. Appropriate exercises for learning the content | 1 | 2 | 3 | 4 |
| <i>Additional comments about these topics:</i> | | | | |
| 7. Overall, how would you rate the following aspects of the workshop? | Very poor | | | Excellent |
| A. Organization of the training | 1 | 2 | 3 | 4 |
| B. Organization of the training manual | 1 | 2 | 3 | 4 |
| C. Workshop content in the manual | 1 | 2 | 3 | 4 |
| <i>Additional comments about these topics:</i> | | | | |
| 8. What did you like most about this workshop? | | | | |
| 9. What did you like least about this workshop? | | | | |
| 10. If you were given the task of redesigning the workshop, what would you change? | | | | |
| 11. Any other suggestions? | | | | |

Level-1 feedback form (2)

TRAINING EVALUATION FORM

Name: Date:

The statements below relate to aspects of this training programme. Please indicate to what extent you agree or disagree with these statements on a scale of 1 to 5, as follows:

Strongly Disagree Disagree Neutral Agree Strongly Agree
 1 2 3 4 5

After each statement, circle the number you feel is appropriate. You may add comments beneath each section if you wish.

| CONTENT | | | | | |
|---|---|---|---|---|---|
| A. The objectives of the training were explained clearly. | 1 | 2 | 3 | 4 | 5 |
| B. The objectives were achieved. | 1 | 2 | 3 | 4 | 5 |
| C. I understood the presentations and explanations. | 1 | 2 | 3 | 4 | 5 |
| D. The training was relevant to my work. | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the content of the training:</i> | | | | | |
| | | | | | |
| METHODS | | | | | |
| A. The trainee's workbook helped me understand the content. | 1 | 2 | 3 | 4 | 5 |
| B. Class discussions helped me achieve the objectives. | 1 | 2 | 3 | 4 | 5 |
| C. The role play was a useful exercise. | 1 | 2 | 3 | 4 | 5 |
| D. The slide presentation made difficult points clearer. | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the training methods:</i> | | | | | |
| | | | | | |
| FACILITIES | | | | | |
| A. The training room had all the facilities we needed. | 1 | 2 | 3 | 4 | 5 |
| B. The meals were adequate. | 1 | 2 | 3 | 4 | 5 |
| C. The accommodation was comfortable. | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the facilities:</i> | | | | | |
| | | | | | |
| FACILITATOR | | | | | |
| A. Knew the subject matter in detail. | 1 | 2 | 3 | 4 | 5 |
| B. Gave clear explanations of the topics. | 1 | 2 | 3 | 4 | 5 |
| C. Encouraged group discussion and got everyone involved. | 1 | 2 | 3 | 4 | 5 |
| D. Asked for questions and responded to them appropriately. | 1 | 2 | 3 | 4 | 5 |
| <i>Comments on the facilitator:</i> | | | | | |
| | | | | | |

OVERALL TRAINING SESSION

On a scale of 1 to 10, where 1 is "Hopeless" and 10 is "Extremely helpful"; give a rating to the training session as a whole.

Hopeless

Extremely helpful

1

2

3

4

5

6

7

8

9

10

Overall comments:

ANNEX 4

Level-2 evaluation tools

Level-2 written test questionnaire

Self-report questionnaire (for written test or interview)

1. What skills or ideas do you have that you did not have before the training?
2. What have you learned that you will be able to use immediately?
3. What have you already put into practice outside the training sessions?
4. Describe any intentions or plans that you have as a result of what you learned in the training.
5. Describe what you want to learn next.

"Before and after" test

ANNEX 5

Level-3 evaluation tools

Simple feedback questionnaire sent six weeks after training

1. What was the most useful session of the training workshop?
2. Have you shared the information from the workshop with your colleagues? If yes, please describe how. This will help us plan future workshops.
3. Have you incorporated aspects of the protocols into your planning and/or emergency preparedness plans? If yes, please describe how. This will help us plan future workshops.
4. Do you need additional technical advice or information on any of the topics discussed during the workshop?
5. Have you read or used the documents included in the CD-ROM that was provided during the workshop? If yes, which documents?
6. Do you need additional technical documents other than those provided on the CD-ROM?

