The evaluation of learning and development in the workplace:

A review of the literature

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1. **The value of learning and development for organisations**

The most basic reason for providing learning and development is to ensure that an organisation's employees are able to carry out their current role. Some training may be mandatory in relation to health and safety or occupation-specific issues but much of it will be discretionary where organisations appreciate the added value that they will gain from having highly skilled and knowledgeable employees.

 Organisations which are keen to improve their productivity, efficiency and profitability will look to move beyond mandatory training and look at more diverse learning and development activities which will enable the employees to maximise their potential and provide a valuable resource for the organisation. Learning and development can be a source of competitive advantage where employees gain appropriate new knowledge and skills (Towler and Dipboye, 2009) which provides a strong argument for organisations to invest in their employees so that they can reap the benefits and differentiate themselves from their competitors.

However, provision of learning and development opportunities alone do not mean that an organisation will be more productive and effective, there are many more steps needed. Firstly the opportunities need to be appropriate in terms of content and the way that it is delivered so that they will add value to the employees and the overall organisation. As well as looking at appropriateness from an organisational perspective it is also necessary to consider the fit with teams in the organisation and individual employees to ensure that their needs can adequately be met. In addition the learning and development activities need to be delivered in such a way that practical benefits to the workplace can be observed and to enable the employees to be able to transfer their new knowledge and skills to the benefit of all of the key stakeholders. Chiaburu and Lindsay (2008:199) comments:

> *training programmes are effective only to the extent that the skills and behaviours learned and practiced during instruction are actually transferred to the workplace.*

In addition many organisations recognise the value of providing suitable learning and development provision where it supports accreditations such as Investors in People which may be highly desirable. With heightened awareness of corporate and social responsibility, different stakeholders may have an interest in the learning and development opportunities offered to employees.

Prospective employees may also be enticed through the provision of a good range of learning and development opportunities as a way of differentiating employers who offer similar salaries. As well as the sometimes tangible benefits of the training this commitment to employees sends out a message that employees are valued and supported within the organisation.

It is increasingly recognised that employees need to be actively aware of an organisation's strategies and objectives and the provision of learning and development opportunities can help to cement this where clear links are drawn between the learning intervention and how it is aligned with the overall strategy. Felstead et al (1997:v) also emphasise *"moulding attitudes and generating enthusiasm for corporate objectives"*

2. What do we mean by evaluation of learning and development?

Training evaluation can be described as a systematic process of collecting and analyzing information for and about a training programme which can be used for planning and guiding decision making as well as assessing the relevance, effectiveness, and the impact of various training components (Raab et al., 1991). This demonstrates the wide range of activities that are associated with it as well as the many benefits.

James and Roffe (2000:12) provide a simplified explanation of evaluation: *"comparing the actual and real with the predicted or promised"* which emphasises the need to reflect on what was achieved in comparison to what was hoped for. This definition also highlights the potential subjectiveness of evaluation for different individuals are likely to have diverse expectations and their review of the event(s) may also differ depending on a wide range of variables, for example; the learning interventions may be heavily focused towards one particular learning style. Dawson (1995:3) provides another explanation which suggests that the process should be impartial and devoid of subjective opinion:

> *It is useful at this point to consider just what evaluation of training really does mean. The evaluation of training is the systematic and impartial collection of data for managers and all other interested parties. This information equips them to draw conclusions about the effectiveness of particular training measures as a way of achieving organizational objectives, implementing policy and promoting organizational learning*

Dawson's (1995) definition is useful in illustrating the wide range of issues that evaluations are intended to capture as well as the assortment of reasons why evaluations might be necessary. It is therefore clear that organisations will need to have clarity in their rationale for evaluating and they need to ensure that this is shared with all of the relevant stakeholders. Failure to do this may lead to a mismatch in the data provided, thereby providing limited use to the organisation and/or the trainer(s).

3. The importance of evaluating learning and development activities

Mann (1996:14) states *"With the huge investment in developing training strategies, the question is no longer "should we train" but rather "is the training worthwhile and effective?".* This is consistent with a wide range of literature which accepts that training is important and recognises the evaluation of it to be a key issue so that its 'worth' can be proven. Lewis and Thornhill (1994:25) state *"there seems to be widespread agreement with the proposition that evaluation is the least well conducted aspect of all training activities"* which suggests that there is a need for organisations to focus on this area of the learning and development process in order for evaluation to reach its potential. This attitude was confirmed in the CIPD (2008) Learning and Development survey whereby only one in five (21%) of the respondents said that they spend most of their time monitoring or evaluating training at the moment. There is also evidence that this problem is not limited to UK organisations, Athanasaou (1998) indicates similar results when research was undertaken in Australia. The importance of the process can be viewed from the perspectives of different stakeholders:

3.1. To the organisation

There are a number of reasons why organisations should evaluate their learning and development activities and this includes the following:

- To help make decisions about what interventions should (or should not) be replicated in the future

- To provide evidence of investment in their [organisations] human capital

- To demonstrate the value that interventions bring to the organisation (Burkett, 2005a)

- To enable training departments to justify their expenditure, particularly where there is an increased focus on spending less whilst generating more outcomes (Goldwasser, 2001).

- As part of business efficiency considerations (The Industrial Society, 1998)

- To reinforce the importance of an evaluation process when trialling new programmes for employees (Russ –Eft and Preskill, 2008).

- To assist in determining who should attend training programmes (Mann, 1996).

- To allow the organisation to identify whether there are better ways to achieve things rather than through the provision of formal learning and development interventions i.e. job aids which are more effective (Simpson, 2002)

- Mann (1996) identifies beneficial legal implications of having effective evaluation data so that if necessary, organisations can demonstrate the job relatedness of training programmes (the work of these authors is set in the American context).

APSC (2005:2) suggest that evaluation is even more important in the public sector and state:

> *Effective evaluation is part of an accountable, professional and ethical public service. It is fundamental to good governance, good practice and good management.*

This suggests that public sector organisations need to pay particular attention to this issue so that they can demonstrate the values and benefits that they accrue from their investment into training and development. In the current economic and political climate where there is a strong focus on public sector expenditure this area of spending is likely to be particularly important. In addition a comprehensive evaluation process may lead to cost savings and support the requirement from Gershon (2004) to reduce public sector expenditure.

3.2. To individuals

Evaluation provides individual learners with the opportunity to give feedback to their trainers; perhaps this is most useful when it is gathered early on in the process so that they can benefit from any resultant adjustments.

Individuals in subsequent cohorts can also benefit from the evaluation process if feedback is acted upon for the benefit of the programme. This relies on individual learners taking the time to actively engage in the evaluation process and to provide honest feedback in the most relevant areas. Learners may also be able to benefit from the evaluation process if they are members of particular professional bodies which require reflective evidence of continuing professional development (CPD).

3.3. To trainers/facilitators

Evaluation data may be used as a performance indicator which justifies the existence of a training department and/or investment in trainers. Independent trainers may also depend on their feedback to gain future business and/or to engage with potential new clients as an indicator of the quality of their provision and delivery. Trainers or facilitators can also benefit from evaluations so that they can update or amend it accordingly; this may be particularly useful if they are working in specific sectors or types of organisation.

3.4. The wider importance of evaluation

In many countries Governments may also play a significant role in the expansion of learning and development activities either through the delivery of programmes or the provision of free or subsidised funding for industries or organisations. Where this is the case providers are likely to have to prove the value that they add in a more transparent way (Massey, 2004).

4. The purpose of evaluation

APSC (2005) provide a simple overview of the purpose of evaluation and state that it has the following four objectives:

 i.   Assess if intended learning and development objectives have been met

 ii.   Continuous improvement of learning and development

 iii.   Assess whether resources are used wisely

 iv.   Assess the value for money of the learning and development

From these four options organisations may decide to address all of them or concentrate on some of them. For example, many organisations do not have the resources to be able to assess the value for money of the learning and development so may focus more on the other three objectives. Other issues that may impact on the extent to which programmes are evaluated are:

- The size of the organisation

- The availability of expertise to generate evaluation frameworks and subsequently analyse the data provided by learners

- The objectives of specific training programmes – in some cases the focus may be almost exclusively be on ensuring that the programme-specific objectives have been met.

