MARCHMONT OBSERVATORY

Workplace Basic Skills Training Impact Evaluation

Research Report
For The
Leonardo Da Vinci WoLLNET Project

An analysis of current theory and practice in training impact evaluation
with recommendations for the development of a
workplace literacy, language and numeracy
training evaluation toolkit

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ACKNOWLEDGEMENTS

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1   Introduction

This is the final research report by Marchmont Observatory, University of Exeter, as providers of expert research services for the Leonardo da Vinci WoLLNET project, funded under the new European Union Lifelong Learning Programme. The project aims to research, trial, pilot and develop a web-based, user-friendly Toolkit to enable employers, providers and unions to evaluate the impact of workplace basic skills (literacy, language and numeracy) training programmes on learning, individual work performance and organisational performance. As per the WoLLNET project documentation:

> *The Toolkit will include a workplace basic skills training impact evaluation tool based on the needs of stakeholders and grounded in good practice models of workplace training evaluation; bespoke data analysis and reporting tools; and guidance documents for Toolkit users on good practice in workplace basic skills training impact evaluation.*

The overall purpose of the underpinning research presented in this final report is to collate approaches and models currently used in impact evaluation at all stages in the training process. We identify and survey below theories behind individual and organisational programme and training evaluation in the workplace. Practice and practical evaluation exercises across contexts are considered with specific reference to basic skills. We then categorise impact analysis models according to structure and purpose with a view to recommending particular approaches to serve as the basis for the WoLLNET Toolkit.

The report is structured into the following sections. Section 2 details the research methodology used to carry out the research. In Section 3.1 we cover the following aspects of training impact evaluation as reported in the literature:

- conceptualising training impact evaluation, its rationale and processes
- benefits for individuals and stakeholders engaged in training impact evaluation
- environmental factors influencing assessment of training impact: types of workplace, overall staff capacity, and organisational circumstances
- individual considerations to be embedded in workplace basic skills training impact evaluation: perceptions of value to staff, cultural issues and individual skill sets.

In Section 3.2 we analyse and categorise identified approaches to training impact evaluation based on, wherever possible:

- their characteristics, dynamics, factors and practices
- contexts in which each approach is applied and outcomes expected
- any enablers and barriers to implementation
- any other issues associated with application to basic skills training.

Section 4 highlights the results of stakeholders' consultation exercises undertaken across the WoLLNET partner countries including focus groups organised and responses from an online survey. Partner countries' current policies and practice as regards vocational training with specific reference to literacy and numeracy are also included. Findings have been subjected to further disaggregation and analysis to identify existing stakeholder practices in workplace basic skills training impact evaluation, perceived benefits and barriers, and preferences for toolkit development.

Finally, Section 5 makes recommendations based on the assembled evidence and its implications for design, structure and content of the WoLLNET toolkit, including suggestions for how to maximise likely uptake across partner countries.

2 Methodology

The research methodology is based on a combination of mixed methods of desk research, drawing together and analysing findings from primary and secondary sources:

- qualitative survey of the existing literature base on the use of impact analysis and evaluation in training contexts, particularly for purposes of literacy and numeracy training
- qualitative analysis of stakeholder responses from focus groups organised by project partners, and
- qualitative and quantitative analyses of online questionnaire surveys with stakeholder respondents as mediated by the project partners.

2.1 Qualitative survey and analysis: literature review / taxonomy of approaches

The literature review was conducted in two stages, looking initially at general trends in evaluation and impact analysis and then more specifically at their use within training contexts particularly in literacy and numeracy training.

Stage 1
For this secondary research, the body of literature consulted was identified via general Internet indexed sources together with access to full text of selected electronic journals and books held via the University of Exeter Library. Geographical coverage was worldwide and then focused more tightly on practices common across the European Union. Throughout the desk research we have sought to establish:

- evolution of evaluation models over time
- any policy drivers influencing selection of models for evaluation
- which models of impact analysis evaluation are most widely utilised in practice, and why
- contextual sensitivities: whether and how models are targeted towards contexts
- critical review of the pros and cons of models investigated, and their audiences
- geographical spread and preferences for particular models
- how well uptake of evaluation / impact analysis for training purposes matches the outcomes of training, both envisaged and unexpected
- individual and organisational issues for impact evaluation models
- particular challenges associated with the use of training impact evaluation in basic skills programmes.

Stage 2
Following the literature survey, further analysis and categorisation of sources has resulted in a 'taxonomy' of models to compare evaluation approaches and highlight their practical applications. We have aimed to focus on the appropriateness of models to capture training impact by workplace learners with literacy, numeracy or language needs, whether through discrete (standalone) or embedded approaches.

2.2   Qualitative and quantitative analysis: survey findings

This second part of the research aims to complement the first by providing evidence of practical approaches for training impact evaluation currently used in the workplace by WoLLNET partners. It includes primary research which was based on several modes of stakeholder consultation: the results of interviews (telephone or face to face) conducted by project partners; qualitative analysis of focus group data collected by partners, and detailed qualitative and quantitative analysis of the Web based online questionnaire survey designed and implemented by the WoLLNET project. The questionnaire consists of open and closed questions which have been analysed separately and then recombined to produce overall findings.

Open ended survey questions have been subjected to textual analysis to determine frequency of responses which have been cross correlated with types of respondent. In parallel, closed questions have been analysed via the SPSS statistical analysis programme. Routine tests applied to the data include both basic descriptive statistical routines such as frequency and cross correlation between different significant parameters, together with more complex analyses such as Chi square, T test and cluster analysis to confirm relationships between factors and stakeholder preferences. The following criteria have been of particular interest:

- national preferences for particular training impact analysis models or practice
- predominant workplace settings or contexts in which impact analyses are used
- perceived benefits or disadvantages of training impact analysis
- links between impact analysis practice and organisational size or industry sector
- roles of staff carrying out training impact analysis and how their training for this task is managed
- particular aspects of practice receiving greater focus in impact analysis
- stages of organisational training cycles of interest to impact analysis
- hard and soft skills of staff training subjected to impact analysis
- achieved training outcomes, incremental behavioural changes and impact analysis practice
- relationship of impact analysis to wider organisational performance measures.

Findings and analyses from the primary and secondary desk research have informed and shaped the report's recommendations by categorising the most significant approaches from the literature together with evidence of preferred training impact evaluation methods as generated by the online survey. Recommendations for the training impact analysis toolkit are therefore based on theoretical and practical findings together with their feasibility of implementation within partners' individual and national contexts.

3   Theoretical and practical approaches to training impact evaluation

For maximum benefit, evaluation of workplace training initiatives needs to be conceptualised beyond individual staff results to include overall impact on the whole organisation. Any identified returns to investment (ROI) can then be seen as a wider contribution to a workplace team or department activities with linked performance impacts on a company's operations. Employers respond favourably to the integration of results of effective training with business benefits. According to training expert Paul Kearns (as reported in the TrainingZone online resource):

Learning organisations see evaluation and ROI when appropriate as integral to a holistic learning culture. Training = input and learning = output.

Training needs analyses are one method used to identify specific areas for individual improvement although these do not measure benefits at organisational level. The latter tend to be captured by organisational development needs analysis, although these are less in use. Evidence from expert trainers suggests that the most useful approaches are those which look to evaluate impact more broadly and longitudinally than based on a single intervention at one moment in time[1], permitting integration of the outcomes of training with actual practice. We will examine further the role of specific linked activities in section 3.1 below.

Various models have been developed in the past forty years to build a more rigorous approach to evaluating the impact of training. The influential Kirkpatrick multi-level model has itself generated a succession of alternative frameworks for evaluation following its initial introduction and comprises[2]:

- the reaction level
- the immediate / learning level
- the intermediate / job behaviour level
- the ultimate / results level.

The identification of benefits over time is intrinsic to the Kirkpatrick approach in that it aims to capture changes in behaviour resulting from the training intervention which signify that the training has been successful. Such changes may also operate at organisational level and be ultimately linked to training outcomes. Secondary models to Kirkpatrick's may differ in their finer detail but many retain its basic structure. We will review the details of these in section 3.2 below.

In more recent years, the advent of e-learning and technological applications has opened up further possibilities for modelling and supporting training impact evaluation in computer based environments. Generally however evaluation literature has not as yet translated proven evaluation approaches and processes into robust and consistent recommendations for new technology design. We have identified some points of good practice in evaluating Web based training and will include these under section 5 as recommendations for toolkit design.

3.1   Literature survey

The academic and professional literature surveyed broadly classes according to theoretical and practical approaches. A range of international electronic journals was accessed through the University of Exeter's online gateway to Athens resources (online information repository available to UK higher education institutions) that had been identified through entry of global keywords including:

- Training + evaluation + models + (basic skills) or (literacy or numeracy)
- Training + impact + analysis + (organisational or individual) performance
- Training + (Kirkpatrick or multi-level) model

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[1] eg the Chartered Institute for Personnel & Development (CIPD) 'targeted sample', 'systematic' and 'reaction level' approaches
[2] Tamkin, P et al. Kirkpatrick and beyond: a review of models of training evaluation. Brighton: Institute for Employment Studies, 2002.

The results generally produced covered mainly theoretical approaches that had been piloted or reviewed in the literature for international audiences, including studies from the US and Canada, Australia, Europe and Africa. Online journals interrogated with appropriate 'hits' included the following:

- American Journal of Evaluation
- Evaluation
- Evaluation Review
- Journal of Labor Economics
- Management Learning
- Studies in Continuing Education.

In addition, the research team have been able to access complementary practice based books, resources, case studies and toolkits. These have been invaluable in demonstrating the application of the theory to real world practical contexts, techniques and delivery of training impact analysis and evaluation. Practitioner based approaches of particular note include those from the Conference Board, the Chartered Institute of Personnel and Development, the American Society of Training and Development, Training Zone and other training based organisations. We are grateful to Skills for Work for signposting and providing access to a number of these.

Before entering the survey, it should be noted that there was little literature available specifically on impact analysis or evaluation of training interventions on basic skills, literacy or numeracy in the workplace. A US conference paper, reports by the US/Canadian Conference Board and the UK National Research and Development Centre for Adult Literacy and Numeracy at the Institute of Education in London are notable exceptions. These will be covered in section 3.1.3 below. Similarly, nothing was found on the use of online or electronic resources specifically designed to support evaluation in basic skills contexts, although good practice in designing online educational resources is included below to inform recommendations.

3.1.1 Theoretical models

The following key documents conceptualise and highlight the benefits of training impact evaluation. Sources emphasise the importance of alignment between individual and organisational impacts of training. 'Scaling up' benefits for wider impact is also indicated, particularly in involvement of stakeholders and their roles. Selected options to be used to encourage stakeholder participation are reviewed below.

Evaluation journals surveyed showcase the use of different techniques in the context of evaluators' 'toolboxes', such as return on investment or ROI, with a view towards developing the professional capacity of evaluators. A significant proportion of evaluation literature is available from the US where 'impact analysis' tends to refer to what is called 'program evaluation'. Reported 'program evaluation' links more frequently to public sector funded social interventions and projects ('programs') rather than private sector based, smaller scale organisational or workplace training. However, training can be considered as a specific subset of other types of interventions: recommended principles and techniques transfer readily between programme and training contexts.

Six stage model: Bamberger et al

Bamberger and colleagues in the US proposed a six stage model for what they termed 'shoestring evaluation'[3] – that which is limited due to time, resources or data constraints. Their recommended evaluation design (for social programmes rather than training in this instance[4]) is instructive and can be seen as good practice regardless of programme or training context and constraints. It is reproduced below.

- Step 1. Planning and scoping the evaluation (defining client information needs, the programme theory model, constraints to be addressed)
- Step 2. Addressing budget constraints (modify evaluation design, revise sample, rationalise data needs, economic data collection methods, use of reliable secondary data)
- Step 3. Addressing time constraints (as Step 2 plus: commissioning preparatory studies, revising record formats, use of hand held computers / optical scanning)
- Step 4. Addressing data constraints (reconstructing baseline data, recreating or working with non-equivalent control groups, collecting sensitive data, multiple methods)
- Step 5. Assessing strengths and weaknesses of evaluation design (identifying threats to validity in experimental design, assessing adequacy of qualitative design, integrated checklist for multiple methods)
- Step 6. Addressing identified weaknesses and strengthening the evaluation design (by objectivity, replicability, internal and external validity, utilisation, application and action orientation).

The team considered that timing, focus, and level of detail of the evaluation should be determined by the client information needs and the types of decisions to which the evaluation must contribute. These should be informed by the policy and operational context for the evaluation and the level of precision required by stakeholders. Typical questions that should be addressed included:

- Is there evidence that the project[/training] is achieving its objectives? Which objectives are and are not being achieved? Why?
- Are all sectors of the target population/trainees benefiting from the project[/training]? Are any groups being excluded?
- Is the project[/training] sustainable and are benefits likely to continue?
- What are the contextual factors determining the degree of success or failure?

Researchers noted that many of these questions do not require much detail but should elicit reliable answers to questions such as:

1. Are there measurable changes in the characteristics of the target population[/trainees] with respect to the impacts the project[/training] was trying to produce?
2. What impact has the project[/training] had on different sectors of the target population[/trainees]? Is it likely that the same impacts could be achieved if the project[/training] were replicated on a larger scale?
3. Why have these observed changes occurred? Are the conditions that facilitated these changes likely to continue and are the impacts sustainable?