Self-assessment questionnaire of abilities, strengths and needs within a two-year training programme

SELF ASSESSMENT OF FIELD EPIDEMIOLOGY COMPETENCIES

Mastering competencies in field epidemiology is a development process that will continue throughout the two-year programme and beyond. Your development as a field epidemiologist is a partnership between you, your supervisor and your mentors. This self assessment is designed to help you prioritize the areas of your own development, by identifying your skill level and the importance of the competency. By carefully completing this assessment you will be able to work with your mentor to develop a work plan that is customized for your own needs. Regular self assessments during the formal training programme will support continued progress towards achieving your long-term goals.

Please read the instructions carefully before you begin.

This assessment will take you approximately 30 minutes to complete. After you have completed the assessment, bring it to your mentor to plan your next steps.

INSTRUCTIONS FOR COMPLETING THE SELF ASSESSMENT

1. **Review** the competencies on the following pages
2. **Complete column A**
Assess your level of ability in each competency, either through course work or employment experience. You may encounter competencies which are completely unfamiliar to you. This should not be a cause for concern. Assess your ability as best you can, and do not hesitate to acknowledge that you are unfamiliar with a topic or its importance.
 Use the following ability scale to complete column A:
 5 = Outstanding – Definitely one of your strengths
 4 = Above average compared to your ability in other areas
 3 = Average or moderate
 2 = Minimal ability
 1 = No experience or training in this area.
3. **Complete Column B.**
Rate the importance of each competency to your current assignment and/or to your professional goals, using the scale of importance:
 5 = Critical importance – a key developmental objective
 4 = Very important
 3 = Average or moderate importance
 2 = Minimal importance
 1 = No importance
 0 = Don't know

| DOMAINS AND COMPETENCIES | A CURRENT ABILITY LEVEL | B LEVEL OF IMPORTANCE | C STRENGTHS AND NEEDS (A-B) |
|--|----------------------------------|--------------------------------|--------------------------------------|
| (1) EPIDEMIOLOGICAL METHODS | | | |
| 1.1 Conduct field investigations of disease outbreaks | | | |
| 1.2 Analyse and interpret data by person, place and time | | | |
| 1.3 Design and conduct a survey | | | |
| 1.4 Design and conduct case-control and cohort studies | | | |
| 1.5 Analyse and interpret data from analytical studies | | | |
| 1.6 Present data and findings from surveys and studies to decision-makers and other stakeholders | | | |
| 1.7 Conduct stratified analysis | | | |
| 1.8 Use logistical regression modelling | | | |
| 1.9 Collect, package, store and transport specimens to the laboratory | | | |
| 1.10 Interpret results of laboratory tests | | | |
| 1.11 Describe the laboratory tests used for diagnosis of diseases under surveillance | | | |
| (2) COMMUNICATIONS | | | |
| 2.1 Prepare and deliver an oral scientific presentation | | | |
| 2.2 Prepare a scientific manuscript for a peer-reviewed journal | | | |
| 2.3 Prepare an abstract for a peer-reviewed journal | | | |
| 2.4 Prepare and present a poster presentation for a scientific meeting | | | |
| 2.5 Prepare reports for presentation to decision-makers and policy-makers | | | |
| 2.6 Prepare reports for publication in non-scientific publications | | | |
| 2.7 Prepare statements for the public, using a variety of media, in response to public health issues | | | |
| 2.8 Prepare a funding proposal | | | |
| 2.9 Use appropriate interpersonal communication skills to enable efficient and sound leadership in the public health community | | | |
| (3) BIostatISTICS | | | |
| 3.1 Describe and apply probability distributions | | | |
| 3.2 Calculate descriptive statistics | | | |
| 3.3 Present data using tables, graphs, charts and maps | | | |
| 3.4 Perform statistical tests such as Students t, Chi-square, Fischer's Exact | | | |
| 3.5 Determine sample size for a survey | | | |
| 3.6 Calculate linear regression | | | |
| 3.7 Conduct non-parametric tests | | | |
| (4) COMPUTER TECHNOLOGY | | | |
| 4.1 Describe the components of a computer | | | |
| 4.2 Use the operating system on a personal computer to manage files and navigate between computer programs | | | |
| 4.3 Use a word processor to prepare scientific documents and reports | | | |
| 4.4 Use spreadsheet software to organize epidemiological and financial data | | | |