The original four objectives shown above were later expanded by APSC (2005) to include the following purposes:

- To Determine success
- Assess if objectives have been achieved
- Make improvements
- Ensure quality
- Ensure accountability
- Meet external requirements
- Account for activity
- Assess value or merit
- Assess risk
- Justify investments
- Facilitate decisions whether to continue/discontinue the activity
- Ensure appropriateness and alignment
- Identify strengths and weaknesses

Clegg (1987) believes that a key purpose could be to establish guidelines for future programmes by building upon strengths and identifying areas for development. It could also be argued that the evaluation process could also be used to review diversity related issues as Schmidt (2009) believes that a major challenge for training practitioners is being able to meet the needs of diverse groups.

This section of the review has highlighted the many different reasons why organisations use evaluation as part of their processes and it is likely that organisations will vary significantly in the reasons why they use them but they must have a clear understanding of their purpose so that they can collect the necessary information in an appropriate way. It is important that this purpose is also communicated to all of the relevant stakeholders, particularly the trainers and facilitators so that they can ensure that appropriate information is collated.

5. Linking learning, development and evaluation to business strategy

Learning and training can provide a pivotal link between an organisation's human resource strategy and overall business strategy (Mabey, Salaman, and Storey, 1998) by ensuring that the organisation's employees have the relevant skills and knowledge needed to be able to execute the HR strategy. This should also give the HR strategy an improved chance of success if they have a clear understanding of capabilities and whether investment and development is required. Smith and Smith (2007) uncovered evidence that more and more employers are demanding that training is deliberately aligned with the strategic needs of the organisation.

It is clear from a range of papers that researchers have identified the importance of linking learning with organisations' overall strategies and business objectives, particularly where their people are one of their sources of competitive advantage. This means that those responsible for learning, development and evaluation have to have a good understanding of the strategy and objectives and discuss the key issues with a range of stakeholders.

The extent to which learning and development can be linked to the strategy depends on how close an alignment exists, for example; whether or not learning is explicitly referred to within the strategic planning document and whether there is ongoing communication and links between the learning and development function and the senior managers (Anderson, 2009b).

Anderson (2009a) believes that the alignment of HRD to organisational strategy remains problematic. This concern was also identified in the earlier findings of CIPD (2007) where only one third of their survey participants felt that learning and development implications are considered when organisational strategy is constructed.

As strategies are updated or refocused it will be necessary to review the learning and development process and therefore an ongoing dialogue is needed between those responsible for learning and development and senior managers. This section suggests that whilst alignment with wider HR and organisational strategies are needed there is insufficient evidence of this in operation.

6. Models of evaluation

6.1. The Kirkpatrick model

In the 1960's Donald Kirkpatrick wrote a series of articles on evaluation where he identified four stages (or levels of evaluation). Despite its age, Kirkpatrick's model continues to be used in contemporary research (Schmidt et al, 2009 and Elliott et al, 2009). Kirkpatrick (1977:9) divided the evaluation process into four segments or stages as shown below in Figure 1.

Figure 1	
Stage One – Reaction	How do the participants feel about the program they attended? To what extent are they 'satisfied customers'?
Stage Two – Learning	To what extent have the trainees learned the information and skills? To what extent have their attitudes changed?
Stage Three – Behavior	To what extent has their job behavior changed as a result of attending the training program?
Stage Four - Results	To what extent have results been affected by the training program? (Results would include such factors as profits, return-on-investment, sales, production quality, quantity, schedules being met, costs, safety record, absenteeism, turnover, grievances and morale).

One of the key strengths of this model is in its simplicity, which was designed to allow it to be understood and used easily by HR practitioners when designing their evaluation tools. Evaluating at the 'reaction' stage allows the trainer to get a quick understanding of how the learners' felt about the session in terms of the content, structure and how it was delivered. Usually this will be in the form of a self-completion questionnaire that the learners will complete at the end of the training event. Through analysing the results the trainer can make amendments to the programme as necessary and the results can also be fed back to the organisation. One of the main advantages of this approach is that it is usually carried out straight after the intervention and therefore the trainers/facilitators receive the feedback quickly so can implement it within a short time span if they choose to do so.

There are limitations associated with the four different stages. For example, Kirkpatrick (1977) confirms that the usefulness of stage one evaluations is dependent upon the honesty of the learners who complete the questionnaire and whether they feel comfortable in being able to tell the truth. One way to encourage honesty in this process would be to enable the employees to complete them anonymously thereby having no fear of any repercussions, though this would limit the opportunity for the trainer to provide additional support for learners where they felt that their objectives were not met. There is also the potential issue of social desirability whereby the learners feel that they have to respond in a particular way (Darby, 2006) especially if they are asked to complete their evaluation in front of the trainer or fellow learners. Lee and Pershing (2002) believe that Kirkpatrick provides insufficient guidance on how stage one can be achieved through a questionnaire and suggests guidelines in this area would be useful. There is also a risk that the evaluation focuses too heavily on enjoyment rather than on how useful it has been (Hamblin, 1974) most frequently in the form of 'happiness sheets' (Bramley and Kitson, 1994).

Evaluating at stage two provides the learners with the opportunity to evaluate their learning and to identify how they believe their behaviours might change. In relation to stage two, Kirkpatrick believes that there is a distinction between gaining 'evidence' and 'proof' and proof can only be gained by comparing pre- and post- intervention performance to identify whether there has been a shift. However an outstanding limitation would be how we would be able to control for other factors, in other words, how can we be sure that it was just the training intervention that made the difference? and this would involve using experiments and control groups (Kirkpatrick, 1977). One way to try to overcome this would be to use a tool to measure ability before and after the event though the design of reliable tools can be complex (Bramley and Kitson, 1994).

Stage three of Kirkpatrick's model is entitled 'behaviour' and can be defined as *"the extent to which change in behaviour has occurred because the participant attended the training program"* (Kirkpatrick, 1998:20). Similar issues to stage two also arise for the stage three level of evaluation where a control group would be needed to ascertain whether the intervention is the differing factor. The distinction between evidence and proof poses a challenge for both researchers and practitioners; Kirkpatrick (1977:12) suggests that organisations use a pragmatic approach:

> *Let's shoot for proof but be satisfied with evidence. In most cases, our superiors would be more than satisfied with evidence, particularly in terms of behavior or results.*

Kirkpatrick's level four is defined as *"the final results that occurred because the participants attended the programme"* (Kirkpatrick, 1998:60) this is where it is more difficult to meet this criteria as they may not be suitable for some types of programmes that are run. James and Roffe (2000) agree that inherent challenges in evaluation at levels 3 and 4 are down to the other factors which may have an impact on changes in performance, including; personal factors (e.g. motivation, ability and attention); instructional factors (e.g. course design and trainer's ability); and organisational factors such as climate, timing, management ,learner support etc. This view is confirmed in reports such as Tyson and Ward (2004) who were concerned about the intervening variables that might have an impact.

Cheng and Hampson (2008) argue that levels three and four are not often used because organisations find it much simpler just to focus on the first two levels. The lack of organisations who evaluate at this level (and the subsequent lack of empirical organisation-based data and case studies) mean that these levels of evaluation remain poorly understood (Bramley and Kitson, 1994).

Alliger and Janak (1989) argue that some interventions will not aim to meet all four levels and this does not necessarily mean that it should not be used; assuming it meets the required needs. This highlights the clear need for organisations to consider what form of evaluation is needed and accept that for some programmes, evaluation at stages one and two may provide sufficient information.

6.2. Moving beyond Kirkpatrick

Alliger and Janak (1989) identified limitations in the language used by Kirkpatrick and also felt that his model contained a number of assumptions which potentially impact upon its validity. This includes the assumption that each succeeding level is correlated with the previous level and they argue this is not necessarily the case, particularly where there are queries about causality.

The primary research undertaken in the work of Weissner et al (2008) was clear about the need to move beyond Kirkpatrick's model and this has been reflected within many other studies. It is interesting to note however that there has been little agreement about how this can be undertaken with a series of models being constructed yet no evidence of widespread use of any particular models. This suggests that both researchers and organisations believe that Kirkpatrick's work remains relevant particularly where the potential limitations are understood and acknowledged within the evaluation design process.