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[3] Bamberger, M et al. Shoestring evaluation: designing impact evaluations under budget, time and data constraints. American Journal of Evaluation 2004; 25; 5.
[4] References to 'training' have been added by the present authors

4.   Is it reasonable to assume that the changes were due in a significant measure to the project[/training] and not to external factors beyond control?

Bamberger pointed out that many theory models (such as Kirkpatrick's) define four stages of the project cycle: inputs, implementation, outputs, and outcomes or impacts. However, two additional stages are useful: *how the project was designed (*eg whether 'top down', participatory, around a set of interventions which are expected to produce certain outcomes, or by identifying desired impact and then determining appropriate interventions), and how effectively the stream of outcomes was *sustained*. Contextual factors (the 'setting') can also affect implementation and outcomes should include the economic, political and organisational context as well as the socio-economic characteristics of the target groups.

Multi-level model: Yang et al

Another model by Yang and colleagues exploring aspects of multi-level evaluation highlighted the importance of alignment across levels of impacts and stakeholders[5]. Researchers identified several important factors to influence multi-level evaluation alignment: stakeholder participation, commitment within the organisations involved, and technical support. Their proposed model includes issues and opportunities; strategies; outcomes; and impacts. For each element the model distinguishes three clusters or groups: leaders, knowledge, and tools, which in turn support evaluations at initiative, cluster, and project levels.

Multi-level programme evaluations benefited from alignment between levels and evaluations to foster efficiency, internal consistency and flexibility. Alignment achieved a focus on the same fundamental goals of the programmes, used common principles to link evaluations together, and was based on techniques such as a common question framework and coordination of data collection and analysis.

Programme theory model: Macdonald et al

In Australia, MacDonald and his team offered their insights into evaluation training for public sector organisations[6]. In their view, evaluation development should start with a belief in enduring organisational benefits, such as a sustainable resource for producing evaluations as well as a system and environment to foster their use. It should include evaluation skills and knowledge for internal use as well as effective practice to commission and manage of external evaluations and ongoing monitoring. The formal processes, frameworks and resources developed to support evaluative activity should be complemented by tacit knowledge, human capital, symbolic actions and learning about learning.

A generic programme theory (Bennett's Hierarchy) was used in a project context to link activities and outcomes at seven levels and provide a framework for collection of evidence, including:

1.   resources expended by the project
2.   activities produced, involving
3.   people with certain characteristics, with
4.   reactions to their experience, that can

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[5] Yang, H et al. Multi-level evaluation alignment: an explication of a four-step model. American Journal of Evaluation 2004; 25; 493.
[6] McDonald, B et al. Teaching people to fish? Building the evaluation capability of public sector organisations. Evaluation 2003; 9; 9.

5. change their knowledge, attitudes, skills and/or aspirations, which then
6. changes practices, thereby achieving
7. an end result of economic, social and/or environmental value.

The team proposed four principles for effective contextual evaluation of research projects, taking account of: the role of evaluation as a change agent; the need to plan evaluation during project development to permit adjustments to be made during the lifetime of a project; the need to be utilisation-focused; and the need to use a variety of methods as appropriate. It was also noted that final impacts of research are typically felt long after a project has finished, and are likely to be influenced by external factors.

The researchers also proposed the following framework for evaluation, based on ORID (Objective–Reflective–Interpretive–Decisional) procedures[7]:

1. *Describing*: developing a shared understanding of the project and its outcomes, and an agreed programme theory of the intended contribution of programme activities to outcomes.
2. *Framing*: deciding the purposes of the evaluation, the audience, the specific evaluation questions to be answered, and the resources required.
3. *Designing*: developing evaluation methodologies, including account sampling, data collection and data analysis.
4. *Implementing*: gathering, analysing, interpreting and reporting data.
5. *Using*: formally and informally encouraging information use and learning from the evaluation.
6. *Overall management*: applying sound project management principles to these activities including milestones, financial management, review, roles and responsibilities.

Finally, seven recommendations for successful evaluation were made:

- start small and grow evaluation
- address both supply and demand
- work top-down and bottom-up simultaneously
- use a theory of change behaviour
- develop a common evaluation framework, including a generic programme theory
- build knowledge of what works within the agency's context, and
- systematically and visibly evaluate each stage.

Job analysis model: Jenkins and Curtin

The application of job analysis methods towards evaluation was proposed by Jenkins and Curtin in the US[8]. Job analysis, first used in personnel research, involves the application of a standardised approach for identifying or defining a programme's staff positions. Detail provided about the tasks performed, staff linkages, and the requisite knowledge, skills, and abilities (KSAs) required for jobs provides a depth of information about operations not commonly collected using traditional evaluation methods. Job analysis procedures offer an additional evaluation tool to collect reliable and valid programme data. The shift towards job analysis and competency

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[7] They noted that of the six tasks, only 3) Designing and 4) Implementing can realistically be contracted out. Project managers need to keep control of the rest.
[8] Jenkins, S M and Curtin, P. Adapting job analysis methodology to improve evaluation practice. American Journal of Evaluation 2006; 27; 485

based techniques (see below) has only recently entered training practice and is recognised as having wide utility across a range of human resources contexts.

The value for evaluators in job analysis lies in its systematic collection and analysis of information on the role of programme staff in service delivery, which can be used for most formative, outcome, and impact evaluations. Detailed data on job functions inform revision, strategic planning or analysis of transfer between roles and activities. Data are also useful for multi-site evaluations to identify subtle, but important, operational differences across programmes.

According to Jenkins and Curtin, job analysis proceeds across five stages:

Step 1: Collecting Background Position Information
Collection of basic staffing information to draft data collection instruments, including review of staffing structures, roles and linkages, job descriptions, organisational charts, and recruitment and assessment materials. Staff input should also be sought using consistent frameworks and focus on the tasks and the KSAs important for successful performance.

Step 2: Identifying Position Duties, Tasks, and KSAs
Information gathered from programme records, occupational standards and staff position questionnaires or interviews are converted into standardised position descriptions that include general and specific details on:
- *Job duties* – general work that is performed in a job
- *Job tasks* - the more detailed tasks performed within a job
- *KSAs (Knowledge, Skills and Abilities)* - the qualities needed by staff to perform the tasks and duties of a particular position.

Step 3: Collecting Data
Staff rate the relevance of each of the identified job duties, tasks, and KSAs to particular positions through the use of job-specific job analysis questionnaires (JAQs). Rating scales allow multiple respondents to provide consistent information about how important tasks are to effective performance.

Step 4: Analysing Data
Identification of the duties, tasks, and KSAs most relevant to each job through JAQ analysis of relative importance and performance frequencies.

Step 5: Reporting
KSA importance ratings were used to develop a list of 'core' KSAs that were common to the majority of jobs surveyed, as well as identifying those unique to each position. Job analysis resulted in detailed staff demographics, including levels of relevant experience, education, and previous background.

Self assessment model: Stufflebeam

Regarding who should be involved in evaluation, the American evaluation expert Daniel Stufflebeam[9] examined the use of arguably one of the simplest evaluation techniques: that of self assessment. The context for its use was a professional development residential institute for evaluators, their trainers and programme organisers who might therefore be assumed to be fairly expert in its use.

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[9] Stufflebeam, D L and Wingate, L A. A self-assessment procedure for use in evaluation training. American Journal of Evaluation 2005; 26; 544.

Stufflebeam noted that there was a range of advantages in inclusion of self assessment within the training context for this group. It served as a good introduction to the content of the training programme and helped participants to benchmark from the start their existing evaluation knowledge and skills as well as identify areas to strengthen. It forecasted likely benefits by including pre- and post-test self ratings and demonstrated useful techniques for external piloting.

However, Stufflebeam was not alone amongst authors surveyed in cautioning against over or sole reliance on the self assessment approach, particularly for those less experienced. Chief amongst drawbacks identified were the lack of objectivity which acted to 'over inflate' learning benefits, despite measurable progress. Stufflebeam's conclusion was that self assessment is not a replacement for triangulation of training benefits through use in external contexts and field performance exercises. However, self assessment techniques are one example of consistent approaches towards structuring, administration, rating, analysing, and reporting of information.

Predicting future evaluation: Smith et al

A longer term perspective on building capacity within the evaluation community with wider implications for participants in evaluation was provided by Smith[10], predicting approaches that would be well utilised in future evaluation programmes. Of particular note was the growing importance of organisational performance measurement amongst evaluation experts. Trends identified are of interest to the positioning of the WoLLNET toolkit:

- *Use of new technologies.* Strategies for coping with the information revolution to support electronic delivery of information and services; use of new technologies for real-time data collection and analysis; data analysis, storage and use; innovative reporting using electronic, audio, and video representations of data to make reports accessible; technical expertise
- *Evaluation* as a political tool. Strategies for engaging, coping with, and capitalising on the political side of evaluation
- *Organisational learning.* Promoting organisational learning through collaboration and facilitation, interpersonal communication, team development, group process, consulting, organisational behavior and change
- *Collaborative skills.* Fostering of interpersonal and group dynamic skills for working in collaborative relationships, partnering with stakeholders and serving as coach, facilitator, and critical friend
- *Arbitration.* Cultural sensitivity, mediating, negotiating, and conflict resolution, and
- *Strategic planning and development.* Skills for providing training for organisation members in such areas as strategic planning and development of goals.

Smith picked up on the key theme of performance measurement as leading to an increased demand for evaluation expertise to be held in house by organisations. He foresaw a need for programme managers to be able to translate performance measurement information into organisational learning and greater strategic importance for impact evaluations to address performance measurement issues. To underpin these, evaluators *within* organisations will be expected to use evaluative findings to make changes; integrate findings with work activities and infrastructure; and invoke alignment of values, attitudes, and perceptions among organisational members.

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[10] Smith, M F. Evaluation: preview of the future #2. American Journal of Evaluation 2001; 22; 281.

Performance measurement: Morell

Internal evaluation and performance measurement within organisations were highlighted by Morell[11], referring to the practice of 'control charting' as similar to performance monitoring. Control charting aims to assess a variety of processes within an organisation with appropriate metrics by suitable programme staff. Successful programme evaluation may include total quality management or business process re-engineering and can involve changes in an organisation's culture, incentive systems, reporting relationships, and skills base. Morell pointed out that an organisational shift towards rewarding effective evaluation requires influential methods for setting evaluation priorities and assessing the risk of proposed programme changes.

Key stakeholders to the evaluation process are a programme's management and service staff, with evaluators assisting and advising as needed. To address shortfalls in awareness Morell proposed three types of training: short-term workshops, evaluators' own courses and those undertaken by managers and policy makers. All aim towards building the common knowledge base and collective mindset that are needed to change the types and perceptions of evaluation activities.

Multiple stakeholders: Michalski and Cousins

Michalski and Cousins examined the roles of multiple stakeholders in training evaluations within a global network development firm[12]. These included training sponsors, such as line managers overseeing product development with training budgets; training participants (trainees), such as engineers, hardware and software designers and other technical workers; and training providers who designed, developed, deployed, specified, and / or facilitated training for the previous two client groups. Although stakeholders agreed on identifying outcomes for organisational success, they disagreed on their relative importance for training evaluation.

Interviewees were asked for their views about the purposes, processes, and consequences of training evaluation. Purposes for evaluation drew on formative (related to programme improvement), summative (related to the judgment of programme merit and worth), and mixed (formative-summative) forms, and might also include a broader range of possibilities, including knowledge generation and organisational learning. All participants valued training outcomes leading to customer and employee satisfaction, as well as employee learning relevant to the job and / or profession.

However, each stakeholder group emphasised different aspects of training evaluation according to their organisational role/s and relationship to the training function. Whilst trainees emphasised their own professional and career development, sponsors focused on linkages between training outcomes, especially in terms of business, customer, and employee performance. Training providers were most concerned with training results in terms of sponsor and participant satisfaction.

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[11] Morell, J A. Internal evaluation: a synthesis of traditional methods and industrial engineering. American Journal of Evaluation 2000; 21; 41.
[12] Michalski, G V and Cousins, J B. Multiple perspectives on training evaluation: probing stakeholder perspectives in a global network development firm. American Journal of Evaluation 2001; 22; 37.

Results suggested diverse stakeholder views regarding the purposes, processes, and consequences of training evaluation, which were considered to reflect underdeveloped alignment between training evaluation and programme evaluation literatures. Training may generate unrecognised organisational effects, which over time may become uncaptured longer term impacts of evaluation. If individual learning can result in changes at organisational level it can ultimately affect practices and behaviours beyond limited short-term decision making.

Management development techniques: Tyson and Ward

Tyson and Ward at the Cranfield School of Management[13] considered evaluation of management development activities that aimed to change organisations by changing management behaviour. They noted that organisational strategies are often ambiguous and not precise, without clear aims or objectives to inform a management development programme. They caution against a 'one size fits all' approach, as organisational complexity, size, changing employee roles and multi-layered structures make simplistic evaluation impossible.

The diversity of management development activities hinders the setting of specific learning objectives. These in any case might not be appropriate for broader developmental activities that highlight softer skills. Multiple stakeholders' views of development activities present differing perceptions for which a single evaluation method would not be sufficiently responsive. Finding evaluation techniques which are robust, sensitive to the many different nuances of behaviour within development processes and capable of measuring intangible outcomes, presents a considerable challenge.