| | | | | |
|---|---|--|--|--|
| 4.5 | Use graphics software to prepare presentations | | | |
| 4.6 | Use Epi Info to enter, clean, analyse and report epidemiological data | | | |
| (5) MANAGEMENT AND LEADERSHIP | | | | |
| 5.1 | Manage a field project such as an outbreak investigation, epidemiological study, or survey that is time limited and situational | | | |
| 5.2 | Implement control measures or conduct a public health intervention | | | |
| 5.3 | Conduct an ongoing programme such as a public health surveillance system | | | |
| 5.4 | Perform financial planning and budgetary management | | | |
| 5.5 | Administer and participate in personnel management | | | |
| 5.6 | Manage personal responsibilities such as priorities, time and information | | | |
| 5.7 | Conduct analysis of processes/programmes from planning to evaluation | | | |
| 5.8 | Create an environment that supports group participation and interaction | | | |
| 5.9 | Communicate effectively with other health professionals, such as laboratory personnel | | | |
| 5.10 | Facilitate organized training sessions | | | |
| 5.11 | Coach and mentor other public health professionals | | | |
| 5.12 | Develop instructional materials and presentations using sound instructional design methodology | | | |
| (6) SURVEILLANCE | | | | |
| 6.1 | Manage a public health surveillance system | | | |
| 6.2 | Analyse and interpret surveillance data | | | |
| 6.3 | Evaluate a public health surveillance system | | | |
| 6.4 | Design or revise a public health surveillance system | | | |
| 6.5 | Prepare surveillance analysis reports for presentation to decision-makers and policy-makers | | | |
| (7) EPIDEMIOLOGY OF DISEASE AND INJURY | | | | |
| 7.1 | Describe the epidemiology and control of diseases of national, regional and global importance | | | |
| 7.2 | Appropriately prioritize communicable and noncommunicable diseases | | | |
| 7.3 | Describe unique circumstances of injury surveillance | | | |

4. Now complete Column C

Determine strengths and needs by subtracting column B from column A.

In other words, subtract the number in the *Level of Importance* column from the number in the *Current ability level* column. The scores will range from -4 to +4. Competencies resulting in positive scores in column C represent strengths. *Negative* scores in column C represent developmental needs; the larger the negative number, the greater the need for improvement. For example, a score of -4 for a competency would indicate a critical developmental need; a score of 0 would indicate no need; a score of +4 would indicate a definite strength.

1. Set your developmental priorities by identifying 1 to 3 competencies with the *lowest* numbers in column C and entering them as competency development needs in the work plan that you will review with your mentor.
2. As you meet your goals, refer again to your self assessment to identify subsequent priority areas. Reassess yourself semi-annually.

Thank you for your participation.

Sample management work impact questionnaire

Impact questionnaire

Instructions

1. Please complete this questionnaire as promptly as possible and return it to the address shown on the last page. It may be helpful to review the materials from each training session.
2. Please take your time as you provide responses. Accurate and complete responses are very important. You should be able to provide thorough responses in about 20 minutes.
3. Please be objective in your responses. Your name will not be linked to your input. Responses or comments related to individuals will not be communicated to your employer.
4. Your responses will help evaluate the impact of the training programme. A copy of a report summarizing the views of training participants will be distributed to you in two months. Please ensure that your views are reflected in that report.
5. Should you need clarification or more information, please contact

IMPACT QUESTIONNAIRE

1. Listed below are the skills or behaviours that were the objectives of the [*name of training programme*]. Please indicate your degree of success in achieving these objectives. Please check/tick the appropriate response for each item.

| SKILL/BEHAVIOUR | NO SUCCESS | VERY LITTLE SUCCESS | LIMITED SUCCESS | GENERALLY SUCCESSFUL | COMPLETELY SUCCESSFUL |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Objective 1 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objective 2 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objective 3 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objective 4 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objective 5 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objective 6 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objective 7 (state objective) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. On a scale of 1–5, rate the relevance of each of the training elements to your job.

| | NO RELEVANCE | | SOME RELEVANCE | | VERY RELEVANT | |
|---|--------------|---|----------------|---|---------------|--|
| Class discussions | 1 | 2 | 3 | 4 | 5 | |
| Small group discussions | 1 | 2 | 3 | 4 | 5 | |
| Skill exercises (scenarios, role plays, etc.) | 1 | 2 | 3 | 4 | 5 | |
| Programme content | 1 | 2 | 3 | 4 | 5 | |
| Coaching and explanations | 1 | 2 | 3 | 4 | 5 | |

[Use the above examples or any others]

3. Have you used the written materials since you took part in the training?

Yes No

Please explain:

.....