Dyer (1994) suggests a revised version of Kirkpatrick's model which he refers to as' Kirkpatrick's Mirror Evaluation System' which starts by looking at the final stage of Kirkpatrick's model rather than the first. Whilst an advantage of this model is that it includes the all-important link to business objectives there is little empirical evidence that this model is used in practice (or in research).

Phillips (2002) cited in Burkett (2005b) suggested the addition of a fifth stage on return on investment (ROI) to measure the monetary costs of providing the intervention with the monetary benefits received. This

concept of ROI has become an area of increasing interest and is discussed in more detail later in this review.

6.3. Alternative models: An overview

The CIRO model focuses on three questions as shown below in Figure 2 (cited in Elliott et al., 2009) and the main difference from Kirkpatrick's model in that it focuses on measurements taken before and after the training has been carried out. Perhaps a key strength of this model is that it takes into account the resources of the organisation (within the *input* measure) and their objectives (within the context measure) thereby responding to some of the criticisms of Kirkpatrick. Tennant et al (2002) critique this model by highlighting that it does not take behaviours into account they also believe that it is suitable for managerial focused training programmes rather than those that are less specialised and perhaps aimed at people working at lower levels in the organisation.

Figure 2

The CIRO model of evaluation

Context – what needs to be addressed?

Input – what is likely to bring about the changes?

Reaction – how did the learners react to the training?

Outcome – what are immediate, intermediate and ultimate outcomes?

A further alternative is the 'learning transfer system approach' where 16 factors are identified (full list provided as Appendix One) which allow a measurement of learning transfer. Divided into four scales (as shown below in Figure 3) learners are asked to complete a questionnaire after the conclusion of their programme. This approach should enable organisations to identify any potential blockages in the learning transfer process so that they can maximise the effectiveness of their training processes and expenditure (Donovan et al, 2001).

Figure 3

1. Ability to use knowledge and expertise

2. Motivation to use knowledge and expertise

3. Work environment supporting use of knowledge and expertise

4. Trainee characteristics (secondary elements)

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7. The role of training needs analysis

It is clear from all of the literature on learning and development that an effective system has to begin with a comprehensive training needs analysis process so that the organisation, departments and individuals can identify their specific needs. Through the careful identification of these needs the organisation can identify where gaps exist in skills and knowledge and offer appropriate interventions to try to address these gaps.

The process of training needs analysis can take a variety of forms; at an individual level it may be discussed as part of the performance management process; it may be a discrete activity in its own right or they may be driven from other organisational data. The increasing use of staff surveys is an example of using data to identify specific areas requiring development. Throughout the training needs analysis process attention

should also be paid to the linkage with the overall organisational strategy and goals to ensure that there is consistency and that learning interventions have the potential to have an impact. A critical success factor for effective training needs analysis is the need for learners to be honest (Tennant et al., 2002) otherwise the learning and development opportunities offered will not be as effective.

Naturally the training needs analysis process has a close link with the evaluation of learning and development as the objectives of the programmes/interventions should be considered as part of the training needs analysis process.

8. Practical issues

In addition to some of the theoretical issues that have been explored, it is necessary to also look at some of the practical issues which may impact upon how evaluations are designed and carried out.

8.1. What should we measure?

It is clear from the literature base that measuring satisfaction with the programme is important; however this should not be the sole focus. Learners may enjoy attending a programme but not actually learn anything/enough to have an impact on their performance in the workplace which minimises the value of the programme.

To a certain extent many of the evaluation criteria may be quite specific to individual programmes and their contexts as well as the purpose of the evaluation. It is important that the key stakeholders agree on the evaluation criteria to ensure that the data will meet all of their needs. There is a need to include a range of stakeholders in making the decision on what should be evaluated, including business unit managers (Goldwasser, 2001). There may be some core evaluation criteria which should be collected from each programme but these could be weighted differently depending on specific programmes.

As well as looking at skills and knowledge it will often be appropriate to measure behaviours. Of further interest is to look at behaviour both within participation in the intervention and when they return to the workplace (Mann, 1996).

Results from the survey undertaken by Industrial Society (1998) suggest that management training is the most likely to be evaluated followed by technical and IT training and those focusing on developing interpersonal skills. This may be because these are the most frequently delivered programmes.

There is clear evidence throughout the literature that it would not be cost-effective (or indeed desirable) to measure every possible intervention in the workplace; particularly where there are significant costs associated with in-depth evaluation. It is therefore important to make clear judgments on what should be measured, Ellis (2005) refers to this process as calculating the ROI on ROI. The significant work of Philips recommends that only 5-10% of training interventions should be evaluated at this level which means that organisations need to give careful consideration to which programmes would benefit the most from this in-depth approach. Criteria to consider may include:

- The cost of the programme

- The characteristics of the cohorts who attend (i.e. senior managers)

- The strategic importance of the programme

8.2. Designing appropriate evaluation criteria

It is clear that a 'one size fits all' approach would be inappropriate (Anderson, 2009b).

Hussey (1988) and Dawson (1995) are clear about the need to move beyond happiness ratings which may be useful from a commercial perspective (if an organisation can prove that attendees have enjoyed the experience) as they do not give an indication of the extent to which the objectives have been met.

The extent to which criteria is appropriate will be influenced by the level at which the evaluation is taking place. As most programmes will be evaluated at the reaction level (i.e. Kirkpatrick stage one) a focus should be placed on the quality of training/instruction, the range of content and overall satisfaction (Athanasou, 1998). Where data is being captured at levels three and four the criteria will have to be designed so that they can capture the relevant information. The culture of the organisation should also be taken into account (Lewis and Thornhill, 1994).

8.3. *How do we measure the un-measurable?*

One option is to focus on specific objectives for the individual learner, Industrial Society (1998) suggests that this may be in the form of a pre-course briefing between the learner and their line manager, followed by a de-brief after the event. During this meeting they can agree the areas that they want to measure as well as how they can be measured.

Organisations may need to take a wider view on things that appear to be difficult to quantify by reflecting on how they could be measured in more innovative ways. Examples might include programme looking at less tangible areas such as communication skills.

8.4. *Methods of data collection*

The most frequently used method of data collection is asking participants to complete evaluation sheets towards the end of the session (Eseryel, 2002). The advantage of this method is that is a quick process for the respondents as usually they revolve around ticking boxes . Where the learners are asked questions which involve selecting the most appropriate response, this means that the full dataset can also be compiled and summarised easily. The speed in which these forms can be completed at the end of the session is also useful for trainers as they tend to get high response rates.

A further limitation in existing practice is that there is a tendency for the same forms to be used for every session, despite the diversity of the content and structure of the sessions (Dawson, 1995). As well as limiting the range of information provided there is also a danger that learners get bored in completing the same form after every session and resort to their 'default' responses rather than ranking each one based on their specific reflections. Lingham et al (2006) suggests that many organisations always use the same type of questionnaire (and in many cases the same content) for budgetary reasons.

Whilst using generic forms may be appropriate for learning which will only be evaluated at stage one (and possibly stage two) they would be unlikely to be able to capture all of the information required for stages three and four. One possible way to proceed may be to use generic forms which include a variety of open questions, though there is a danger that insufficiently detailed responses may be provided by the learners.

Russ –Eft and Preskill (2008) suggest using a alternative distribution methods to collect the evaluation data, perhaps electronically and that careful consideration should be paid to limiting the amount that the participants are expected to complete. This would require the organisation to agree what the priorities should be and then look at efficient ways in which this information should be collected.

APSC (2005) identify a range of data collection methods (shown below in Figure 4), all of which have different strengths and weaknesses in terms of the time that it would take to collect the data and their appropriateness for different types of interventions:

Figure 4

Methods of collecting evaluation data

- Relevant planning documents
- Reaction sheets
- Assessments and tests
- Participant and supervisor surveys
- Success and failure case studies
- Individual learning action plans
- Individual impact maps
- Performance management processes
- Interviews
- Structured workplace observations
- Work outputs
- Workforce performance data

Within his research with senior managers Clegg (1987) questioned the participants on the extent to which they used 'hour-by-hour student reaction reports during course' as a more innovative method of evaluation. It was interesting to note that 34/36 respondents had never used this method; however this may be a reflection of the intensiveness of the method and the impact that it may have on the flow of the delivery of the interventions.