To meet the evaluation demands of multiple stakeholders, the researchers investigated the use of 360 degree feedback techniques that underlined the significance of contextual variables to perceived organisational relevance and priorities. 360 degree feedback as an evaluation technique draws on the views of various stakeholders to build on underlying research into organisational competencies, and how these are applied in context. Competencies can be selected that relate to the varying levels of analysis for evaluation. Potential challenges caused by mixed scores or priorities can be overcome through the use of aggregated ratings rather than individual data.

This linkage into organisational effectiveness is at the heart of a 360 degree system which depends on the organisational support available. The authors asserted that as part of a change strategy, competency systems and their development programmes provide compelling reasons to evaluate the programmes in terms of competency improvement. For these researchers, evaluation for organisational learning and change is grounded in a social constructivist theory of learning. This suggests that learning takes place through the collective creation of meaning, action, the development of new knowledge, an improvement in systemic processes, and the overcoming of tacit assumptions.

Instead of Kirkpatrick's four levels, in this research three levels were considered more appropriate: 'process', 'content' ('learning' and 'trainee performance') and 'ultimate impact', concerned with the objectives for training. The evaluation model developed concentrated on outcomes: at the *process* level these focus on how development improves learning; the *content* level is concerned with the content of

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[13] Tyson, S and Ward, P. The use of 360 degree feedback technique in the evaluation of management development. Management Learning 2005; 35; 205.

learning as an outcome; and *objective level outcomes* are those that seek to deliver organisational results. This framework also underlines the context-specific nature of evaluation.

The 'before and after' aspects of 360 degree feedback produced data from the main stakeholders either side of the management development interventions. Competency changes can be measured with precision using this mechanism, and differences between expected and acquired competencies clearly seen. Nevertheless, researchers noted that the feedback process and coaching activities seemed to have been the main success factors for the 360 degree systems. Such interaction presented opportunities where the meanings of changes to competencies, and the impact on performance, can be discussed and perhaps negotiated.

3.1.2 Practical models

In contrast to the mainly academic, theoretical studies on evaluation described in the previous section, practical approaches are more grounded in the training literature, where evaluation or impact analysis is a subsidiary practice. Practical sources provide an overview of the training process within which evaluation is a necessary developmental stage. It supports feeding back the benefits of training to individuals or organisations, often linked to initial stage exercises such as training or organisational needs analysis. Where professional evaluators are the audience for the theoretical literature above, the practical reviews are aimed at training practitioners – many in larger companies' human resources or training departments - to encourage their individual development and career progression.

Two of the leading training practitioner organisations are the UK's Chartered Institute of Personnel and Development (CIPD) and the American Society of Training and Development (ASTD). Both have led the field in encouraging evaluation practice within a range of workplace training contexts and have contributed significantly to the approaches to basic skills training evaluation recommended in the present report. They attract a membership of leading training professionals in international workplaces large and small and have produced a range of resources and toolkits promoting alignment of best practice in evaluation of organisational learning as well as assessment of employee training programmes, some of which are outlined below.

Organisational alignment: CIPD toolkits

The CIPD Value of Learning toolkit[14] aims to provide tools and metrics for training decision makers to: align learning process and investment with organisational strategic priorities; offer a range of methods to assess and evaluate contributions of learning; and establish the most relevant approaches to assessing and reporting on value of learning to the organisation. The toolkit identifies key issues for adoption of organisational learning. These include the extent to which organisational capability is achieved through short- or long-term learning and training methods, the level of trust that senior management have in the contribution of learning to the organisation, and the extent that organisation uses and values measures and metrics within its operating culture.

The following pages present three CIPD instruments designed to facilitate alignment of organisational learning with its operating culture and strategic planning:

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[14] Chartered Institute of Personnel and Development. Value of learning: assessing and reporting on the value of learning to your organisation. CIPD toolkit, 2007. (http://www.cipd.co.uk)

- Instrument 1 – Determining current organisational alignment
- Instrument 2 – Key issues for the organisation
- Instrument 3 – Establishing the most relevant approach for the organisation.

They offer a series of scales against which practitioners can map their organisational learning cultures and a set of questions designed to encourage collaborative reflection on key issues for an organisation. Once the most important issues and top six measures have been identified, action planning can be initiated to enhance alignment of learning investment and activities, assess and report on issues of importance to the organisation and develop the most relevant approach to assessing and reporting on value.

Instrument 1: Determining current organisational alignment (CIPD, 2007)

Loose	←——————→	Tight
Doesn't talk about learning priorities	←——————→	Commits resources to defined priorities
Focuses on financial measurement and delivery	←——————→	Establishes and implements annual learning objectives
Does not include the language of learning in its internal dialogue	←——————→	Makes explicit links between learning and organisational performance
Does not include learning and associated objectives in the strategic plan	←——————→	Takes full account of learning considerations in strategic discussions
Does not link learning to operational plans	←——————→	Builds learning objectives into operational plans at all levels
Has few opportunities for interaction between learning function and the business	←——————→	Expects learning function to ensure that it interacts informally with all parts of the organisation
Equips people with the basic skills they need to do their current job	←——————→	Appreciates that learning enables the organisation to adapt to future requirements, or to create its future
Rarely provides occasions when learning opportunities can be identified	←——————→	Encourages continuous learning and identifies outcomes from learning
Focuses on reports about sales, service or production performance	←——————→	Makes explicit links between learning outcomes and key strategic goals which are explored both formally and informally
Evaluates reactions to learning activities	←——————→	Expects learning specialists to continuously evaluate and develop learning strategy

Instrument 2: Key issues for the organisation (CIPD, 2007)
- Ranked against importance (low/med/high) and currently measured (yes/no)

Learning function issues
- Is the learning function delivering operational effectiveness?
- How effectively is the functional capability of the workforce being developed?
- How well are learning interventions supporting our critical success factors?
- How does our investment in learning compare with that of other relevant organisations (benchmarking)?
- To what extent is learning contributing to the organisation's flexibility and 'change agility'?

Return on expectation issues
- To what extent are employees learning to exhibit the behavioural competences that we require?
- How successfully are we able to manage succession and talent pool issues?
- To what extent are we equipped with the people skills needed to mitigate risks to achieving our strategic objectives?
- To what extent are learning and growth objectives and targets being met?
- How does our people performance compare with that of other relevant organisations?

Return on investment issues
- How is learning contributing to the achievement of our key performance indicators?
- To what extent are employees achieving their performance development targets?
- How effective are the learning and training opportunities we provide?
- What economic benefits does our investment in training provide?
- Is learning contributing to the achievement of HR targets?

Benchmark and capacity issues
- How does our organisational performance compare with that of other relevant organisations?
- Are our employees developing in line with the emerging needs of the organisation?
- To what extent are our business process efficiency objectives and targets being met?
- To what extent are employees able to apply what they learn at work to the benefit of the organisation?
- To what extent are we developing an appropriate psychological contract with our employees?

Instrument 3: Establishing the most relevant approach for your organisation
(CIPD, 2007)
Four element approach:

Senior management trust in the learning contribution
Indicators:

| Learning seen as no less or more important than other business activities | low ◄─► high | Learning full part of the management process |

Organisation requirement for learning value metrics
Indicators:

| Managers do not require metrics to underpin decisions about investment in learning | low ◄─► high | Robust metrics are expected to support commitment to training and learning |

Emphasis on short term learning contribution and capability requirements
Indicators:

| Very little learning investment is focused on achieving short term skill and capability objectives | low ◄─► high | Most learning focuses on the achievement of short term objectives relating to skill and capability levels |

Emphasis on long term learning contribution and capability requirements
Indicators:

| Very little learning investment is directed at achieving longer term learning objectives | low ◄─► high | Most learning investment contributes to the achievement of longer term learning objectives |

The above measures can be mapped as follows[15]:

	Senior management trust in the learning value contribution	
	Learning function measures	Return on expectation measures
Emphasis on short term learning		Emphasis on long term learning
	Return on investment measures	Benchmark and capacity measures
	Organisation requirement for learning value metrics	
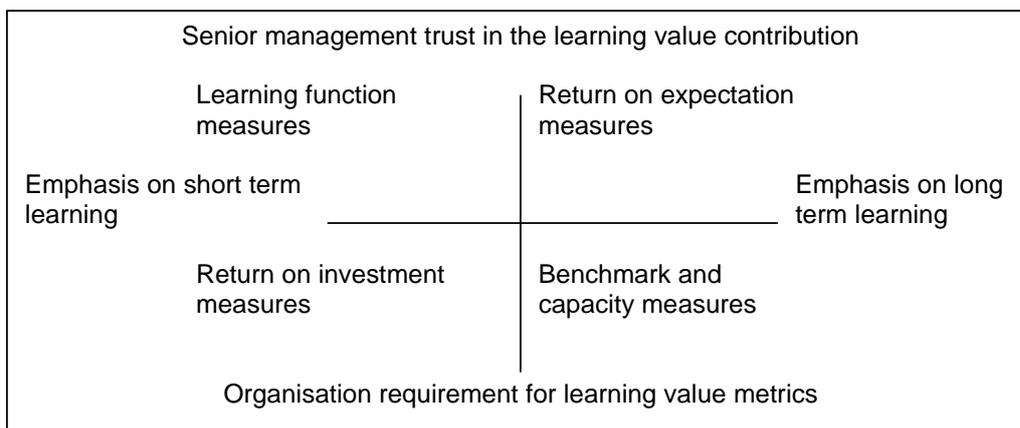
[15] Anderson, V. Value and evaluation: from return on investment to return on expectation.
Report by University of Portsmouth Business School to CIPD, November 2007.

The CIPD has produced factsheets on aligning learning to the needs of the organisation[16] and evaluation of training. The CIPD 'partnership of learning model' highlights the responsibility of learning, training and development practitioners to work in partnership with senior managers, line managers and learners to facilitate a range of different learning opportunities aligned with business needs. Alignment gives a clear direction to learning, training and development and ensures that a drift away from the strategic priorities of the organisation does not occur.

Alignment is considered both a process and an outcome. When linked to a single organisational objective it is an outcome, time bound and measurable, but when integrated with fast moving business developments it is a dynamic process. Organisational learning involves learning professionals in ongoing dialogue with stakeholders to ensure that investment in learning fits with organisational priorities.

Alignment and the process of agreeing budgets that support learning processes are closely linked. Although most learning and development practitioners recognise that learning is an investment rather than a cost, this view is not always shared by line management colleagues. In order to achieve alignment, therefore, managers must be convinced of the relevance of proposed learning processes and of the logic of treating the activity as an investment rather than a cost.

The CIPD's evaluation model[17] is based on Kirkpatrick's four level framework of reactions / learning / behaviour / results to bring together learning professionals in partnership with other stakeholders in the organisation. This dialogue ensures that intended learning and organisational strategies are aligned from before the start of any learning programme, appropriate measures are defined and skills and organisational performance are equally valued in tandem. The model makes use of both hard and soft measures of progress.

According to the CIPD model, the four purposes of evaluation are:

- Proving the value of training – hard metrics relating training to:
    - data about reduced production / process costs / times
    - increased sales, market share, numbers of new customers
    - increased service quality, stakeholder satisfaction
- Improving the quality of training offered – soft measures relating training to:
    - indications of greater use of other learning / development
    - more courses perceived to be effective, valuable, tailored, organisationally focused
- Evaluation as a contribution/reinforcement to the learning process – soft measures:
    - continually improving skills / competencies – better analysis, problem solving, decision making
    - evidence of 'multiplicative' effect from combining courses with learning, coaching, personal development planning (PDP)
- Evaluation as a control over training – hard measures:
    - reduced problems / accidents / grievances
    - shorter, smarter courses
    - more comprehensive / equitable training.

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[16] CIPD. Aligning learning to the needs of the organisation. CIPD factsheet, January 2008.
[17] CIPD. Evaluation of training. CIPD factsheet, May 2007.

Measuring impact: F and R Bee

Published by the CIPD, Frances and Roland Bee's extensive toolkit on learning evaluation[18] was conceived to demonstrate the impact of learning and development on individual, team and organisational performance; examine return on investment (ROI); explore learning to improve effectiveness; support learning by helping individuals understand their own performance and help others; and improve quality. According to the toolkit, the purposes of evaluation are to:

- improve learning quality in delivery, facilitation skills, methods
- assess effectiveness of overall intervention
- justify intervention with ROI and the role of learning in an organisation for budget purposes.

The evaluation framework contains three sections corresponding to a model of three distinct phases of a learning evaluation:

- *Section A. Tools for starting off* (with units on setting the scene, getting the strategy right, taking a workshop and project approach / identifying stakeholders)
- *Section B: Tools for planning and implementing a targeted study* (with units on agreeing objectives for the evaluation project and learning intervention, including operationalising learning objectives; selecting evaluation methodology; analysing data and reporting on results; reviewing the evaluation study)
- *Section C: Tools to use for evaluating your learning interventions* (with units on learner reaction, what was learned, what is being done differently in the workplace (Kirkpatrick approach), indicators of organisational performance; effectiveness of expenditure, including costs and benefits of learning interventions; systematic competency based approaches, performance results; longitudinal evaluation)

In the Bees' model there is a clear link between business needs and an appropriate learning intervention. Business needs should be identified and specified in tandem with learning needs and be seen as translating learning needs into action. A learning and development culture should ensure the most appropriate learning solution and facilitates learning transfer back into the workplace. According to the Bees, evaluation should be planned at the learning needs analysis stage and answer the following questions:

- What will be different for the individual / organisation after the learning intervention?
- How will success / learning objectives be identified and measured?
- How will ROI be calculated from what baseline?
- What do learning objectives mean when applied to workplace?
- What specific changes in behaviour are expected?
- How will learning affect organisational decisions?