.....

4. In the following areas, please indicate your level of improvement since you attended the training. Please check/tick the appropriate response for each item.

| RESULT AREA | NO OPPORTUNITY TO APPLY | NO CHANGE | SOME CHANGE | MODERATE CHANGE | SIGNIFICANT CHANGE | VERY SIGNIFICANT CHANGE |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| A. ORGANIZING | | | | | | |
| 1. Prioritizing daily activities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Applying creative techniques | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Organizing daily activities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Raising level of performance standards in area of responsibility | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. WORK CLIMATE | | | | | | |
| 1. Applying coaching | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Applying techniques/ initiatives that influence motivation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Implementing job enrichment opportunities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Implementing better control and monitoring systems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Applying techniques that influenced better teamwork | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| C. PERSONAL OUTCOMES | | | | | | |
| 1. Improved written communications | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Improved oral communications | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Greater self-confidence | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. List the three behaviours or skills from the list above that you have used most frequently as a result of the training.

- A)
- B)
- C)

6. What has changed about you or your work as a result of your participation in this training? (E.g. specific behaviour changes such as: increased delegation to employees, improved communication with patients, employee participation in decision-making, improved problem-solving.)

.....

7. What barriers, if any, have you encountered that have prevented you from using skills/behaviours gained in the training? Check/tick all that apply.

- I have had no opportunity to use the skills
- I have not had enough time to apply the skills
- My work environment is not appropriate for the use of these skills/behaviours
- My supervisor does not support this type of programme
- Other (please specify):

If any of the above are checked, please explain if possible:

.....

8. What additional support could be provided by management that would influence your ability to apply the skills and knowledge learned from the programme?

9. Would you recommend the training programme to others? Yes No
 Please explain. If no, why not? If yes, what groups/jobs and why?

10. What specific suggestions do you have for improving the training programme?

11. Other comments:

Please return completed questionnaire to: [name and address]

Sample questions for level-3 interviews with trainees

Trainee name:

Dates of training programme:

Current position:

Previous position:

| INTERVIEW QUESTIONS | COMMENTS |
|---|----------|
| 1. Which of the skills that you learned in the programme have you used the most often? | |
| 2. What tasks do you perform the most frequently in your current position? | |
| 3. In what ways did the formal instruction (didactic) prepare you for field activities? | |
| 4. In what ways were you unprepared for field activities? | |
| 5. To what extent do you plan to use your new skills in the future? | |
| 6. List at least one topic you would like to seek included in the programme. | |
| 7. Which of the skills that you learned in the programme have you used the least often? | |
| 8. What obstacles make it difficult to use what you have learned? | |
| 9. Are there any components that should be removed from the programme? | |
| 10. What additional training do you need at this time? | |
| 11. Do you have any suggestions on how to improve the programme? | |

Level-3 interview for evaluation by supervisor**PART I. TO BE FILLED OUT BY FIELD SUPERVISOR**

Name of trainee:

Evaluation period: from: to:

Name of supervisor: Signature of supervisor:

If others have provided supervision, list those who have contributed to this evaluation:

.....

.....

.....

1. QUANTITY OF WORK

- A. Consistently produces less than is expected.
- B. Sometimes falls below productivity levels.
- C. Meets standards consistently.
- D. Usually exceeds standards of productivity.
- E. Exceptionally productive; accomplishes far more than is expected.

2. QUALITY OF WORK

- A. Regularly produces work which does not meet standards of quality.
- B. Occasionally produces work which does not meet standards.
- C. Produces work that consistently meets standards.
- D. Produces above average work.
- E. Produces exceptional work. Is seen as a model for others.