James and Roffe (2000) argue that some organisations can be cynical about using different forms of evaluation (where they are used to using questionnaires) so there is a need to agree on expectations and where appropriate, for the trainer to provide a case for using a different method. Practical considerations also need to be taken into account so that the levels of reflection (and the resources required) are commensurate with the level and types of interventions taking place.

Ammons and Niedzielski-Eichner (1985) also stress the importance of considering *who* will undertake the evaluation and whether this should be someone who is internal/external to the organisation. This decision is likely to depend on the nature of the programme and the primary reasons for evaluation as there would be likely cost implications of employing an external evaluator.

In summary, evaluation instruments need to be easy to understand and be in a format which is quick to complete to maximise full returns; whilst at the same time being comprehensive enough to include all of the relevant information (Green and Skinner, 2005).

8.5. Timing issues

Lewis and Thornhill (1994) are clear about the need to use an integrated model of evaluation which involves evaluation before and after the intervention as a more strategic approach. The benefits of such an approach being that the risk of not meeting the objectives should be minimised. Despite the benefit of this approach there is little evidence of pre- and post- event evaluation. Dawson's (1995) research undertaken in 15 Local Authorities showed that the majority of organisations only completed one evaluation questionnaire and this was immediately after the training session. Based on her research the author recommends that three evaluation sheets should be used; pre-course, post-course and late enquiry sheets.

Darby (2006:229) feels that it is important to judge the conduct of the course and feels that this is best achieved straight after the event as it can *"influence on any decision [by the learners] either to reject it or to*

adopt and transfer to the workplace what has been learned ". Support for the need to undertake an additional evaluation after a given period of time is provided by authors such as Chappell (2008) though Short (2009) argues that a lapse in time may make it harder for learners to recall meaningful information and that organisations need to make the best possible use out of the 'window of opportunity' so that specific benefits can be isolated and explored. Testing just after the event is also advocated in the work of Mann (1996).

Organisations need to be clear about whether the effects of the learning and development interventions are likely to be short term, long term or both. To some extent this will be influenced by the opportunities that the learners have to use this knowledge within the workplace. If they attend an event as part of their longer term career planning it may take a while for the opportunity to arise.

8.6. The case for evaluating informal learning

Yeo (2008:317) states *"research by Marsick and Watkins (1990) found that of all employee learning, only 20% learn from structured training programmes".* This suggests that if organisations want to build up a true picture of the success of different learning interventions they may wish to capture some of the less formal learning which may make a significant contribution to performance. Again there would be practical implications of trying to capture evaluation data from every learning event as time would be needed for the learners to undertake this (assuming that they can identify occasions where they have benefitted from informal learning). If this learning takes place when an employee joins an organisation (as part of the induction process) this could be evaluated as part of the overall review of their induction, where it happens on a more ad hoc basis this may be difficult to identify and reflect upon.

8.7. Managing the evaluation data

Standard data should be retained but it is also important that the data is actually reviewed and analysed so that changes can be made where appropriate. Basic data that should be collected included are cost, number of occasions, attendance rates. The data collected will need to be consistent with organisations' learning and development strategy as well as their overall evaluation strategy.

Data may be collected in different ways such as questionnaires, interviews or other frameworks at the evaluat/ion design stage it will be important to consider how the responses can be collated and analysed. This may involve the use of technology as a means of capturing the data and presenting it in relevant formats. Weissner et al (2008:380) provides an interesting summary statement: *"Usefulness of evaluation data depends on its accessibility and usefulness to those who can effectively collect, analyse and employ it".* This highlights the need for the organisation to have access to the skills to analyse the data and then make sure that relevant actions are taken. It would seem appropriate to identify a specific person or team to look after this important task; this would also reinforce the importance of the process.

Organisations will also need to consider the issues of anonymity and confidentiality when asking learners to provide feedback (Ammons and Niedzielski-Eichner, 1985). To gain the most useful feedback the learners will need to feel that they are free and able to give an honest assessment, if they can be identified through their feedback this may inhibit the information that they provide; thereby decreasing the value and validity.

8.8. Evaluating the evaluation process

This review has already established that a 'one size fits all approach' is unlikely to meet an organisation's needs due to the diversity of their training and development offerings (Eseryel, 2002). It is therefore important that they continuously monitor the added value that can be provided through evaluation. Where

the data collected does not provide a detailed enough picture it is necessary for the evaluation to be re-designed so that it captures relevant information in an appropriate format.

Cotton (1995) identifies four interesting considerations for designing assessment tasks as shown below in Figure 5. These issues could also be appropriate to use when designing evaluation data as they focus on both issues of credibility (i.e. validity and reliability) and the more pragmatic elements which would be of interest to trainers and organisations.

Figure 5

Considerations for designing assessment tasks (Cotton, 1995)

Validity – Does it measure what you want it to measure?

Reliability – Does it measure in a predictable way?

Practicality – Is it useful in real life?

Fairness – Does it advantage or disadvantage any students?

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9. **Contemporary debates in effective evaluation**

   9.1. Return on investment (an overview)

There is a growing need for HR professionals to be able to provide performance measures for the activities that they carry out (Mulvaney et al, 2006) and particularly for those where there are direct cost implications, for example; the provision of learning and development interventions. Specifically they need to provide the bottom line impact of training programmes. Expressed in simple terms; ROI allows organisations to identify the impact of a specific investment on the bottom line (Simpson, 2002). Despite the fact that there is widespread appreciation of the value of using ROI, few organisations do so (Hall, 2003).

Rowden (2005:31) provides a particularly useful introduction which emphasises one of the challenges of evaluating learning and development activities:

> *"The 'bean-counters' in the organization are likely to know exactly how much training costs but they may have little idea of its value. HR must be able to supply that information if it is to truly become a strategic part of the organization".*

This infers that HR have significant role to play in changing the perceptions of some about the value of training and ensuring that supporting data (whether qualitative or quantitative) can be provided. Management need to be clear about what they want from their training and development (Rowden, 2005) so that appropriate investment measures can be used though Giangreco (2009) argues that it would be too simplistic to think that simple linear relationships can be drawn from attendance at training and later results. Hick (2000) believes that return on investment is important for six main reasons, as shown below in Figure 6.

Figure 6

The importance of return-on-investment

1. HRD budgets have grown and so has accountability

2. Total quality measurement and continuous process improvement has put a bigger focus on

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measurement.

3. Focus on bottom line due to its outsourcing; restructuring this places a link on training meeting business needs (strategic)

4. Economic issues

5. Must show contribution to business

6. Increased awareness that training can be measured

Organisations and trainers may have reservations about attempting to calculate return on investment (ROI) due to concerns about the cost, time and human resources that would be needed to carry it out with confidence (Burkett, 2005a). It is therefore necessary for them to generate appropriate criteria to determine which programmes will be evaluated at this level. Ellis (2005) provides an interesting quote: *"bottom line; it's better to measure strategically than constantly"* which reinforces the need to make decisions about which type and level of programmes need to have their ROI measured.

In response to the costs associated with calculating ROI on programmes (assuming that an organisation has a large portfolio of training interventions that they offer) Burkett (2005a:12) identifies ten cost saving approaches to ROI (provided below in Figure 7) which should reduce the costs involved in undertaking the ROI process.

Figure 7

Cost saving approaches to return-on-investment

- Plan for evaluation early in the process – by developing clear programme objectives, defining evaluation purposes, determining evaluation timing and setting evaluation targets for specific programmes.

- Build evaluation into the training process – it should not be an 'add on' element and should be part of a stated evaluation framework. Links between needs, objectives and evaluation targets at the training programme design stage.

- Share the responsibilities for the evaluation – including managers, instructional designers, facilitators and participants.

- Require participants to conduct major steps – for example by participating in interviews, focus groups and follow up sessions.

- Use short cut methods for major steps – by using existing data to perform a gap analysis.

- Use sampling to select the most appropriate programs for ROI analysis – by considering which programmes the ROI data is most useful for.

- Use estimates in the collection and analysis of data

- Develop internal capability – so that an existing member of the team can undertake the ROI process thereby cutting costs.

- Streamline reporting by establishing what the most important impact data are.