Measuring cost effectiveness of the learning also begins with a learning needs analysis that recommends delivery modes based on a mixture of factors. Investment appraisal of the learning intervention involves: assessing expenditure required and its timing, estimating the benefits to accrue and when, and taking into account the time

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[18] Bee, F and R. Learning evaluation. Chartered Institute for Personnel and Development, 2006.

value of money. Appraisal for investment in a learning project should provide one of three measures:

- Payback period: time taken to recoup expenditure from the flow of benefits
- Net present value for the project (= benefits – costs)
- An internal rate of return for the project (= ((benefits – costs) / (costs)) x 100)

The toolkit also details the development process of a competency based learning opportunity including several phases of post intervention evaluation. For this model the following stages apply: nomination form, confirmation of learning intervention to remedy the gap, pre-learning briefing form, evaluation form immediately after the learning, evaluation form completed three months after learning, and final evaluation form.

Organisational performance: Balanced Scorecard for Skills

Other online practitioner resources also provide useful summaries of workplace education evaluation strategies and techniques. The Balanced Scorecard for Skills[19] is a framework for aligning organisational strategy to measures of performance. It advises evaluators when designing evaluation for training programmes to focus on their audience, selection of statistical routines, use a range of data sources, provide consistency and depth over time, and permit enough time to elapse after the intervention to demonstrate its impact. The Scorecard recommends the Kirkpatrick framework as guidelines for evaluations at the following levels:

- Level 1: Was the employee satisfied with the workplace education and did the employee complete it?
- Level 2: What did the employee learn from the workplace education programme?
- Level 3: How did the workplace education programme effect employee performance?
- Level 4: Did improvements in employee performance attributable to workplace education effect organisational performance?

Management buy-in and Training Needs Analysis: Training Zone

Expert commentators on the Training Zone Website regularly discuss and advise trainer practitioners on evaluation. A recent article[20] noted the importance of linking training with the business planning process and consulting with stakeholders as to methodological preferences. Senior management support is essential in agreeing priorities for evaluation which should show how training relates to the real needs of the business.

Miller recommended that approval be sought from the organisation's Board that prior to any programme of people development delegates will be fully briefed, have agreed personal and professional objectives for undertaking development and agreed with their manager a date and time to carry out a post-programme debrief following training. Follow up coaching should then cover how the learning will be transferred to the workplace to support the business objectives agreed at the pre-programme briefing. Any additional development should also be agreed at this stage to support the delegate in meeting the business objectives from the training.

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[19] Balanced Scorecard for Skills. (http://www.scorecardforskills.com)
[20] Miller, S. The rocky road to evaluation heaven. Training Zone, 26 March 2008.

Schmalenbach related training needs analysis[21] (TNA) to be conducted in the initial stages of training to its evaluation following an intervention. He considered that clear identification of learning outcomes is the major objective of TNAs, which might include competency gap analysis as part of a staff appraisal or performance gap analysis for underperforming employees. To ensure there *is* a desired impact on the organisation requires a firm link to be made between performance standards and what the organisation is actually trying to achieve. Competency frameworks can be seen as an attempt to make these links.

If a TNA is conducted to determine if training is needed, and if the TNA is firmly and credibly linked to driving organisational performance, then any training it recommends is likely to have a desirable impact. Repeating the TNA after the training and demonstrating that the original training needs have been met (because the repeat TNA suggests no further training needs) is one reasonable approach to evaluating.

The author argued that a good TNA will evaluate the likely impact of training before resources are committed as long as it is clearly and explicitly linked to organisational objectives, is able to overcome barriers and build on core drivers for meeting objectives. In order to do this evaluators should:

- Clarify the problem and the desired outcomes
- Determine root causes and core drivers
- Do more of what works, and less of what does not
- Review progress, using baseline and clear problem definitions, to determine if outcomes have been achieved.

Types of training evaluation: Management Sciences for Health

Management Sciences for Health[22] reported the outcomes of a case study in assessing the impact of training on staff performance in a training institute. They noted a range of types of training evaluation that could be utilised:

Type of evaluation	Purpose
Needs assessment	To identify the knowledge, attitudes and skills (KAS) needed for acceptable job performance
Baseline evaluation	To determine the trainees' levels of KAS before training
Input evaluation	To assess the elements associated with the training: costs, selection of trainers/trainees, curriculum plans, venue, materials
Process evaluation	To conduct assessments periodically during the training, and adapt the schedule, content or approach accordingly
Outcome evaluation	To assess new or improved KAS after training
Impact evaluation	To determine the effect of the training on: • Individual job performance (on the job application of KAS) • Organisational performance (service quality, client satisfaction) • Programme performance • Regional or national background indicators

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[21] Schmalenbach, M. TNA and evaluation: two sides of the same coin? Training Zone, 21 January 2008.
[22] Assessing the impact of training on staff performance. Management Sciences for Health Electronic Resource Center, 2001.

Once the type of evaluation is selected, a six step process is recommended to conduct the evaluation:

- Step 1 – Identify job performance issues (defining key job related tasks, choosing indicators and setting standards)
- Step 2 – Collect the data (developing techniques and instruments, including their piloting and revision; defining the sample; preparing evaluators, collection)
- Step 3 – Analyse the data
- Step 4 – Interpret the data
- Step 5 – Report on the findings
- Step 6 – Make changes.

It is anticipated that revisions will need to be made to the training course following the evaluation and that changes may be implemented to organisational procedures or systems. Ideally the training evaluation process will continue following course revision. Options for continuing evaluation can assess changes made in input / output terms, focus on longer term performance, evaluate new skills and job behaviours, assess application of training and oversee subsequent feedback mechanisms that continue to support trainees.

A range of printed publications was also consulted as part of the present research, including selected books on training evaluation held by the University of Exeter Library. They represent a timeline of developing thinking on conceptualisation of evaluation and offer further guidance and specific techniques on conducting workplace training evaluations. The enduring relevance of the Kirkpatrick model is a common thread between authors.

Goal and objectives based strategies: Bramley and Hamblin

Bramley[23] presented a goal based strategy for controlling and evaluating training. Here, the effectiveness and efficiency of individual training were improved due to the following factors:

- objectives were based upon performance derived from job analysis and there was therefore no difficulty with transfer of training
- objectives of training were made explicit from the start
- goal setting as a motivator was found to be highly effective and its potential role in improving performance should be further researched.

Hamblin proposed an extended version of the Kirkpatrick framework to evaluate learning in terms of predefined objectives. He linked several levels of evaluation in a 'cause and effect' chain which respectively measured: training, reactions, learning, changes in behaviour, organisational changes, and changes in the achievement of ultimate goals. For effective evaluation, it was recommended to select the level at which evaluation is required and then set objectives to be achieved at that level. Effects of training can then be measured up to that level.

Several evaluation frameworks (Kirkpatrick; Hamblin; and Warr, Bird and Rackham) were compared in relation to how they measured the distinct stages of learning and assessed changes.   Evaluation contexts and stages included changes within the training itself; at the job, after training; overall organisational effectiveness; and

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[23] Bramley, P. Evaluation of training – a practical guide. London: British Association for Commercial and Industrial Training (now CIPD), 1986.

reflected social and cultural values. Of especial interest were changes in knowledge, aptitudes and skills resulting from individual interventions, both during and after training. Modified job behaviours after training were key to assessing the long term success of the intervention.

Purposes of evaluation covered a range of areas including feedback, control and intervention. Definitions of required training outcomes before delivery could be used to further refine evaluation goals as in the following example:

1. define changes in organisational effectiveness
2. define incremental measures of progress towards the change
3. define the skills and resources necessary
4. assess existing skills and resources
5. implement the learning/training intervention.

Training impact evaluation: ASTD / Parry

The American Society for Training and Development (ASTD) published a comprehensive compendium of training impact evaluation tools and techniques by Parry[24]. He listed a range of reasons for evaluation:

- to find out where the desired expectations (goals) are and are not being met
- to make the learning environment more supportive of learning
- to revise and refine the course to make it more effective
- to identify and reduce workplace constraints that inhibit transfer
- to prove that training does not cost; it pays (investment vs expense)
- to win commitment and support for training by management
- to give instructors and course developers feedback to help them improve
- to justify and perhaps enlarge the training budget
- to influence future decisions on what kinds of courses to run
- to manage the training function more professionally.

Parry proposed a range of 'hard' outcomes from training which could be adapted as evaluation indicators to measure return on investment. Detailed benefits of training activity could include the following impacts:

Project management
- money saved by avoiding time or budget overruns
- elimination of penalty charges on time overruns (on some contracts)
- reduced lost time in renegotiating goals and activities
- resources available as needed (no delays)
- reduced turnover of project team members due to frustration.

Customer service skills
- higher retention of customers (fewer lost)
- reduced time spent handling complaints
- more new customers through positive word of mouth
- fewer supervisors needed for staff over time
- more sales per customer for repeated orders.

Counselling the problem employee
- better retention, lower turnover

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[24] Parry, S B. Evaluating the impact of training: a collection of tools and techniques. Alexandria, Virginia: ASTD, 1997.

- reduced costs of recruiting and training replacements
- improved productivity as problems are solved
- reduced lawsuits, legal fees, court action
- better teamwork and productivity from fellow employees

Business writing skills
- shorter, clearer letters (less time, paper, message units)
- reduced need to rewrite to clarify
- less time needed by readers who understood initially
- fewer mistakes, missed meetings, poor decisions
- better proposals resulting in more sales.

Parry flexibly adapted the Kirkpatrick multi-level model to demonstrate its relevance for evaluation of stages of training, both in terms of value added elements of training and assessment techniques appropriate for each level.

Value added elements
- Level 1: Needs analysis conducted, instructional design and development, course materials, instructor's delivery skills, learning facilities, programme time and timing, selection of participants
- Level 2: KAS outcomes: knowledge is imparted (facts, rules, procedures, policies, concepts, theory); attitudes are shaped (values, perceptions, beliefs, styles, feelings); skills are practiced to develop competence and confidence (various skills: perceptual, verbal, cognitive, manual, psychomotor)
- Level 3: Improvement in individual data: quantity of work, quality of work, shorter time to reach competency
- Level 4: Improvement in organisational data: overall productivity of plant, department; market share; profitability; work teams without supervision; reduced cost of lawsuits, insurance claims, lost business, accidents, turnover

How assessed
- Level 1: Evaluation sheets measure learners' reactions to: content, relevancy, use format, methods, media; readability, graphics, image; pacing, clarity, fun; comfort, location, meals; when offered, length; homogeneity, networking
- Level 2: Learners are evaluated throughout training to see how well they are acquiring KAS; end of course mastery test is used if appropriate
- Level 3: Learner's output is measured; evaluation by self or others; performance in simulations or activities done off line (in an assessment lab)
- Level 4: Cost-benefit analysis or pre-training and post-training comparison of data already in the system (accident rate, new accounts, rejects, absenteeism, turnover within 90 days)

Benefits from identifying return on investment (ROI):

- training budgets can be justified and even expanded when training contributes to profit
- course objectives and content will become more lean, relevant and better match job behaviours
- better commitment of trainees and managers, who become responsible for follow-up and ROI
- action plans, individual development plans, and manager briefings will be taken more seriously, strengthening teamwork
- better performance by training staff in containing costs and maximising benefits
- training staff have solid data on effective and weak training to enable fine tuning
- curriculum can be determined on financial basis

- course enrolments and retention will be improved
- ROI can be used to evaluate Level 4 interventions which might otherwise lack assessment criteria.

Parry also listed factors which should be included in calculating costs and benefits of training:

Costs:
- course development (time) or purchase (price, licence fees): needs analysis and research; design and creation of blueprint; writing, validating and revising; producing (typesetting, illustrating, ready for reproduction)
- course / instructional materials: per participant (consumables: notebooks, handouts, tests) and instructor (durables: videotape, film, software, overheads)
- equipment and hardware: projects, computers, video ('fair share' use), flipcharts, training aids
- facilities: rental of training premises or fair share of classroom overhead
- travel, lodging, meals, breaks, transport of materials / equipment rental
- salary: instructor (administrator / manager) and support / AV staff (prorated), consultant fees, participants (no hours instruction x average hourly rate)
- lost productivity, opportunity costs or temporary replacements.

Benefits:
- time savings (shorter lead time to reach proficiency, less time to perform operation, less supervision needed (= hours saved x pay), better time management
- better productivity / quantity (faster work rate (= value of additional units produced), less downtime, not having to wait for help (= reduced non-productive time)
- better quality of output (fewer rejects / returns, lost sales, reduced accidents, lower legal costs), value added to output, improved competitiveness (= greater market share)
- better personnel performance / data attributable to training (less absenteeism, fewer medical claims, reduced grievances / claims, same output with fewer employees).