3. PUNCTUALITY OF WORK

- A. Regularly misses deadlines.
- B. Is sometimes behind schedule.
- C. Is almost always on time with assigned work.
- D. Can be relied upon to meet all deadlines and is sometimes ahead of schedule.
- E. Is exceptionally prompt and usually ahead of schedule.

4. INITIATIVE, CREATIVITY, AND JUDGEMENT

- A. Often fails to take obviously necessary actions or takes wrong ones.
- B. Sometimes fails to take steps that would solve or head off usual problems.
- C. Deals effectively with usual problems and challenges.
- D. Moves creatively to meet programme objectives and solve somewhat unusual problems.
- E. Routinely recognizes and solves unusual problems.

5. COMMITMENT TO PROGRAMME GOALS

- A. Seems exclusively concerned with own convenience, welfare, and advancement to detriment of programme.
 - B. Too often puts personal concerns ahead of programme.
 - C. Is generally able to balance personal and programme concerns.
 - D. Has worked out a relationship between personal and work responsibilities which allows a satisfactory resolution of almost all conflicts.
 - E. Has achieved such integration of personal and programme interests that conflicts rarely arise.
-

6. ABILITY TO WORK WITH OTHERS
 - A. Is not effective when work requires cooperative efforts.
 - B. Performance is sometimes impaired if it requires working with others.
 - C. Satisfactorily achieves objectives when working with others is required.
 - D. Is able to cooperate with others in a manner that helps produce better work than any one member of the group could produce.
 - E. Works with others in ways which maximize the contributions of each person and consistently produces excellent results.
7. ABILITY TO EXPRESS SELF VERBALLY AND IN WRITING
 - A. Often does not get the desired response even to routine material because the message is not understood.
 - B. Failure to communicate clearly sometimes causes problems.
 - C. Communication failures rarely cause problems.
 - D. Gets message across even when material is complex.
 - E. Expresses complex and controversial material in such a lucid and persuasive way that achievement of objectives is materially aided.
8. PLANNING AND ORGANIZATION
 - A. Needs continual supervision to determine priorities, resource needs, and time to be allotted for even routine tasks.
 - B. Sometimes is lax in determining and adhering to priorities, available resources and schedules.
 - C. Sets and adheres to priorities, available resources and schedules in most circumstances.
 - D. Skilled planner and organizer. Grasps problems well and works out overall and detailed solutions.
 - E. Exceptional skills in planning and organizing. Anticipates subtle and difficult issues and deploys resources imaginatively.
9. RESPONSE TO CRISIS
 - A. Performance is ineffective during crises.
 - B. During crises, performance is somewhat less effective than at other times.
 - C. Performance during crises is as effective as at other times.
 - D. Rises to the occasion during crises.
 - E. Emerges as a superior performer and leader during crises.
10. ABILITY TO SOLVE PROBLEMS
 - A. Often asks questions or presents solutions that show lack of understanding of routine matters.
 - B. Sometimes asks questions or presents solutions which complicate the management of routine problems.
 - C. Almost always evidences understanding of routine and many more complex matters.
 - D. Usually understands and presents good solutions to new and particularly difficult problems.
 - E. Is a person to whom others look for creative and thorough analyses of the most difficult problems.
11. PROFESSIONAL SKILLS IN PRESENT ACTIVITY
 - A. Cannot be trusted in situations when professional judgment is required.
 - B. Sometimes makes professional judgments that are not supportable.
 - C. Consistently makes professional judgments that are supportable and appropriate.
 - D. Is looked to by others for professional advise.
 - E. Is recognized by people outside his/her programme as an expert in the application of professional skills.

12. SUPERVISORY SKILLS

- A. Frequently causes problems as a supervisor which require intervention.
- B. Sometimes makes supervisory decisions which complicate management problems.
- C. Handles most supervisory problems without difficulty.
- D. Resolves problems and improves employee's performance.
- E. Solves even difficult problems and gets the most out of even deficient employees.
- F. Resident has no supervisory responsibility.

13. GROWTH IN SKILLS DURING RATING PERIOD

- A. Performance has deteriorated.
- B. Has shown little, if any, improvement.
- C. Showed steady growth.
- D. Progressed more rapidly than most of his/her peers.
- E. Showed much more growth than almost all his/her peers.