- Utilise technology to perform the data analysis

An ongoing problem is that the benefits of many programmes tend to be subjective (James and Roffe, 2000) and there are methodological complexities in measuring it (Carliner, 2009) because of other potential

intermediaries. Soft skills are by their nature more difficult to quantify though Philips (1996) proffers a model to convert such data to monetary values by focusing on a single unit and calculating the annual value. Where estimates are required as part of such calculations Phillips urges the need to take a conservative approach to attributing values and the need to be able to explain approaches and assumptions.

Philips (1996) suggests that only 10% of interventions should be explored at ROI level and Ellis (2005) defines specific criteria to identify the most appropriate interventions to be calculated at the ROI level:

- High level of visibility

- Those with strong management interest

- Those with strong ties to company objectives

Whilst Philips (1996:4) is clear about the advantages of calculating return-on-investment he urges caution in some areas:

> *"when reporting training results . credibility is always an issue. It is the crucial that the data be accurate and the conversion believable"*

Other possible measures on investment include:

- Increases in levels of customer satisfaction (Brown, 2001)

- Increase in productivity (Rowden, 2005)

- Time saved

- Improved teamwork

- Enhanced organisation commitment

Whilst Carliner (2009) suggests that performance outcome data can be collected through looking at measures that are independently generated within the organisation (e.g. overall financial performance) this would appear to have limitations in being able to identify cause an effect or indeed even correlations between the two.

9.2. Return on expectation (an overview)

Return on expectations (ROE) requires stakeholders to evaluate the training outcomes in terms of what they expect to be able to do after undertaking the intervention. The rationale behind this concept is that the success of the intervention is assessed by looking at the extent to which these expectations have been met; thus relying on carefully constructed and specified expectations to reduce ambiguity.

Anderson (2009b) states that key questions underpinning a return on expectation approach are:

- What were the original expectations of the organisational stakeholders for the learning or training? Have those expectations since changed?

- What changes have occurred as a result of the learning processes?

- To what extent have stakeholder expectations been met?

There are clearly a range of issues to consider in using expectations for example; ensuring that they are realistic i.e. not too easy or difficult to achieve as that might impact on the motivation of the trainer and/or learners. There is also an onus on managers to be as specific as possible about what they are looking to achieve rather than general statements about having happy customers. It is also important that the

managers' expectations are in line with the expectations of senior managers and the overall organisation – they need to have a longer term orientation rather than just considering the immediate needs of their team.

The nature of this feedback is predominantly qualitative (Simpson, 2002) which will be relevant and adequate for many programmes – particularly those delivered in-house

A related approach may be to look at 'impact analysis' as outlined in the work of Bramley and Kitson (1984) whereby the relevant stakeholders discuss and agree the objectives and the behaviours that they will require and thereby agree their own criteria.

This also requires a clear understanding of the objectives.

Short (2009:17) emphasises the key role played by the trainer/facilitator in setting objectives and comments *"was the learning outcome clear or vague? In other words, did the designer user a target rifle or a shotgun approach to determining learning objectives?"*.

9.3. Return on investment or return on expectation?

A wider advantage of the return on investment approach is that it allows the HR team to speak the same financial language as the management team and increased credibility and input into strategic decisions (Purcell, 2000). As ROI is particularly expensive to carry out and the literature suggests that it should only be used on a small number of projects it may be useful to also use return-on-expectations.

9.4. Evaluation of coaching and mentoring interventions

Coaching and mentoring are increasingly been used as methods of learning and development (Bloch, 1995, and Leedham, 2005) however they are also some of the interventions that are the least likely to be evaluated (Industrial Society, 1998 and Leedham, 2005). This position does not appear to have changed as in the CIPD (2008) survey only 8% of L&D respondents evaluate the effectiveness of coaching through a formal evaluation process. Whilst some exceptions exist such as Paige (2002) it remains evident that there is little empirical evidence in this area.

9.5. The impact of the trainer/facilitator

Organisations need to reinforce the need for the trainer/facilitator to evaluate their sessions and this should be made clear within job descriptions or contract for services. Where this does not happen it may be appropriate to consider sanctions or penalties as a way of reinforcing the importance of undertaking evaluations on all programmes.

Dawson (1995) argues that there should be a requirement for the trainer to design and use customised evaluation forms so that the data can be used effectively, otherwise they may continue to use generic forms which do not add any value. In order to do this they need to have a very clear picture of why different types of training are needed (Athanasou, 1998) i.e. is it in response to a prior problem of legislative requirement? This information will also enable the trainer to take appropriate decisions in their methods of delivery and in how they evaluate their provision.

Towler and Dipboye (2009:664) emphasise the importance of the role of the trainer and express surprise that this is such as under-researched area. Within their research they looked to investigate the impact of the trainer's ability to be both *expressive* and *organized*. The authors felt that these characteristics are important as

> *"the more of each is seen to improve learning and the effects of these components are assumed to be additive. Implicit in this thinking is the assumption that trainees react more positively to an expressive and organized lecture and are better able to recall and apply what they learn".*

An alternative approach (i.e. McNamara et al., 1996) suggests that less organized trainers may actually help learners to use the information more; particularly where they have had to undertake their own research to fill in the gaps or develop a greater understanding. This infers that successful learning interventions should encourage the learners to undertake further work of their own to extend and expand their knowledge and skills.

Carliner (2009) suggests that few organisations will have staff in their training and development departments that are sufficiently skilled and/or experienced to be able to analyse the resultant evaluation data. An additional problem is highlighted in the work of Davidove and Schroder (1992) *"too many training professionals have no idea how training investments relate to their companies business objectives"*.

10. The role of line managers in effective evaluation

The UK National Skills Task Force (NSTF, 2000:37) reinforces the crucial role of managers:

> *"the capability and commitment of managers and key workers throughout an organisation's hierarchy are the most important factors in determining the provision and effectiveness of workplace learning (both formal and informal)"*.

Mumford (1993) argues that the increased emphasis placed on development in organisations creates the need for managers to take the role as developers of their staff. This is consistent with the wider literature on the devolvement of people management responsibilities to managers who may not have the relevant skills and knowledge. Senior management respondents to Anderson's (2009b) study also recognised that line managers have an important role to play.

Where managers fail to demonstrate their own commitment to programmes or do not support employees this can have a negative impact on the organisation (Kirkpatrick, 1998). As 49% of respondents to CIPD's (2008) Learning and Development survey believed that more responsibility for learning and development would continue to be passed to line managers this is a critical issue that needs to be addressed by organisations.
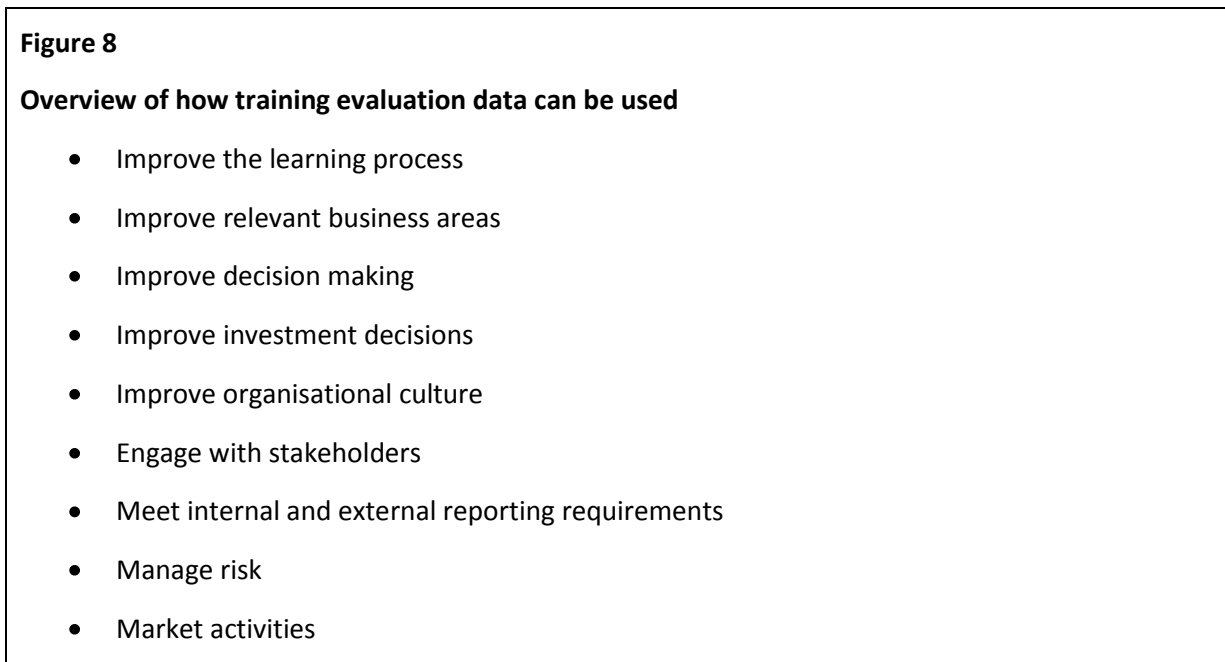
McGuire et al (2008) also argue that managers' motivation towards the development of their employees will be partially based on self-interest and that they may make decisions based on their own personal values. Horwitz (1999:188) states that FLMs' lack of enthusiasm for developing their staff is *"reinforced by the findings that the least popular training delivery mechanisms include coaching and mentoring"*.