Training cycle, roles and activities: Rae

The training evaluation expert W Leslie Rae[25] examined in detail both the roles of stakeholders involved at different stages of training and evaluation activities geared round the training cycle. He proposed an evaluation framework which included a series of pre-course assessments, training objective setting, interim validation, end of course action planning, debriefing, and ROI calculation. He noted that the National Standards for Training and Development identified five key phases for development:

1. Identify training and development needs (organisations and individuals)
2. Design training and development strategies and plans to meet the needs of the organisation, groups and individuals
3. Provide learning opportunities, resources and support (obtain and allocate resources to deliver training; provide learning opportunities and support to enable individuals and groups to achieve objectives)
4. Evaluate the effectiveness of training and development (including individual and group achievements against objectives and achievements for certification)

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[25] Rae, W L. How to measure training effectiveness. Aldershot: Gower, 1991.

5. Support training and development advances and practice (contribute to advances in training and development; provide services to support practice).

At the earliest phase, training needs analysis can be linked to aspects of job, role, task and skills analysis:

- job analysis: description of job activities and requirements
- job description: outline of job with duties and responsibilities
- job specification – knowledge, skills and attitudes required to perform job
- performance standards – linked with vocational qualifications
- functional analysis – the principal methods of identifying occupational competences and relevant standards, looking at the job in terms of outcomes and focusing on practical skills. Standards for occupational performance relate to skill levels of a given occupation.

Rae identified a number of potential training outcomes that were suitable for evaluation after some time has elapsed since training. These relate to learning that has been applied and any resulting changes to work behaviours, such as the introduction of new practices or modifications to previous behaviour. By contrast, other conclusions could be drawn from learning that has not been applied in practical contexts after training. Improved insights into the potential usefulness of modified procedures might result in their not being thought appropriate for context, for example.

Longer term evaluation approaches can also broaden consultation with other staff within the organisation and use control groups, action planning, and follow up of evaluation questionnaires and action plans, together with direct and indirect observation. Wider business assessment should measure evaluation of value for money, including more detailed analysis of costs. These could include direct costs of training and evaluation, taking into account fixed and staff opportunity costs.

Four stage evaluation models: Phillips

In his training evaluation handbook, Phillips[26] identified the following reasons for evaluation:

- determine whether a programme is accomplishing its objectives
- identify strengths and weaknesses in human resources development (HRD) processes
- determine cost / benefit ratio of an HRD programme
- decide who should participate in future programmes
- identify which participants benefited most or least from the programme
- reinforce major learning recommendations made to the participant (in follow up)
- gather data to assist in marketing future programmes
- determine if the programme was appropriate.

Phillips surveyed a range of four stage models for training impact evaluation including Kirkpatrick's, all of which make use of standardised outcomes to measure progress following a training activity. These are outlined below.

Parker's approach[27] identified four elements of possible change for individuals and teams: job performance – extent to which individual improved; group performance –

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26 Phillips, J J. Handbook of training evaluation and measurement methods. London: Kogan Page, 1990.

including measures of overall productivity, output, absenteeism, errors; participant satisfaction - including content and methods of training; and participant knowledge gained – facts, techniques or skills acquired.

The Bell System approach[28] evaluated programme results or outcomes: reaction outcomes – participants' opinions; capability outcomes – what participants are expected to know by the end; application outcomes – what participants know, think, do, in real world settings, and worth outcomes – the value of training in relation to cost (money, time, effort or resources invested).

The CIRO (Context / Input / Reaction / Outcome) approach[29] to evaluation (proposed by Warr, Bird and Rackham) includes:
   Context evaluation – obtaining and using information about current operational context to determine training needs; ultimate, intermediate and immediate objectives
   Input evaluation – selection of possible training resources/methods according to relative merits, internal v external development and available time
   Reaction evaluation – collecting subjective information from participants to improve HRD
   Outcome evaluation – collecting information to improve future programmes by: defining trend objectives, constructing measures of those, making measurements and assessing results.

Phillips developed a costing methodology for ROI which covered development of cost data in order to:

- determine overall expenditures for the human resources department
- determine relative cost of each individual programme
- predict future programme costs
- calculate costs v benefits for a particular programme
- improve the efficiency of the HRD department
- cost and evaluate alternatives to the proposed programme, and
- plan and budget for next year's operations.

He advised collection of costs even if not used in evaluation, caution when reporting cost data due to lack of precision and a note that considerable effort is required in setting up a system.

3.1.3   Impact analysis of basic skills training

Literacy interventions: Bhola

A case study evaluation of the impact of literacy and numeracy training in a community setting was presented by Bhola[30] and highlighted several important principles of impact evaluation. Learners were tested across six domains: writing; reading / comprehension; cognitive skills; attitudinal change; functionality (utilisation

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[27] Parker, T C. Evaluation: the forgotten finale of training. Personnel, Nov-Dec 1973.

[28] Jackson, S and Kulp, M J. Designing guidelines for evaluating the outcomes of management training. In Determining the payoff of management training. Washington, DC: ASTD, 1979.

[29] Warr, P et al. Evaluation of management training. London: Gower, 1970.

[30] Bhola, H S. A discourse on impact evaluation: a model and its application to a literacy intervention in Ghana. Evaluation 2000; 6; 161.

of knowledge); and numeracy. The study proposed a model for three categories of impact:

1. *impact by design* – outputs resulting directly and immediately from the intervention
2. *impact by interaction* – outcomes arising from interactivity with concurrent interventions by other agents, and
3. *impact by emergence* – unanticipated outcomes emerging from the original intervention over a longer time frame.

Individual returns to training: Institute of Education

Other studies have sought to establish benefits of individual training through improving their literacy and numeracy in workplace contexts. The UK's Institute of Education (IoE)[31] carried out an economic analysis to identify rates of return to individuals in the workplace from basic skills training. In common with researchers worldwide, they found clear links between earnings and employment returns to qualifications, with greater effects the higher the level achieved. Individuals with average or above numeracy skills can expect to earn between 15% and 19% more than individuals below this level, when not taking into account any other factors that may influence earnings (such as family background or education level).

Results indicated that numeracy skills below Level 1 had a negative impact on both earnings and employment rates. The evidence for literacy was more mixed, but in general individuals with better mathematics and reading skills had higher earnings and were more likely to be in work. One interesting implication for basic skills training was that obtaining a vocational qualification on an employer-provided course seemed to provide a higher return than non employer provision. Overall, the research suggested a wage gain from training of around 5%. However, as the study was based on a single cohort of relatively young workers, it is not clear whether the results would also be applicable to workers of other ages.

Evidence from the Netherlands suggested that the wage returns from training for individuals vary according to the type of training provided. Data covered three different types of training: technical; economic, administrative and commercial; and 'other' training[32]. Analysed together with education, gender and experience, technical training increased wages by about 4%, economic / administrative training by some 14%, and other training by about 12%.

IoE researchers concluded that employer based training provision appeared to have a major direct impact on recipients' wages, which may partly reflect improved employer perceptions of the productivity and value of the employee. However, it was more difficult to estimate the effects of increasing training with specific government-funded workplace basic skills interventions. Where employers selected candidates for training, it could be associated with wage gains as it is aimed at those whom employers wish to promote or re-deploy.

Recommendations highlighted the usefulness of datasets which brought together individual- and firm-level information, both on workplace training and on business

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[31] Ananiadou, K et al. Basic skills and workplace learning: what do we actually know about their benefits? Studies in Continuing Education 2004; 26; 289.
[32] Eg agricultural, medical, teacher, legal, science, government / public administration and other training. Cited in Groot, W. Type specific returns to enterprise related training. Economics of Education Review 1995; 14; 323.

performance outcome measures such as productivity, turnover and financial performance. Availability of such data for basic skills and for training more generally would facilitate robust quantitative analysis of the effects of training. Detailed firm-level studies are also needed to improve understanding of workplace contexts for basic skills programmes, impact on the employees receiving the training, and how these effects are related to programme features.

Organisational ROI: Hollenbeck

A benefit-cost framework to measure the impact of workplace literacy training was proposed by Hollenbeck[33] to calculate return on investment (ROI). The essential task of a benefit-cost analysis (BCA) is to measure the benefits and costs of an action, place weights on each, and arrive at a conclusion as to the net benefits of the action. Hollenbeck stated that to conduct a BCA, it is necessary to measure the outcomes (benefits) and costs of an investment in a common unit, usually money. Perceptions of benefits and costs may differ depending on stakeholder groups, which in the workplace may include the workers who are trained, the employer, the rest of society, and the education sector. Various combinations of how these may be conceptualised are described in terms of return on investment below.

The rate of return on investment (ROI) equals the ratio of total net benefits (or costs) to the total investment cost. This ratio is usually expressed in percentage terms. Rates of return are most meaningful for employers because the employers tend to bear most of the investment costs. For publicly subsidised training these costs are negative for workers and for the rest of society. One common practice for firms that engage in workplace literacy programmes is to give release time for half of the training time, where workers invest their nonwork time in the training.

Higher levels of productivity following training may arise from a new ability to use more complex technology or provide improved services. Enhanced productivity (defined as physical output per hour of labour), does not directly benefit the worker. It does benefit the employer and it may benefit society, which now can access (marginally) more goods and services per unit of labour. Increased earnings may take the form of higher wages per hour or higher lifetime earnings because of greater job security: in this context, higher wage compensation is a cost to employers.

There are further nonwage compensation effects that may result from general training and increased wages such as workers' retirement incomes or employer-paid health insurance premium payments. For workers, these nonwage compensation items are a benefit; for employers, they are a cost. The rest of society may benefit from nonwage compensation due to higher levels of health insurance and retirement income security.

Besides higher worker productivity, a second major benefit to training is reducing the costs of staff turnover in terms of recruitment, training and staff leaving costs. Most empirical studies have found that training in basic skills does notencourage staff to seek other jobs once trained, Rather, upgrading basic skills through training acts to retain staff and may allow an employer to avoid costs associated with new recruitment. Society also benefits from lower turnover because there will be lower levels of unemployment and benefit costs.

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[33] Hollenbeck, K. A framework for assessing the economic benefits and costs of workplace literacy training. Paper presented at the conference on Workplace learning: the strategic advantage, Milwaukee, Wisconsin, April 1996.

Anecdotal evidence has suggested that workplace literacy training can reduce accidents in the workplace and enhance safety. Workers with higher levels of technical literacy will be able to follow safety instructions and incur lower injury and health-related costs. Employers benefit from lower insurance rates, fewer workers' compensation claims, and less lost productivity from accidents or injuries. Society also benefits from lower expenditure on avoidable accidents and personal injuries.

An indirect consequence of the higher wages and nonwage compensation earned after training is higher tax payments from which society benefits from additional public sector revenue. Further analysis shows that the crucial bottom line for employers depends upon whether the positive benefits of higher productivity, reduced turnover, and safety outcomes outweigh the training costs that employers bear, plus any future wage and nonwage compensation increases.

The ultimate personal benefit of workplace literacy training is an improvement in self-esteem. However, workers who participated in the workplace literacy training may also gain from 'soft' outcomes not captured elsewhere, such as initiative, motivation, ability, or training 'propensity' that may be correlated with higher earnings. Therefore, it is overly limiting to attribute the full return to the workplace literacy programmes to the training itself. It should also be noted that workplace literacy programmes are often initiated by changes in workplace organisation or investments in physical capital. In this case, part of the return to workers' earnings may be due to enhanced productivity caused by these other factors.

Sector based research: Krueger and Rouse

Related college based research to quantify impact measurement on workplace training[34] in manufacturing and service companies included analysis of outcome variables on earnings, turnover, performance awards, job attendance and subjective performance measures. There was a small positive impact on earnings for the manufacturing company but no impact on the service company, and trainees were found to be no more likely to leave company than nontrainees. There were positive associations also with job bids, upgrades, performance awards and job attendance.

Employers' perspectives on training: the Conference Board

Finally, a wide ranging study of employers by the Conference Board of the US and Canada provided a definitive picture of the economic benefits of workplace training programmes[35]. Training helped staff improve basic literacy and numeracy, and also encouraged positive attitudes in employees such as taking pride in their work and embracing change. These skills have proven to be critical to the success of employees and their organisations.

Employer respondents confirmed that when employees learn that high-quality work is crucial to the success of the organisation and to their own job security, they are likely to become more conscientious. Once they are fully aware of what is expected of them and how their efforts fit into the big picture, and then receive the skills to meet those demands, the quality of their work generally rises. This leads to a host of direct

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[34] Krueger, A and Rouse, C. The effect of workplace education on earnings, turnover, and job performance. Journal of Labor Economics 1998; 1; 61.
[35] Bloom, M R and Lafleur, B. Turning skills into profits: economic benefits of workplace education programs. New York: The Conference Board, 1999.

economic benefits for the employer, including increased output of products and services, reduced time per task, reduced error rate, a better health and safety record, reduced waste in production of goods and services, increased customer retention, and increased employee retention.

Training also produces a variety of indirect economic benefits, such as improved quality of work, better team performance, improved capacity to cope with change in the workplace and improved capacity to use new technology. These indirect economic benefits, although less tangible and more difficult to measure precisely than the direct benefits, have an important impact on organisational performance. According to most employers interviewed, the indirect benefits of increasing organisational capacity and performance frequently result in tangible, direct economic benefits that they can measure.