14. RESPONSIVENESS TO SUPERVISION

- A. Usually rejects supervisory guidance without considering its merits.
- B. Sometimes rejects supervisory guidance without considering its merits.
- C. Usually considers supervisory guidance carefully and is usually able to apply it.
- D. Works with supervisory guidance constructively.
- E. Knows when to seek supervisory guidance and is highly creative in implementing recommendations.

| EVALUATION SUMMARY | (TO BE COMPLETED BY EVALUATOR) |
|-------------------------|--------------------------------|
| Number of "A" responses | |
| Number of "B" responses | |
| Number of "C" responses | |
| Number of "D" responses | |
| Number of "E" responses | |

15. OVERALL JOB PERFORMANCE

- A. Inadequate.** This trainee is a hindrance rather than an asset.
- B. Marginal.** This trainee is sometimes less effective than can be reasonably expected.
- C. Competent.** This trainee is fully effective in performing his/her job.
- D. Well above average.** This trainee has made a significant contribution and has enhanced the position he/she holds.
- E. Exceptional.** This trainee's performance is far better than can be reasonably expected and has brought credit on the resident and the programme.

16. Does this trainee have any limitations not identified above which might hinder his/her effectiveness?

.....

.....

17. Does this trainee have any strengths not identified above which might enhance his/her effectiveness?

.....

.....

18. Other comments:

.....

.....

.....

.....

PART II. TO BE FILLED OUT BY THE TRAINEE

19. I have read this evaluation and had an opportunity to discuss it and retain a copy.

A. I concur with this evaluation.

B. I disagree with this evaluation in the following ways:

.....
.....
.....
.....
.....

Signature of trainee: Date:

PART III. TO BE FILLED OUT BY THE FIELD COORDINATOR

20. I have read this evaluation and had an opportunity to discuss it.

A. I concur with this evaluation in all respects.

B. Although this evaluation is reasonable, this supervisor is somewhat more demanding than most.

C. Although this evaluation is reasonable, this supervisor is somewhat less demanding than most.

D. I disagree with this evaluation in the following ways:

.....
.....
.....
.....
.....

21. FIELD COORDINATOR'S ASSESSMENT OF OVERALL JOB PERFORMANCE

A. Inadequate. This trainee is a hindrance rather than an asset.

B. Marginal. This trainee is sometimes less effective than can be reasonably expected.

C. Competent. This trainee is fully effective in performing his/her job.

D. Well above average. This trainee has made a significant contribution and has enhanced the position he/she holds.

E. Exceptional. This trainee's performance is far better than can be reasonably expected and has brought credit to the trainee and the programme.

Comments:

.....
.....
.....
.....
.....

Signature of field coordinator: Date:

Action Plan: Rapid containment

(Section 1 should be completed after each module. Sections 2 and 3 should be completed on the last day of the workshop.)

SECTION 1: ACTIONS I SHOULD LIKE TO TAKE BASED ON THIS SESSION WHEN BACK AT WORK

| | |
|------------------------------|--|
| Topic | |
| Decision-making | |
| Pharmaceutical interventions | |
| Public health measures | |
| Ethics | |
| Communications | |

SECTION 2: PERSONAL ACTION PLAN

| ACTION | WHAT IS NEEDED FOR IMPLEMENTATION? | DEADLINE |
|--------|------------------------------------|----------|
| | | |
| | | |
| | | |

SECTION 3: CONTAINMENT ACTIVITIES FOR THE PREPAREDNESS AND RESPONSE PLAN

| ACTION | WHAT IS NEEDED FOR IMPLEMENTATION? | WHO WILL IMPLEMENT? | TIME FRAME |
|--------|------------------------------------|---------------------|------------|
| | | | |
| | | | |
| | | | |

Sample of a field epidemiology trainee workplan

Each trainee will have a workplan to follow his/her progress towards completion of the requirements for graduation from the Training Programme. Every six months each trainee will review his or her workplan with the director of the programme and the training staff. The workplan should document which requirements have been completed, and how those that are incomplete will be fulfilled.