Beattie (2006) is clear that line managers play a critical role in facilitating learning in the organisation and this reinforces the earlier findings of the Industrial Society (2001) where 43% said that lack of line manager support was one of the main problems encountered in evaluating training.

To reinforce the importance of the role played by line managers in the training and evaluation process it is recommended that clear lines of accountability are built into the process (APSC, 2005) and are monitored on a regular basis. This could involve documenting their input throughout the process – from need identification, and forcing them to make the links with desired learning outcomes.

For line managers to be successful in enabling the development of their employees, they need to have been developed themselves in terms of skills and knowledge (IPD, 1995 and Cunningham and Hyman, 1998). Storey (1992:213) reinforces this by stating *'managers who have themselves received little education and training are less likely to recognise or approve the need for investment in the training of their subordinates'*.

Potential ways to engage line managers is to highlight the benefits that can be gained from the information collected as part of the evaluation process. Organisations could use the information which is presented by APSC (2005) as shown below in Figure 8.

Figure 8

Overview of how training evaluation data can be used

- Improve the learning process

- Improve relevant business areas

- Improve decision making

- Improve investment decisions

- Improve organisational culture

- Engage with stakeholders

- Meet internal and external reporting requirements

- Manage risk

- Market activities

One of the conclusions of the work undertaken by McGuire et al (2008: 346) was that:

> *Line managers who place strong emphasis on achievement, self-reliance, competence and self-respect are more likely to champion training and development in the workplace.*

McGuire et al (2008:346) also state:

> *Managers will not champion training and development if they are fearful about the achievements of their subordinates and uncertain about their own capabilities.*

11. Challenges in undertaking evaluation

Dawson (1995) identified a range of reasons why organisations may not systematically carry out evaluations of their provision, including; cost, lethargy, fear of criticism and difficulty of measurement. From the earlier work of Clegg (1987:67) we can also add *'lack of adequate evaluation methodology'* and *'lack of expertise'* to the list. Measurement will be critically important and James and Roffe (2000:13) identify a key challenge as being potential *"opaqueness in the measurement criteria"*.

Lee and Pershing (2002:184) undertook research with SMEs that looked specifically at the variables needed to construct a useful reaction-based questionnaire which they termed 'reactionnaire'; this builds on one of the key challenges perceived in using 'happy sheets' by designing them in a much more constructive manner. Their dimensions of reaction evaluation are shown below in Figure 9.

Figure 9

Dimensions of reactionnaires (Lee and Pershing, 2002:184)

Dimensions	Purpose
Program objectives/content	To evaluate the objectives of a program with participants' expectations. Appropriateness, structure, level and up-

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	datedness of the content presented in the program
Program materials	To ascertain the effectiveness, efficiency and usefulness of written and other materials used in the program.
Delivery methods/technologies	To judge the appropriateness and effectiveness of instructional delivery methods including media technologies.
Instructor/facilitator	To rate the presentation skills, leadership and overall effectiveness of the instructor or facilitator.
Instructional activities	To evaluate the appropriateness and usefulness of in- and out-of-class activities.
Program time/length	To assess the time length and sessions of an entire program.
Training environment	To evaluate the adequacy of the physical training environment, including the classroom, dining facilities, lodging and leisure facilities.
Planned action/expectation	To evaluate the participants' plans and expectations for applying what was learned upon returning to the job and to identify barrier to applying what was learning on the job,
Logistics/administration	To evaluate the smoothness and effectiveness of scheduling, registration and other logistical and administrative matters associated with the program.
Overall evaluation	To determine overall participant satisfaction with and feeling about the program.
Recommendations for program improvement	To solicit suggestions and recommendations for improving this or similar programs in the future.

A key challenge for both organisations and academics is the extent to which the training alone is responsible for any changes? For example, does on the job activities or less formal support may also have an impact. This should be considered when designing the evaluation process. They also need to consider the type of culture that exists in the organisation and any possible outcomes on the success of learning and development interventions and evaluation activities.

Buckley and Caple (1990) warn against the situation where an organisation invests more into the evaluation process than the cost of the initial reason why the training was needed. This signifies the need to carefully consider the costs and benefits associated with it.

Dawson (1995:3) comments *"using such a document [training evaluation form] has become a ritual, unfortunately rituals do not produce fresh data despite their pungent symbolism"* which emphasises the need to consider more diverse methods of evaluation so that more useful and meaningful data can be produced and analysed.

A final area for consideration occurs where interventions take place over an extended period of time. This raises a question of whether each element should be evaluated individually or should it take place right at the end (where learners may focus on the most recent interventions).

12. Maximising the effectiveness of the evaluation process

APSC (2005) identified through their research a range of conditions that need to be in place to maximise the effectiveness of interventions. One of the more innovative recommendations is that the evaluation feedback needs to be presented in such a way that it will be engaging to senior managers (as well as involving them in the process where appropriate). It is also important that the learners can see how their feedback has been taken onboard as this may motivate them to undertake detailed future evaluations.

Giangreco et al (2009) suggest four areas that should be considered when revising evaluation strategies; particularly where a diverse range of provision exists:

1. Size of the company

2. Type of audience

3. Contents of training

4. Legal framework

13. Learning transfer

One of the key criticisms of Kirkpatrick's model (and some of the subsequent iterations) is that it fails to address the vital area of transferring knowledge into the workplace. As the key purpose of learning and development activities is to have a positive impact on the workplace it is a surprising omission in many of the models.

The need to be able to transfer learning into the workplace in the form of increased performance is of critical importance to organisations as until this happens the organisation does not 'see' the benefits of their investment into the training of their employees. This is another complex issue and one that is explored in detail in the extensive literature review compiled by Cheng and Hampson (2008:336) who conclude:

> *"We have reviewed the existing literature on transfer of training and found that there are inconsistent and puzzling findings in the empirical research".*

14. Conclusions: practical implications of the desk review

14.1.   Evaluation as an ongoing HR priority

Systematic training evaluation is widely understood to be important (i.e. 98% of respondents to the Industrial Society, 2001 research) and with more organisations identifying an increased commitment to it (Industrial Society, 2001) it is a key contemporary issue. There are no easy to cures to this problem and isolating the effect of the training is likely to remain an ongoing issue (Rowden, 2005). It is clear from this review that evaluation should be built into the design process to ensure that it will cover the most appropriate areas and that they will be realistic.

14.2.   Current economic climate

In the current economic climate it is clear that there will be an increased focus on the impact of training on the bottom line. However, it is also apparent that this will be at different levels and that it is neither achievable nor appropriate to calculate the ROI on all interventions. Organisations need to carefully consider where their resources would be best placed to collect ROI data and this should be consistent with their overall evaluation strategy.

14.3. The continuum of learning interventions

There will always be a long continuum of the level of learning interventions from basic knowledge acquisition to more complex concepts which reinforces the need for a range of tools that can be used to capture evaluation data from different interventions. Evaluation tools will also need to be designed so that they meet the requirements of senior managers as this is not always the case (Short, 2009). From a practical perspective it is clear that the cost of the tools should not exceed their value (Ammons and Niedzielski-Eichner, 1985) so this must be considered in the design phase. Whilst one of the reasons why organisations fail to conduct thorough evaluations is cost there is no evidence in the literature that organisations actually know how much the evaluation process costs; this is an area which could be investigated in more detail.