The study reports results of a survey of 55 responding employers who ranked benefits from workforce training programmes over a range of skills and organisational improvements. Employers surveyed reported skills gained by employees through workforce training programmes as follows:

Greater willingness and ability to learn for life	85%
Improved ability to listen to understand, learn, and apply information and analysis	84%
Improved understanding and ability to use documents	84%
More positive attitude towards change	84%
Better ability to build and work in teams	80%
Increased understanding of and ability to use numbers by themselves or in charts and tables	76%
Improved capacity to think critically and act logically to evaluate situations, solve problems, and make decisions	73%
Better ability to communicate using English	67%
Improved ability to use computers and other technology, instruments, and tools and information systems effectively	65%
Heightened understanding and willingness to work within the group's culture	65%
Stronger understanding of and ability to use prose	53%
Employers reporting at least one skill gained	98%

Employers surveyed reported organisational benefits gained through workforce training programmes as follows:

Improved employee morale/self esteem	87%
Increased quality of work	82%
Increased capacity to solve problems	82%
Better team performance	82%
Improved capacity to cope with change in the workplace	75%
Improved capacity to use new technology	73%
More employees participating in job specific training	73%
Higher success rate in promoting employees within the organisation	71%
Improved effectiveness of supervisors	69%
Increased capacity to handle on the job training	67%
Improved labour management relations	65%
Increased output of products and services	65%
Higher success rate in transferring employees within the organisation	60%

Improved results in job specific training	56%
Increased profitability	56%
Reduced time per task	56%
Quicker results in job specific training	55%
Reduced error rate	53%
Better health and safety record	51%
Reduced waste in production of products and services	49%
Increased customer retention	42%
Increased employee retention	40%
Reduced absenteeism	33%
Employers reporting at least one benefit gained	98%

3.2   Common approaches: models for training impact evaluation

In their seminal 2002 study on models of training evaluation[36], the Institute for Employment Studies (IES) categorised models of training impact evaluation largely through their links (present or absent) to the influential Kirkpatrick multi-level framework[37]. Whilst they critiqued the earlier interpretations of the Kirkpatrick model for assuming the four levels are too 'sequential' in approach, they confirmed its continuing utility and flexibility for adaptation to a range of diverse workplace training evaluation settings.

The IES also highlights the 'progeny' of Kirkpatrick in which activities for evaluation are extended beyond the four levels of Reaction – Learning (Immediate) – Behaviour Change (Intermediate) – Results (Ultimate). These models incorporate a range of pre- and post-test stages that aim to link evaluation results to assessment processes that strengthen the case for training evaluation by demonstrating returns and benefits from its implementation. These may be gains experienced by the individual or the training organisation and may be more or less quantifiable depending on orientation of the training evaluation.

It is clear that in recent years paradigms and underlying purposes and assumptions for evaluation of training in workplaces have undergone a shift. To complement developing measures of 'harder' outcomes from training, there is a greater awareness of a less mechanistic, more holistic training process that emphasises alignments between individual and organisational objectives. Researchers and evaluators have noted that intermediate application of training in the workplace (as represented by Behaviour Change) is likely to have benefits for organisations as well as individuals, and that its value for this purpose should be captured more explicitly by evaluation.

Similarly, what have been considered effects of training at the Results level have been extended to those impacts on the wider organisation rather than the more narrow returns to a single worker. These higher level linkages add to the justification for investment of training and evaluation at senior management level and develop a case for greater worker loyalty and effectiveness. Recommendations to capture organisational outputs and outcomes rather than individual results represent a noticeable shift within the IES interpretation of Kirkpatrick.

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[36] IES, op.cit.

[37] Kirkpatrick, D L. Techniques for evaluating training programs. Training Director's Journal, 1959-60.

At the same time, training practice has also seen a deliberate importing of management techniques which have acted to blur the boundary between evaluation, training and learning outcomes. Such techniques include the following tools which have been recently adapted to measure the impact of training in the workplace:

- Management by objectives
- Benchmarking and baselining
- Training needs analysis
- Job analysis
- Competency based frameworks
- 360 degree feedback
- Performance measurement
- Return on investment
- Cost benefit analysis

and their distribution in the literature surveyed is acknowledged.

The following analysis of models does not provide a systematic breakdown of the type of business or organisation that would be likely to take up training impact evaluation. This information is largely not accessible in the literature as many of the case studies are anonymised, with no details of firms' size, public or private sector of operation, or industry sector activities. In the absence of a large scale, robust survey of employers we are unable to draw links between particular characteristics of organisations. However, in the online survey results below (section 4) we will aim to highlight features of respondent organisations wherever possible, particularly where they describe themselves as employers. Partner countries' reports and preferences from their own basic skills policy areas and training evaluation contexts are also included.

We have also been unable to identify specific models for measuring the impact of basic skills training in the workplace. The literature on evaluation methods in literacy and numeracy training is too sparse and diverse to draw generalised conclusions on the most appropriate techniques. Therefore the recommendations (section 5) will be based on proven models of training impact evaluation that will be amenable to adaptation for basic skills contexts. They will also cover feedback from survey respondents as to which aspects of training impact evaluation for basic skills would be of most interest for uptake in their organisations. Techniques for good practice in design and development of online training impact measurement tools will be highlighted, although again robust evidence from basic skills contexts is not yet available.

3.2.1   Models A – 'Progeny' of Kirkpatrick

Training impact evaluation models from the above literature survey have been classified according to how closely they are linked to the Kirkpatrick four stage model. The following models retain a relationship to Kirkpatrick's original core framework and typically add either pre- or post-stages that make explicit links to learning or organisational needs and outcomes.

A number of theoretical models have been cited that define four stages of development. Despite a superficial similarity to Kirkpatrick in structure these may actually cover different ranges of activity to be evaluated and so may be included across the following types of model differentiated below.

- *Bamberger et al* (general impact six stage model): represents four stages of a project cycle (inputs, implementation, outputs, and outcomes or impacts) related to Kirkpatrick's levels, with the addition of two further stages at commencement and close: project design and how outcomes were sustained beyond the project lifetime. Contextual factors were also taken into account.

- *CIPD evaluation model*: Based on Kirkpatrick's four levels, including hard metrics relating to proving value and evaluation as a control over training, and soft measures relating to improving training quality and contributing to learning.

- *Frances and Roland Bee*: Includes extensive 'front end' developments recommending stakeholder consultation and evaluation planning, with actual evaluation of learning focusing on Kirkpatrick priorities for what was learned and applied at individual and organisation level, including ROI and performance results.

- *Balanced Scorecard approach*: Follows the Kirkpatrick four level model configured as evaluating learner satisfaction, outcomes, effects on individual and organisational performance measurements.

- *Hamblin*: An enhanced version of Kirkpatrick in which a fifth level of evaluation is added which links individual changes in behaviour to changes in the organisation and its ultimate goals.

3.2.2   Models B – Purpose based models

- *Bamberger et al*: Six stage 'shoestring' evaluation to overcome constraints in time, data or resources, including initial planning, parallel strands of development to address limitations, assessing and strengthening evaluation design. Measures are mainly concentrated in the early stages of evaluation.

- *McDonald et al*: Use of Bennett's Hierarchy (or other) programme theory to identify evaluation outcomes through a cause-and-effect chain. Again, principles for evaluation are 'front loaded' into the initial stages and are intended to act as stimuli for change, practical utilisation of results and flexible methodologies.

- *Schmalenbach*: Use of training needs analysis at initial stages to evaluate likely impact of training before resources are committed, to strengthen links with organisational objectives and desired outcomes.

- *Bramley*: Goal based strategy for controlling and evaluating training based on early identification of preferred outcomes from training in advance of delivery, based on job analysis and explicit objectives.

- *Rae*: Pre- and post-course evaluations, including initial job and training needs analysis linked to job tasks and performance standards, and longer term follow up approaches to identify training outcomes emerging subsequent to training including value for money assessments.

- *Bell System*: Based on programme results, reactions and outcomes for participants to assess value of training in relation to cost.

- *Warr, Bird and Rackham*: Proposed CIRO approach to evaluation including operating Context for training needs, Input of training resources, Reaction by participants and identification of Outcomes for future trend analysis.

3.2.3 Models C – Measures based models

- *Jenkins and Curtin*: Job analysis that provides systematic detail about job duties and tasks performed, knowledge, skills and abilities (KSAs) required, and staff structures and linkages. Mapping job content informs development of data collection techniques for evaluation purposes.

- *Smith*: Highlights growing trends for performance measurement and management that will require managers to be able to translate performance measures into organisational learning.

- *Morell*: Recommends the use of training for programme staff in 'control charting' techniques to evaluate organisational processes, which may include shifts towards quality of operations or business systems.

- *CIPD Value of Learning toolkit*: Highlights organisational issues regarding learning functions, return on expectation (job behaviours and performance), return on investment (effectiveness of learning, economic benefits of training), benchmarking and capacity to align employee development with organisational needs.

- *Management Sciences for Health*: Explores a range of purpose based evaluation models (needs assessment, input/process/outcome/impact evaluations) and develops a six step evaluation process that identifies job issues; collects, analyses, and interprets data; reports on evaluation findings and makes appropriate revisions.

- *Parry*: Proposes 'hard' outcomes from training and improved performance that could be linked with evaluation of return on investment, including impacts on project management, customer service skills, improved staffing and literacy skills. Kirkpatrick model is redefined to evaluate pre-learning needs analysis, knowledge and attitudes, with improved capture of individual and organisational outputs. A cost benefit analysis framework is recommended.

- *Parker*: Recommends performance based evaluation scales for individuals and teams including measures of productivity, training methods and knowledge gained.

- *Phillips*: Developed detailed costing methodology for ROI to position individual training programmes within overall organisational expenditure and calculate cost benefits for future training.

- *Institute of Education*: Carried out economic analysis to quantify benefits to individuals engaged in workplace training, in terms of qualifications, employment prospects and wage analysis.

- *Hollenbeck*: Calculated ROI as an essential component of benefit-cost analysis, identifying intended and unintended outcomes from training in terms of both 'hard' and 'soft' benefits.

- *Krueger and Rouse*: Quantified impact on workplace training through statistical analysis of outcome variables for a manufacturing and a service company.

- *Bloom and Lafleur*: Developed an output based schema to illustrate hard and soft economic benefits of workplace training to individuals and organisation, based on an employer survey.

3.2.4 Models D – Roles based models

- *Yang et al*: four stages - issues, strategies, outcomes and impacts. Participation of three clusters of stakeholders were envisaged to provide leadership, knowledge and tools, engender organisational commitment and involve technical support.

- *Stufflebeam and Wingate*: self assessment techniques (for use in evaluators' own professional development communities; otherwise considered overly subjective)

- *Michalski and Cousins*: involvement of multiple stakeholders in training evaluation, including sponsors, line managers, trainees and training providers. A key task was to harmonise varying perceptions and priorities on training evaluation purposes and outcomes based on diverse organisational roles.

- *Tyson and Ward*: investigated the use of 360 degree feedback techniques to emphasise the overarching effects of organisational context. Stakeholder participation permitted evaluations to be 'negotiated' between participants as social interactions. They collapsed Kirkpatrick's four stage model into three: process, content (learning / trainee performance) and ultimate impact.

- *Miller*: Importance of linking training with business planning and extensive stakeholder consultation with senior managers to relate evaluation priorities to real needs of business.

- *Bhola*: Linked impacts of community literacy training to stages of design, interaction and subsequent interventions to capture social and cultural effects.

4 Results from partner consultations

4.1 Partner country reports

Although detailed policy documents covering national contexts across partner countries were not examined, there are inferences of policies in partners' country reports and results from stakeholder consultations and focus groups (see section 4.2 below). The evaluators are grateful for additional information provided by two project partners with a specific remit for supporting research: the Romanian and German Institutes for Adult Education (IREA and DIE). Their respective contributions below provide background on Romanian policy drivers for basic skills and a comprehensive literature survey of resources available in Germany, from which the present authors have selected extracts.

For a more in depth summary of national vocational education and training systems in WoLLNET partner countries, readers are directed to the CEDEFOP Electronic

Training Village online resource[38]. Further country level statistics can be found via the EUROSTAT portal[39].

4.1.1 United Kingdom (reported by Skills for Work)

The current UK policy driver to promote adult literacy and numeracy in the workplace was initially recommended in the Moser report of 1999 which identified serious shortfalls in skills amongst UK adults, and a threat to UK competitiveness in the global marketplace. The national Skills for Life Strategy, funded by the national Learning and Skills Council, was launched in response in 2001 and since that time has produced and delivered a national curriculum in literacy and numeracy.

The range of contexts for implementation of basic skills training are diverse: further education colleges, school sixth forms, sixth form colleges, training organisations, adult and community learning, prisons and young offender institutions, work based learning, online learning (learndirect), and education and training for the unemployed and jobseekers (under Jobcentre Plus).

Training in the workplace includes all National Vocational Qualifications (NVQs). Adult literacy, language and numeracy learning can take the form of discrete programmes or specialist learning support for learners enrolled on 'mainstream' NVQ programmes. Alternatively, it may be embedded (or integrated) in vocational or community learning programmes.

The 2003 Skills Strategy made provision for employers' needs for basic skills training for their workforce to be met through a National Employer Training Programme (NETP). Free training in the workplace in basic skills and to Level 2 was designed and developed for employers and delivered to suit their operational needs. Successful piloting in LSC regions across the UK resulted in the present Train to Gain programme, in which brokers work with employers to encourage subsidised uptake of vocational qualifications including Skills for Life. A national entitlement to free tuition for a first full Level 2 qualification and new extensive support for learning at Level 3 has since been implemented as recommended by the Leitch Review[40].