1. Date of this workplan:
2. Dates previous work plans submitted:

Each trainee will prepare and submit quarterly activity reports (*see following outline*).

| DATES | DATE QUARTERLY REPORT SUBMITTED |
|--|---------------------------------|
| YEAR 1 | |
| First quarter (1 January – 31 March) | |
| Second quarter (1 April – 30 June) | |
| Third quarter (1 July – 30 September) | |
| Fourth quarter (1 October – 31 December) | |
| YEAR 2 | |
| First quarter (1 January – 31 March) | |
| Second quarter (1 April – 30 June) | |
| Third quarter (1 July – 30 September) | |
| Fourth quarter (1 October – 31 December) | |

Investigation of acute problems

Field investigations of at least two acute problems such as an outbreak or an acute natural or human-caused disaster where protocols cannot be developed ahead of time. The trainee should play a principal or substantive role in the investigations.

1. First investigation
 - a. Dates of fieldwork:
 - b. Subject of investigation:
 - c. Description of trainee's role in investigation:
 - d. Anticipated date of completion of report:
 - e. Date report(s) attached:
2. Second investigation
 - a. Dates of fieldwork:
 - b. Subject of investigation:
 - c. Description of trainee's role in investigation:
 - d. Anticipated date of completion of report:
 - e. Date report(s) attached to workplan:

Surveillance

1. Analyse data from a surveillance system and write a surveillance summary for at least one disease or risk factor.
 - a. Title:
 - b. Date report attached to workplan:
2. Evaluate a surveillance system and present the results to the other trainees.
 - a. Title of presentation:
 - b. Date of presentation:

Field survey

Participate in the design, management, data analysis and reporting of results from at least one field survey.

1. Date of field survey:
2. Date report of survey attached to workplan:

Research study

Develop and carry out a protocol-based field study using the appropriate design to approach the problem to be solved.

1. Title of research protocol:
2. Date protocol attached:
3. Date report of results attached:

Evaluation of interventions

Each trainee is expected to obtain knowledge and experience of planning, development and evaluation of scientifically sound community-based interventions. This experience will encompass the continuum of core public health functions from assessment, through public health policy and programme development, to assurance in translating science into practice impacting on the health of the public. Progress towards meeting this objective should be documented with the submission of each semi-annual workplan report.

1. Project title or subject area:
2. Community involved:
3. Date report(s) attached:

Scientific communication

1. Publish an article in a national or regional epidemiology bulletin.
 - a. Anticipated date of article:
 - b. Date copy of article attached:
2. Prepare a manuscript suitable for publication in a peer-reviewed journal.
 - a. Anticipated date of completion of manuscript:
 - b. Date copy of manuscript attached:
3. Present a paper at a scientific conference.
 - a. Title of presentation:
 - b. Conference title:
 - c. Date of presentation:
 - d. Date copy of presentation attached to workplan:
4. Give at least one presentation at the weekly FELTP seminars.
 - a. Topic of presentation:
 - b. Date of presentation:

Computer skills

1. Design a database, and enter and analyse a dataset from a field investigation using a software program such as Epi Info.
 - a. Name of dataset/database:
 - b. Date completed:
2. Use the computer to graph and map the data from a surveillance system, survey, or other field investigation.
 - a. Type of graph:
 - b. Date completed:

Teaching

1. Help teach a basic course in epidemiology. This could involve giving lectures, facilitating case studies and/or organising and supervising a field exercise. (Trainees are expected to teach at least two topics.)
 - a. Title of course:
 - b. Dates:
 - c. Contribution made by trainee:

Attendance at training programme seminars

First-year trainees must attend all weekly seminars when not on official travel or annual leave. (The programme coordinator should maintain an attendance record for the seminars).

Attendance at workshops and short courses

All trainees (first- and second-year) must attend all multi-day workshops and courses. The following are examples of the types of workshops/courses that might be held during the training period.

| NAME OF COURSE | DATES OF ATTENDANCE |
|------------------------------------|---------------------|
| Introductory course | |
| Computer training | |
| Advanced computer course | |
| Management and surveillance course | |
| Scientific writing workshop | |

Outline for training programme activity report

1. Acute Investigations

List all acute investigations, health hazard evaluations, other acute investigations

- Investigation number (if applicable)
- Dates of investigation
- Location of investigation
- Summary

2. Analytic investigations

List all analytic investigation activities

- Provide one-line description (topic studied and database)
- Date investigation started
- Date investigation completed

3. Surveillance presentation(s)

- Title of presentation
- Date presented

4. First authored scientific manuscripts (submitted to peer-reviewed journals)

Provide information in the same format used for a curriculum vitae. Indicate if published, accepted, submitted, or in preparation.