14.4. Designing or reviewing evaluation programmes

Whilst this paper has highlighted some of the potential weaknesses of using standard evaluation forms Dawson (1995:4) believes *"used with other measures, as part of an overall evaluation strategy they can form a useful part of thorough formative and summative evaluation".* Testing after the event allows the learner to demonstrate their skills and/or knowledge, however if it was not also tested beforehand it is difficult to establish whether they have learned anything new (Dyer, 1994).

Reviewing success against initial objectives can be a very useful way to evaluate however there needs to be some flexibility in creating and agreeing objectives as Short (2009:17) states: *"All too frequently, course objectives are pre-fixed with non-behavioural, obscure and/or immeasurable learning outcomes".*

There needs to be ownership of the training programmes and the evaluation process (Tennant et al., 2002) to reinforce the importance and ensure that the data is used for the benefit of the organisation and trainers. Where internal HR Departments have responsibility for designing, delivering and evaluating learning and development activities they will be more successful where they consider their potential learners as being clients and take a client-focused approach (Athanasou, 1998).

Finally, it is important to consider the sector and industry in which organisations operate both at the design stage and also when the tools are actually implemented (Ammons and Niedzielski-Eichner, 1985); this will be particularly useful for public sector organisations.

14.5. A supportive culture

It is important to create a climate where evaluation is seen as a development tool – not labelling programmes as good or bad (Mann, 1996). Where evaluation of learning is a standing item in relevant agendas (APSC, 2005) and is shared with relevant stakeholders this sends a strong message to managers and employees. Top managers need to champion evaluation tools and lead by example (Tennant et al., 2002). The learning environment also needs to be conducive to a positive learning experience (Chappell, 2008) as does the organisational structure (Bramley, 1999).

14.6. Key questions to ask

As a result of this review of the literature a series of questions have been identified for organisations to consider:

- What is the intended purpose of their evaluation process?

- What are the main areas that they want to explore in the evaluation process i.e. prioritising the key questions?

- Who in the organisation will have responsibility for overseeing evaluation before, during and after interventions?

- What will happen to the evaluation results? Who will have access to them?

- How will resource implications influence the evaluation process?

- What are the timing issues in relation to when evaluation(s) should be carried out?

- Which programmes should be used to calculate return on investment?

14.7. Final conclusions

Evaluation should become built into the training process; something that takes place after all learning interventions however this does not mean that a one size fits all approach is appropriate. This is also partly a cultural issue – managers and employees need to accept that this is an important stage in the overall learning and development provision.

Brinkerhoff (2006:302) gives examples of organisations that deliver exactly the same training but that have very different levels of impact and suggests that this can be explained by:

> *"The answer lies in the way that companies make use of training, the way it is organized, planned, implemented, and above all, followed up and supported".*

Caution appears to be advised by Giangreco et al. (2009) against over-emphasising the evaluative aspects in case they impact on the training intervention. This suggests that the evaluation process should be carefully introduced within learning interventions so they do not appear to be the main focus and distract from the content of the programme(s).

15. Appendix One

Brief descriptions of the 16 factors measured by the learning transfer system inventory

Ability to use knowledge and expertise	**Personal capacity for transfer**	How individuals' workload, schedule, personal energy and stress levels facilitate or inhibit transfer of learning into the workplace
	Perceived content validity	The degree to which skills and knowledge taught in training are similar to performance expectations as well as to what is needed to perform more effectively. Similarity of methods and materials to those used in the work environment
	Transfer of design	Does the training programme clearly link learning with on-the-job performance and demonstrate how to apply new knowledge and skills?
	Opportunity to use learning	Does the organisation provide individuals with opportunities to apply new skills? Is there adequate provision of resources to apply new skills such as equipment, information and materials as well as financial and human resources?
Motivation to use knowledge and expertise	**Motivation to transfer earning**	Are trainees motivated to utilise learning? To what degree do individuals feel able to perform and believe new skills will help them to more effectively perform on-the-job?
	Performance – outcomes and expectations	This is a measure of whether individuals believe that applying learned skills and knowledge will lead to recognition/rewards they value. Does the organisation create an environment in which individuals feel good about performing well?
	Transfer effort – performance expectations	Do individuals believe that applying skills and knowledge learned in training will improve their performance? How have efforts to utilise new skills made a difference in the past and will such efforts affect future productivity and effectiveness?
Work environment designed to support use of knowledge and expertise	**Personal outcomes – positive**	What positive outcome exist for the individual as a result of applying training on the job?
	Personal outcomes – negative	Are there any outcomes for the individual as a result of not applying training on the job? Negative outcomes include: reprimands; cautions' and penalties. It also indicates whether it is noticed or not if employees do not use their training.
	Peer support	Do colleagues mutually appreciate and encourage

		the use of new skills learned in training? Do colleagues expect new learning to be applied and do they show patience when new skills/techniques are tried out?
	Supervisor/manager support	To what extent are managers/supervisors involved in: clarifying performance expectations after training; identifying opportunities to apply new skills and knowledge; setting realistic goals based on training; working with individuals on problems encountered while applying new skills; and providing feedback when individuals successfully apply new abilities?
	Supervisor/manager sanctions	Do individuals perceive negative responses/opposition from managers/supervisors when applying new skills? Do they assist in identifying opportunities to apply new skills and knowledge?
	Openness to change	This factor surveys individuals' perception of their workgroups' resistance to change, willingness to invest energy for change, and the degree of support provided by the workgroup to individuals who use techniques learned in training
	Feedback – performance coaching	Do individuals receive indicators from people in their work environment (colleagues, managers, employees) about their job performance? These indicators may be formal and/or informal such as constructive input, assistance and feedback from people.
Trainee characteristics – secondary elements	**Learner readiness**	How well were individuals prepared for training? Did they have the opportunity to provide input prior to training? Did they know what to expect during training and did they understand how training was relevant to their work performance and job-related development?
	Performance self efficacy	Are individuals confident and self-assured about applying new abilities and overcoming obstacles that hinder the use of new knowledge and skills?

References

Alliger, G.M. and Janak, E.A. (1989) 'Kirkpatrick's levels of training criteria: Thirty years later', *Personnel Psychology*, 42, pp.331-342.

Ammons, D.N. and Niedzielski-Eichner,p.a. (1985) "Evaluating Supervisory Training in Local Government: Moving Beyond Concept to a Practical Framework, Public Personnel Management, 14, pp. 211-230.

Anderson, V. (2009a) 'Desperately seeking alignment: Reflections of senior line managers and HRD Executives', *Human Resource Development International,* 12(3), pp.263-277.

Anderson, V. (2009b) The Value of Learning. London: CIPD.

APSC (2005) *Evaluating learning and development: A framework for judging success.* Canberra. Australian Public Service Commission.

Beattie, R.S. (2006) 'Line managers and workplace learning: Learning from the voluntary sector', *Human Resource Development International,* 9(1), pp.99-119.

Bloch, S. (1996) 'Coaching tomorrow's top managers', *Employee Counselling Today,* 8(5), pp30-32.

Bramley, P. and Kitson, B. (1994) 'Evaluating Training against Business Criteria', *Journal of European Industrial Training',* 18(1), pp.10-14.

Brinkerhoff, R.O. (2006) 'Increasing impact of training investments: An evaluation strategy for building organizational capability', *Industrial and Commercial Training,* 38(6), pp.302-307.

Brown, B.L. (2001) Myths and realities: Return on investment in training. [Online] Available at: http://www.calpro-online.org/eric/docs/mr00031.pdf

Buckley, R. and Caple, J. (1990) *The Theory and Practice of Training*. London: Kogan Page.

Burkett. H. (2005a) 'ROI on a shoestring: evaluation strategies for resource-constrained environments : Measuring more with less (part i), *Industrial and Commercial Training,* 37(1), pp.10-17.

Burkett, H. (2005b) ''ROI on a shoestring: evaluation strategies for resource-constrained environments: Measuring more with less (part ii)', *Industrial and Commercial Training,* 37(2), pp.97-105.