Policy drivers towards formative assessment are weaker than those for qualifications based outcomes. However, evidence suggests that adults with literacy or numeracy needs respond well to indicators of 'softer' progress such as improved self esteem that build towards 'harder' qualifications. The RARPA (Recognising and Recording Prior Achievement) framework developed by the National Institute of Adult and Continuing Education provides one way of capturing and recognising intermediate outcomes of some importance to lower skilled adults.

At the end of 2006, the Government commissioned Leitch Review of Skills made recommendations regarding skills development in England to 2020. In 2007 the Government responded to these recommendations in its paper World Class Skills[41],

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[38] CEDEFOP Electronic Training Village.
http://www.trainingvillage.gr/etv/Information_resources/NationalVet/
[39] EUROSTAT online portal.
http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL
[40] Leitch Review of Skills. Prosperity for all in the global economy – world class skills. Final report to UK HM Treasury by Lord Sandy Leitch, December 2006.
[41] UK Department of Innovation, Universities and Skills. World class skills: implementing the Leitch Review of Skills in England. DIUS, July 2007.

which set out ambitious new plans. These included a challenging new target of 95% of adults having basic literacy and numeracy skills by 2020; a huge expansion of the Train to Gain employer brokerage service; the roll out of a Skills Pledge, whereby employers commit to support their staff to acquire basic literacy and numeracy skills, and also to work towards achieving their first full Level 2 vocational qualification; and the development of a range of initiatives to support 'demand-led' skills development, including improving standards of training provider responsiveness to employers' training needs.

Romania (reported by IREA)

In 2003 it was acknowledged that Romania had no specific national strategy for delivering lifelong learning, although 'adult professional education and training' was considered to encompass vocational and general training for the workplace. However, adult basic skills is not coherently recognised nor explicitly regulated as distinct from vocational training and there is a dearth of basic data and performance indicators on adult basic skills.

The establishment in Romania of a European influenced competency based framework of key skills, also in 2003, acknowledged that key competencies would include literacy, number, language and ICT which would become known as 'basic competencies for all'. Since that time 'basic skills' are understood to refer to reading, writing and numeracy. Although there has been less emphasis on focused adult education policy, community based provision of literacy and numeracy has been actively supported since 1989.

There is no national qualifications framework that could drive reform. However, government financial support is available for adults attending vocational courses. When employees participate in employer financed training programs they receive their usual working wages as stated and employers provide any travel expenses needed for participation in training. Such an arrangement may require employees training for at least three months to commit to continuing employment through their individual work contracts, stipulating their rights and obligations after graduation.

Training programmes are secured free of charge at the request of the employee, with the agreement of the employer, or at the request of the employer for persons returning to work following career breaks.

4.1.3 Germany (reported by DIE)

The German literature on training impact evaluation for basic skills focuses on issues relating to quality control of training and highlights return on investment techniques to justify or cut funding for training. Elements of Kirkpatrick, Stufflebeam and Phillips evaluation models detailed above were compiled by Gessler and applied to the CIPP model to measure effectiveness of training and ROI[42]. Using this method, measurable improvements on business results could be linked to favourable impact of training. Context, process, product and input evaluation models are also well known in Germany and linked to ROI.

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[42] Gessler, M. Gestaltungsorientierte evaluation and the return on investment of programmes of continuing education. 2005. http://www.bwpat.de

Another commentator, Hasebrook[43], notes the proliferation in Germany of online evaluation techniques to measure learning. Education and training providers see competitive value in offering extra services such as needs analysis, adaptation and individualisation of measures, analysis of competences, knowledge management and evaluation, and pre- and post-tests. Hasebrook claims that calculated costs make up the majority of direct training costs, and that a cost analysis is the best way to plan education budgets and control course delivery.

For Hasebrook, transfer of skills in the workplace should be carried out directly after the learning intervention and be based on assessments and observations. Validation of transfer can be carried out by knowledge tests, discussions with a supervisor, through a transfer / learning partnership, or in other follow-up activities. Evaluation of successful training should be celebrated for its role in highlighting performance, problem solving, transfer, promotion, and success of the company. However, return of investment statistics indicate that beyond a 50% level of supported costs, training achievement decreases.

Sicher and Harzl[44] proposed a six stage evaluation model covering the following:

Stages	*Measurements*
Stage 1 – What happened to whom for what costs?	Descriptive data
Stage 2 – How was the educational measure perceived?	Satisfaction
Stage 3 – What did participants learn?	Learning success
Stage 4 – What is actually being transferred?	Transfer into practice
Stage 5 – What advantages did it have for the company?	Results
Stage 6 – Was it all worth it?	Return on investment

In another corporate setting (the Henkel company), continuing education was monitored by researchers[45] using the PHAROS evaluation framework of seven main components:

1. decision on strategic educational aims (resulting from a definition of needs)
2. definition of aims for each training intervention
3. survey/interview of participants prior to training (and other individuals)
4. survey/interview of participants directly after training
5. survey/interview of participants 90 days after training
6. design of measure of value for the added value to be achieved
7. calculation of the actual added value.

Training takes place two weeks after this survey / interview and is assessed by online questionnaire, available to participants for three working days after the training. Interpretation and feedback of the data is carried out automatically and stakeholders only receive information relevant for them. Some statistical data is produced for the department responsible for continuing education, namely:

- gains in competence
- achievements in total objectives
- achievements of objectives of individual training

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[43] Hasebrook, J. Education controlling and online learning. Learntec 99 conference, Feb 1999.
[44] Sicher, J and Harzl, G. What value does knowledge have? Practice-oriented controlling in corporate continuing training. Presentation.
[45] Deutscher Industrie- und Handelskammertag. Grasping added value – efficiency and transparency in continuing education at Henkel. 2006.

- assessment of teaching process
- assessment of group dynamic effects
- assessment of teacher's behaviour
- assessment of location
- summary of qualitative information
- assessment of motivational advantage

Following further successful piloting, the PHAROS initiative has now been rolled out across Austria and Eastern Europe.

Brandt and Jungmann[46] agreed that the Kirkpatrick model was useful but found it somewhat simplistic. They expanded it with further recommendations for post course evaluation to extend beyond immediate feedback (e.g. three surveys / interviews at the end of a course, two weeks after and three months after the course):

1. assessment of courses should include affective as well as utility responses
2. factors influencing the effectiveness of the measure should be taken into account, including characteristics of participants, training and the organisation
3. there should be a balance between development of standardised / generic and tailored course evaluation instruments
4. measurement before and after the course (depending on cost considerations)
5. key numbers / indicators can be attained by secondary behaviour analysis
6. use of online surveys
7. individual feedback to participants on success of transfer of learning
8. evaluation to be carried out by independent expert.

Reinmann-Rothmeier et al[47] sought to evaluate the use of multimedia in continuing and further education, and claim that a formative and summative evaluation is based on the following dimensions: acceptance, process and success of learning, and transfer. Alongside pedagogical aspects, they feel that a cost-benefit-analysis is important from a company perspective. They use subjective and objective assessment to determine whether learning aims have been achieved and are being applied, how content has been conveyed and taken up. For learning transfer, assessments cover whether or not the acquired knowledge and abilities are being used at the workplace in a flexible and suitable way. Anticipated transfer can be measured immediately after a course, while the actual transfer over time is evaluated later.

To analyse results most efficiently, organisational benefits are determined by comparing benefits with the costs. However, not all levels can be compared to the same degree. Overall aims, the context of evaluation and the financial and personnel resources available should also be taken into account.

Transfer of skills into the workplace was also studied by Masuhr and Gallenberger[48] who compiled a useful review of related research. Criteria for transfer can be evaluated through:

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[46] Brandt, J and Jungmann, C. Course evaluation and the securing of transfer – tips and exemplary concepts for trainers.

[47] Reinmann-Rothmeier, G et al. Qualitätssicherung bei multimodalen Lernumgebungen. In H.F. Friedrich et al (eds): Multimediale Lernumgebungen in der betrieblichen Weiterbildung: Gestaltung, Lernstrategien und Qualitätssicherung. Berlin: Luchterhand, 1997.

[48] Masuhr, K and Gallenberger, W. Evaluation of transfer as securing of quality of educational measures in the area of occupational health and safety. In: Bergmann, B and Pietrzyk, U

1. application of the acquired skills in the workplace
2. the introduction and implementation of problem solution in the workplace
3. conveying solutions for problems to other employees
4. detecting and solving new problems at the workplace by the help of self-managed / self-planned learning

Transfer needs to be integrated with learning and working conditions, which bring together:

1. individual characteristics (abilities, skills, motivation, and character/individual factors)
2. characteristics of the learning place (principles of learning, sequencing of course-material, relevance of content for real life)
3. characteristics of working place (atmosphere at work, support by superior & colleagues, possibilities and hindrances for transfer into practice).

Results of the research were as follows:

- Transfer can be described by five factors, namely: benefits of application, detection of problems, motivation for continued learning, expansion of skills, negative transfer). Personal characteristics like age, gender, willingness to participate, learning aims and the time spent on the job are not connected with transfer of acquired skills.
- The perceived relevance of content for real life, the integration of problems at the workplace in the course and the detection of possible ways of application via the course are very important in connection with transfer.
- Characteristics of the workplace do influence transfer (e.g. agreement with line manager on application, supervisors and colleagues who are interested in the acquired skills, support by supervisors and colleagues)
- Kirkpatrick´s connections between reaction, learning, transfer and outcomes should be evidenced.

Results from partner focus groups / stakeholder consultations

The following section reports on the outcomes of partners' direct consultations with stakeholders in their respective countries. Where focus groups were not achievable by partners they have collected feedback through other means from samples of suitable respondents. The WoLLNET Website includes fuller accounts of each country consultation.

4.2.1 United Kingdom (Skills for Work)

The target for the focus group was ten participants and on the day eleven attended, including five large employers, one medium-sized employer, one representative of small and micro employers, one provider, and representatives from the WoLLNET Steering Group (unionlearn, the London Development Agency, and the Learning and Skills Council London Region). Participants' reasons for attending the group and contributing towards the development of the toolkit included wanting to:

- be able to measure the impact of current training programmes
- capture soft as well as hard outcomes from training
- further refine existing evaluation of basic skills programmes
- get support to make the business case for basic skills training to employers
- bring together data already collected from local evaluations and get an overall organisational picture
- look at ways to grow the number of participants in basic skills training
- to help promote sustainable employment
- represent the views of small and medium-sized enterprises (SMEs).

Focus group participants were asked questions regarding their current experiences of evaluation and what benefits and barriers they perceived to implementing it in training contexts. Their responses included the following, which were also echoed in survey responses (section 4.3 below).

The main barriers participants reported from existing evaluation practices included: getting buy-in to the process from managers / staff; knowing what to measure; difficulties in measuring improvements in performance for some types of jobs; and identifying contributory factors for behaviour improvement / change, for which guidance on possible external factors would be useful.

Those attending broadly agreed the utility of developing evaluation frameworks which would cover: learner achievements, job behaviours, employees' working lives, and financial / organisational performance measures. Frameworks to evaluate learner achievements should link measures of training retention and qualifications to 'softer' outcomes and improved confidence and be able to measure progression and learners' responses more accurately. Job behaviour evaluation would need to be carefully framed and anonymised and data analysis should also relate to the wider business outputs of the organisation. There were concerns expressed regarding how a toolkit could cover both generic v specific issues of skills within a company. Employees' pre-assessment prior to employment would be a useful feature together with their future plans for career development and progression, pride in their work and loyalty.

Comments relating to evaluation of organisational and financial performance included: the utility of measuring return on investment in training, particularly immediate benefits versus those accrued over time; identification and ranking of primary business drivers for providing training; highlighting of training impact on output, errors, staff retention and absenteeism, health and safety, employee satisfaction and customer satisfaction; and overarching priorities of impact on financial / organisational performance as the starting point for the toolkit as all else follows on from this.

There was a good deal of enthusiasm regarding the proposition of an online toolkit which was similarly well received by online survey respondents. Participants felt that benefits and barriers to such an approach for evaluation purposes would include:

- it must not be time nor cost consuming
- adaptation was an important feature: to be able to opt out of inappropriate questions and also have the potential for further adaptation to meet the needs of specific sectors. Output analysis should be featured
- there would be potential benefits from data warehousing including sharing good practice and benchmarking, although access and information would need to be secure and anonymised

- it would provide opportunities to make the case for workplace basic skills, so there would be a need to build in flexibility to extract this information in the future
- a shared database would be useful for identifying successful interventions that address the needs of employers / employees, acting as a motivator and have a 'snowball effect'
- it would be important to be able to download reports (into e.g. Excel) and to have access to own previous surveys, including the option to save settings and re-use.

4.2.2 *Ireland* (reported by NALA)

Country overview

In 2001 NALA developed a Workplace Literacy Strategy in consultation with key stakeholders including Department of Education and Science, Department of Enterprise, Trade and Employment, employer organisations, unions and practitioners. The Strategy aimed to raise awareness, influence policy, gain support, prioritise those in the workplace with the lowest skills and establish a mechanism for the development of workplace basic skills programmes.

As a result of NALA's campaign and the workplace literacy strategy in 2005 the Government announced a Workplace Basic Education Fund (WBEF), set up under the Department of Enterprise Trade and Employment, with a budget of €2m for 2005. The fund was given to the Irish National Training and Employment Authority (FÁS) to manage, guided by a National Steering Group

The Skills for Work pilot was funded through the Workplace Basic Education Fund managed by FÁS. It developed an innovative model of brokers working with employers across Ireland to generate demand for workplace basic education courses and liaise with providers to create tailored courses meeting the needs of employers and individuals alike. The pilot was highly successful: it ran for two and a half years and reached over 4,000 individuals during this time. It finished in November 2007 and is currently being rolled out across Ireland.