5. Scientific conference presentations

- Title
- Indicate whether oral, poster, or late-breaker
- Year presented
- Title(s) of abstract(s) for each Conference

6. Other presentations (national or regional meeting, etc.)

- Title
- Name of conference
- Place
- Sponsoring organization
- Date

7. Public inquiries

Public inquiries: average number of weekly phone responses; average number of weekly written responses

8. Teaching responsibilities

Indicate subject, institution, course, or audience, dates

9. International trip

Indicate countries, reason, dates

10. Other activities

Any other activities that you would like to report.

Development priorities

(Based on Field Epidemiology Self Assessment)

| COMPETENCY DEVELOPMENT NEED | DEVELOPMENT METHOD (CLASS, MENTOR, FIELD PROJECT, ETC.) | TARGET COMPLETION DATE |
|-----------------------------|---|------------------------|
| 1 | | |
| 2 | | |
| 3 | | |

ANNEX 6

Level-4 evaluation tools

Trainee questionnaire

1. How has your organization benefited from your participation in the training programme?
Please identify specific organizational accomplishments or improvements that you believe are linked to participation in the training. (Consider how the improvements actually resulted in influencing measures such as increased revenue, increased shipments, improved customer satisfaction, improved employee satisfaction, decreased costs, saved time, etc.)

.....

2. Reflect on your specific business accomplishments/improvements as stated above. Consider ways that you can convert these accomplishments into a monetary value. Along with the monetary value, please indicate your basis for the calculations.

Estimated monetary amount:

Indicate if above amount is weekly, monthly, quarterly, or annually.

Weekly Monthly Quarterly Annually

3. What is your basis for your estimates? (What influenced the benefits/savings and how did you arrive at the value above?)

.....

4. What level of confidence do you place on the above estimations?

..... % *confidence* (0% = No confidence, and 100% = certainty)

5. What percentage of the improvement above was actually influenced by the application of knowledge and skills from the training programme?

..... % *improvement* (0% = none, and 100% = all)

6. Do you think this training programme represented a good investment for your organization?

Yes No

Please explain:

.....

7. Indicate the extent to which you think your application of knowledge, skills and behaviour learned from the training programme had a positive influence on the following business measures in your work unit. *Please check/tick the appropriate response beside each measure.*

| BUSINESS MEASURE | NOT APPLICABLE | APPLIES BUT NO INFLUENCE | SOME INFLUENCE | MODERATE INFLUENCE | SIGNIFICANT INFLUENCE | VERY SIGNIFICANT INFLUENCE |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| A. Work output | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Quality | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Cost control | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Efficiency | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Response time to customers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Cycle time of products | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G. Sales | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| H. Employee turnover | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I. Employee absenteeism | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| J. Employee satisfaction | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| K. Employee complaints | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| L. Customer satisfaction | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| M. Customer complaints | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please cite specific examples or provide more details:

.....

.....

.....

.....

.....

.....

Feedback Form

This guide is a work in progress. A new version will be prepared based on feedback received. For the Training Evaluation Working Group to improve the content and examples provided, could you please take a moment and provide us your feedback. Comments can be sent to: influenzatraining@who.int. Thank you.

1. Did the manual address your training evaluation needs?

a. If yes, please provide information.

b. If no, what are your training evaluation needs?

.....
.....
.....

2. Did you refer to the manual in carrying out training evaluation?

a. If yes, what level of evaluation?

b. If no, other reasons for using the manual.

.....
.....
.....

3. Did you refer to the examples provided?

a. If yes, did you make modifications? Please provide information

b. If no, can you provide some tools from your own experience?

.....
.....
.....

4. How can we further improve the training evaluation manual? What aspects should be further emphasized?

.....
.....
.....

5. Do you know of any other important reference materials that should be considered for improving this document?

.....
.....
.....



**World Health
Organization**