Burkett, H. (2006) Ten Tactics for Highly Effective Evaluators [online]. Available at: http://evaluationworks.net/documents/Ten%20Tactics%20for%20Highly%20Effective%20Evaluators%20(Dec%2006).pdf

Carliner, S. (2009) '*Maybe ROI really is a waste of time',* Training, June.

Cheng. E.W.L. and Hampson, I. (2008) 'Transfer of Training: A review and new insights', International Journal of Management Reviews, 10(4), pp.327-341.

Chiaburu and Lindsay (2008) 'Can do or will do? The importance of self-efficacy and instrumentality for training transfer', *Human Resource Development International,* 11(2) pp.199-206.

CIPD (2007) *Learning and Development Survey.* London: CIPD.

CIPD (2008) *Learning and Development Survey.* London: CIPD.

Clegg, W.H. (1987) 'Management training evaluations: An update', *Training and Development Journal,* February, pp.65-71.

Cotton, J. (1995) *The theory of learning strategies: An introduction.* London: Kogan Page.

Darby, J.A. (2006) „Evaluating training courses: an exercise in social desirability?‟, *Journal of European Industrial Training,* 30(3), pp.227-239.

Davidove, D.E. and Schroeder, P.A. (1992) 'Demonstrating ROI of training', *Training and Development*, August, pp.70-1.

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

Donovan, P; Hannigan , K. and Crowe, D. (2001) 'The learning transfer system approach to estimating the benefits of training: Empirical evidence', *Journal of European Industrial Training,* 25(2), pp.221-228.

Dyer, S. (1994) ' Kirkpatrick's Mirror', *Journal of European and Industrial Training,* 18(5), pp.31-32.

Elliott, M., Dawson, R. and Edwards, J. (2009) 'Providing demonstrable return-on-investment for organisational learning and training', *Journal of European Industrial Training,* 33(7), pp.657-670.

Ellis, K. (2005) What's the ROI on ROI?' Training, 42(1), pp.16-21.

Eseryel,D. (2002) 'Approaches to evaluation of training: Theory and Practice', Educational Technology and Society, 5(2), pp.93-98.

Felstead, A., Green, F. & Mayhew, K. (1997) *Getting the measure of training a report on training statistics in Britain.* Leeds: Centre for Industrial Policy and Performance.

Gershon, P. (2004) *Releasing resources to the front line: Independent Review of Public Sector Efficiency.* Norwich: HMSO.

Giangreco, A., Sebastinao, A. and Peccei, R. (2009) 'Trainees reactions to training: An analysis of the factors affecting overall satisfaction with training', International Journal of Human Resource Management, 20(1), pp.96-111.

Goldwasser, D. (2001) Beyond ROI. Training 38(1) pp.82.

Green, P. and Skinner, D. (2005)' Does time management training work? An evaluation', International Journal of Training and Development, 9(2), pp.124-139.

Hall, B. (2003) 'Click here for ROI', Training, 40(3) pp.15.

Hamblin, A.C. (1974) Evaluation and Control of Training: New York: McGraw-Hill.

Hick, S. (2000) 'Why return on investment?', Training and Development 54(7), pp.59

Horwitz, F.M. (1999) 'The emergence of strategic training and development: The current state of play', *Journal of European Industrial Training,* 23(4/5), pp.180-190.

Hussey, D. (1988) *Management Training and Corporate Strategy: How to Improve Competitive Performance*. Oxford: Pergamon Press.

IPD (1995) *Personnel and the Line.* London: IPD.

James, C. and Roffe, I. (2000) 'The evaluation of goal and goal-free training innovation', Journal of European Industrial Training, 24(1), pp.12-20.

Kirkpatrick, D.L. (1977) 'Evaluating training programs: Evidence vs proof', *Training and Development Journal,* pp.9-12.

Kirkpatrick, D.L. (1998) Evaluating training programs: The four levels. 2nd edition. San Francisco: Berrett- Koehler Publishers Inc.

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

Leedham, M. (2005) 'The Coaching scorecard: A holistic approach to evaluating the benefits of business coaching', *International Journal of Evidence Based Coaching and Mentoring'*, 3(2), pp.30-41.

Lewis, P. and Thornhill, A. (1994) "The evaluation of training: An Organizational Approach." *Journal of European Industrial Training*, 18(8), pp. 25-33.

Lingham, T., Richley, B. and Rezania, D. (2006) 'An evaluation system for training programs: A case study using a four-phase approach', *Career Development International,* 11(4), pp.334-51.

Mabey, C., G. Salaman, and J. Storey. (1998) *Strategic human resource management: A reader.* London: Sage.

Mann, S. (1996) 'What should training evaluations evaluate?' *Journal of European Industrial Training*, **20**(9), pp.14-20.

Massey, C. (2004) 'Is the training train out of control? A case of evaluation failure from New Zealand', *Journal of Small Business and Enterprise Development,* 11(4), pp.458-466.

McGuire, D., Garavan, T.N., O'Donnell, D., Saha, S.K. and Cseh, M. (2008) 'Managers' personal values as predictors of importance attached to training and development: a cross country exploratory study', *Human Resource Development International,* 11(4) pp.335-350.

McNamara, D. S., Kintsch, W., Songer, N. B. and Kintsch, W. (1996). ,Are good texts always better? Interactions of text coherence, background knowledge, and levels of understanding in learning from text',. *Cognition & Instruction,* 14, pp.1-43.

Mulvaney, R.R.H; Zwahr, M. and Baranowski ,L. (2006) 'The trend towards accountability: What does it mean for HR Managers?', *Human Resource Management Review,* 16, pp.431-422.

Mumford, A. (1993) *How Managers Can Develop Managers.* Aldershot: Gower.

NSTF (2000) *Third Report of the National Skills Taskforce: Tackling the Adult Skills Gap: Upskilling Adults and the Role of Workplace Learning.* London: DfEE..

Paige, H. (2002) 'Examining the effectiveness of executive coaching on executives', International Education Journal, 3(2), pp.61-70.

Philips, J.J. (1996) 'How much is the training worth?', Training and Development, 50(4), pp.20-24.

Phillips, J.J. (2002), Return on Investment in Training and Performance Improvement Programs, 2nd edition. Woburn: Butterworth-Heinemann.

Purcell, A. (2000) '20/20 Return on investment', Training and Development,

Raab, R.T; Swanson, B.E; Wentling, T.L., and Dark, C.D. (Eds.). (1991). *A trainer's guide to evaluation.* Rome: FAO.

Rowden, R.W. (2005) Exploring methods to evaluate the return-on-investment from training. Business Forum. Available from: http://goliath.ecnext.com/coms2/gi_0199-4971411/Exploring-methods-to-evaluate-the.html

Russ-Eft, D. and Preskill, H. (2008) 'Improving the quality of evaluation participation: A meta-evaluation', *Human Resource Development International,* 11(1), pp.35-50.

Schmidt, S.W. (2009) 'Employee demographics and job training satisfaction: the relationship between dimensions of diversity and satisfaction with job training', *Human Resource Development International,* 12(3), pp.297-312.

Short, T. (2009) 'Exploring the vacuum in training evaluation: Is this a case of mission impossible?', *Development and Learning in Organizations,* 23(5), pp.15-18.

Simpson. L. (2002) 'Great Expectations', *Training,* 39(2) pp. 40-44.

Storey, J. (1992) *Management of Human Resources*. Oxford: Blackwell.

Tennant,C.; Boonkrong, M. and Roberts, P. (2002) 'The design of a Training Programme Measurement Model', *Journal of European Industrial Training*, 26(5), pp.230-240.

Towler, A.J. and Dipboye, R.L. (2009) 'Effects of Trainer Expressiveness, Organization and Training Orientation on Training Outcomes', *Journal of Applied Psychology,* 86(4), pp.664-673.

Tyson, S. and Ward, P. (2004) „The use of 360 degree feedback in the evaluation of management development‟, *Management Learning,* 35(2), pp.205-223.

Weissner, C.A., Hatcher, T., Chapman, D. and Storberg-Walker, J. (2008) 'Creating new learning at professional conferences: an innovative approach to conference learning, knowledge construction and evaluation', *Human Resource Development International,* 11(4), pp.367-383.

Yeo. R.K. (2008) 'How does learning (not) take place in problem-based learning activities in workplace contexts?' *Human Resource Development International,* 11(3), pp.317-330.