The Expert Group on Future Skills Needs reported in 2007 and stated that 330,000 workers needed to move out of the lowest levels of education by 2020. As a result there is an increased emphasis on the role of the workplace in delivering basic education and training. Ireland´s national policy and advisory board (FORFAS) is currently researching potential interventions which may help to deliver on these challenging targets.

Recruitment of participants

There were significant issues getting people to respond, particularly employers. Even those committed to workplace basic education were unwilling to give up the time to fill in the survey or travel to the focus group. NALA reported that in the time available to contribute to this project it was not possible to search out new contacts who had not previously engaged in basic education and training in the workplace. Two employers agreed to take part in the focus group but dropped out on the day.

Key issues identified

There is already much evaluation going on through the Further Education and Training Awards Council (FETAC) progress, VEC's internal processes and through union learning. Any additional toolkit would need to be linked to these systems.

There is substantial goodwill amongst employers who are willing to invest in their staff if they see the evidence of impact. This kind of evidence is useful. The group felt that intangible or 'softer' measures were at least as important as 'harder' financial impacts. This came through particularly strongly from International Benefits, Evaluation and Costs (IBEC) Working Group who was there to represent employers. Morale and confidence were mentioned many times and overall seemed to be the single most important soft measure.

Key 'intangibles' to measure included morale and confidence, communication, team working and readiness for further work related training. In relation to employees' working lives the following areas came though most strongly: job satisfaction, job security and career development opportunities.

The group did support the measurement of organisational performance measures and in particular commented on the importance of ROI and suggested that existing models for measuring these were used. Increase in profits and market share were seen as less important than accidents at work, errors, wastage and customer satisfaction which were all highlighted as important areas, particularly by employer representatives.

The main benefits to using the tool were considered to be ease of access, flexibility in how it can be used and consistency and comparability of data. The group felt that this kind of information may help to increase investment in WBE and therefore participation rates.

Barriers to using the tool

The main issue the group had with the tool was it that it would not be used which would mean there would be no impact on participation rates. The group felt that there would need to be extensive marketing if employers were to be aware of the tool. Furthermore, there would need to be considerable investment in support systems if the tool was to be used. They felt the toolkit should be seen as part of a package of WBE policies rather than a stand alone resource. For example, it could be linked in with the Skills for Work programme in Ireland, so brokers can promote the toolkit to employers and support them in using it.

Respondents' experiences of evaluating basic skills

In the survey it was felt that the impact of training on learner achievement was important. However it was felt that end of course assessment and/or qualification was more important as a measure than nationally recognised literacy or vocational qualifications. Of the list provided, survey respondents considered most job behaviours important to measure. The least important were considered to be ability to think critically and act logically and ability to contribute ideas; however, over half of all respondents still thought these were important areas.

The areas most respondents considered to be essential related directly to speaking, listening, reading, and writing. Morale and self esteem as well as ability to achieve in other work related training were also considered to be essential by over 50% of respondents. In relation to the attitude of individuals towards their working life, job satisfaction and progression in other training were considered to be the most

essential areas to be measured. However, most respondents saw all of the areas as important but not essential. In relation to organisational / financial impact measures, again the majority of respondents considered all answers to be either important or essential.

However, the answers which over 90% of respondents considered to be important or essential are as follows: accidents at work, successful transfer / promotion of staff, wastage and errors, customer satisfaction, progress towards meeting quality standards and progress towards meeting current organisational objectives.

The main benefits to an internet based tool were considered to be: easily accessible; cost effective; time saving; and consistency in its measures which offers comparability of data.

The main barriers included fear of / inability to use IT; the toolkit seen as too prescribed and narrow - flexible personal assessment based on course needs was considered far more valuable; lack of understanding of tool; individuals feeling threatened by the questions they are being asked; and lack of appreciation for the importance of evaluation.

4.2.3 Romania (reported by IREA)

Key issues identified

The respondents have very broad definitions of workplace basic skills and of impact evaluation and they needed a number of clarifications. The questionnaire had a awareness raising dimension, besides being a data collection instrument.

- There is no tool known to the ten respondent organisations that helps them measure the impact of the evaluation of the training programmes they organise, offer or experience and there is high interest for such a tool to be tested and used in their current activity. However, organisations currently have their own procedures to measure and document impact.
- Discussions and responses prove that there is a gap between what the employers know and need in terms of training for their staff and what the providers are asked to do. Providers mention the need to know the results of the evaluation of impact done in companies that would help them shape their training; on the other hand most providers mention that they are not aware of the organisational needs and of the impact of training on organisational performance.
- ROI is one of the most important elements identified by training representatives in companies as information that should emerge from evaluation of impact of training. Respondents do not have means to measure this at this point; they consider that an instrument that can measure ROI would be a novelty and an important support, enabling them to have a documented conversation with management in terms of investment in training.
- Many respondents saw a potential difference between large and small companies when using a tool for evaluation of impact of training. They are concerned that SME's might not have the necessary practical skills and expertise to use and interpret data from a complex impact evaluation tool accessible via the Internet.
- Most respondents indicate potential difficulties in shaping the evaluation tool. The tool should be broad enough in terms of the training formats, needs and objectives it covers, both from the point of view of the company and the trainers. They believe that it might not be easy to identify the essential and common

elements for all companies and organisation types and to integrate these common elements in the instrument.

- Most of the respondents have identified a 'washback' potential of the evaluation instrument: for the structure and content of the training programmes, to underpin discussions between different stakeholders (management and training departments, employers and professional associations).

Respondents' experiences of evaluating basic skills

- Basic skills training is evaluated both throughout and at the end of training in 70% of survey participants; two refer to evaluation made at the end of training and one notes a 'follow up' stage in the evaluation process (a sort of delayed evaluation, carried out a certain period after the training has finished).
- Many respondents underline that there are already organisation specific evaluation procedures in place.
- 'Practical evaluation' is one type of evaluation of interest, measuring what the learner has achieved through training and can apply in practice.
- Learner reaction, learning changes and impact of training on job behaviour are the three main priorities for evaluation. Impact of training on organisational performance is mentioned by three respondents that do not specify the level / dimension of organisational performance evaluated.
- Current evaluation strategies include materials / textbooks, the structure of the training programmes, the trainers and the learning method.
- Learner reaction questionnaires and data from basic skills assessments or qualifications are the two methods of evaluation identified by most of the respondents.
- Initial assessment / diagnosis and training needs analysis are the two related activities to evaluation that rank highest in the respondents' answers; benchmarking is mentioned by a training provider in the context of the European Language Portfolio.
- Most respondents involved in evaluation report that the results of evaluation inform the design of future training.

The main benefits of existing evaluation are seen to be: improving training programmes by identifying the elements to be improved, better selection of providers, correlation of levels of income with qualifications held, benchmarking staff evaluated.

The main difficulties experienced with evaluation include: lack of time, difficulty in reproducing real work conditions, risk of disrupting production processes, inadequate instruments and expertise of evaluators, negative reactions from those evaluated.

Benefits to using the toolkit include: interactivity, access to information, improved efficiency of HR department, calculation of ROI, positive perception of the users, self paced access, easier administration for evaluation, greater awareness in managers of the need for quality in training.

Barriers to using the toolkit include: data security and protection; lack of expertise in SMEs, poor IT competencies and experience of users, exclusion of evaluation of practical skills, possible clashes with standardised organisational evaluation procedures, difficulties in covering all training needs and areas.

4.2.4 *Germany* (reported by DIE)

Country overview

In 2007 important initial steps were taken to develop basic skills in Germany. The Bundesministerium für Bildung und Forschung presented its new promotional activity: 'Alphabetisierung / Grundbildung mit Erwachsenen' (alphabetisation / basic skills with adults). Over the next five years cooperative projects (with members from science and practice) will be funded with 30 million Euros. There will be four thematic categories, one of them being 'Grundbildung im Kontext von Wirtschaft und Arbeit' (basic skills in the context of economy and work).

The emphasis in Germany is rather between unemployment and the lack of basic skills than between work and basic skills training. This might not only be a question of a more positive or negative perspective, but more a question of timing and the labour market situation (such as high unemployment). It is hoped that cooperative projects will have an influence on the situation in Germany.

Recruitment of participants

There were barriers to focus group participation by employers which included lack of knowledge, awareness and willingness to participate. Employers: do not know what basic skills are; do not offer courses; do not see the necessity to do so; do not see the need to get involved in evaluation. As a corollary, although course providers would be willing to provide training at the workplace there is no demand. Multipliers contacted were busy working on their own projects.

Practical problems for focus group participation included the (overly) ambitious time schedule and relatively low budget for travel expenses to and from the focus group. Unfortunately, due to poor response the focus group had to be cancelled.

For the email survey a list was compiled of contact details of employers, unions, and course providers in Germany. Invitations plus questionnaires were sent out at national level. Companies were approached as to whether they were willing to take part in a telephone interview or whether they would like somebody to come to their offices. Responses collected are reported in detail below (in section 4.3).

Key issues identified

There is no awareness amongst employers of basic skills needs in the workplace. Reasons given for not offering basic skills courses were: that employees already have enough skills, and that they rely on the school system and / or the school reports. Financial support would have probably been further limited had it been known that part of the costs were covered by the employer.

For stakeholders, especially employers, in Germany it would be important to be informed about the basic things first, namely: what basic skills are; the advantages of offering courses in this area; the possibilities to get information about projects in this area. This is a development that has to take place first or - if possible - at the same time as an approach to employers, in order for an evaluation project to be successful and respond to demand.

Respondents' experiences of evaluating basic skills

Due to the fact that in general there was little interest in this project and that Germany seems to be at a stage where it is necessary to convince people of the necessity to have basic skills training, stakeholders were not willing to talk about evaluating courses. Beyond respondents already active in this field, the majority did not even voice a developed opinion on the topic of literacy and basic skills. It was not possible to motivate them to talk about evaluation of basic skills training, which for them probably is a very hypothetical and abstract question. Consequently, no detailed information can be provided on the views of what should be evaluated and what benefits there might be to using the toolkit. The question of the main barrier to using the toolkit is noted above.

4.2.5   Austria (reported by BEST)

Country overview

Particularly in the last two years, awareness raising activities (i.e. UNESCO and OECD) as well as PISA results and press articles have focused attention on the scale of need of basic skills training. Up to this point about 500 students a year have been placed in education basic skills programmes in Austria. However, according to PISA, demand is thought to include up to 14% of the 15 year-olds in Austria. There is a continuing lack of scientific studies to deliver a quantitative and qualitative picture of the country specific situation, and the campaign needs to focus on national circumstances.

Regarding workplace basic skills in particular, the subject of educational deficiencies is still taboo in Austria. But besides age and gender, education shows an important influence on work life. The lower the qualification, the higher the risk of being unemployed (two thirds of lower educated males are employed compared to 80% with higher education, similar to their female counterparts). Thus education is seen as important factor for income / living standards.

Research has shown that there is a rising tendency to define basic skills in the wider sense beyond narrow illiteracy, particularly incorporating ICT skills. More importantly, basic skills were defined as a prerequisite for being integrated into any further education and sustainable transfer of skills into the workplace. Workplace needs are rated as very important to identify a changing demand for basic skills.

Regarding workplace training, low skilled workers rarely participate at all if there are offers which may be due to fears of exposure or lack of awareness. 45% of higher educated people participate in workplace training compared to 8.7% of low skilled workers. The Steiner study shows a growing gap.

Thus low educated adults not only have to face higher risks of unemployment and social exclusion but often cannot improve their situation due to absence of provision. In addition, low education often goes hand in hand with health problems and even a higher risk of mortality than their better educated peers.

Key issues identified by the focus group included:

- very low awareness of basic skills except in the training sector, corresponding to desk research data findings and BEST experience

- fear of exposure/stigma for lower skilled workers
- lack of offers for company in-house provision
- evaluation rated as an important step where enterprise follows management by objectives
- online tool in general considered of benefit if user-friendly, with flexibility and analysis included; privacy issues to be addressed
- questionnaire structure was discussed
- awareness raising to be fostered. Generally awareness is poor, so there are few activities
- if evaluations take place, most constraints refer to privacy issues.

4.2.6 *Czech Republic* (reported by KTB)

Country overview

There is no awareness about workplace basic skills in the way they are conceived by this project. But actually there have been several specific instances of basic skills training at the workplace concerning ICT skills and communication and presentation skills. This sort of training is included in course packages offered by the trade unions and public providers. The majority of courses are commercial and attract funding by companies or participants.

There are also special projects financed by the EU and a national budget dedicated to unemployed people. 'Back to work' courses have been provided by the Countrywide Education Centre and focus on improving qualifications according to the needs of the modern labour market and requirements of the employers. They consist of several themes: a consultation programme focused on ICT skills and verbal communication, an adaptive consultation programme for practical re-qualification, a consultation for continuous activation within the re-qualification course, motivation diagnostics, theoretical and practical training with final exams, and job mediation.

Recruitment of participants

Some educational institutions reported that they are not interested in using evaluation to identify the impact of their courses using an online questionnaire, and that they evaluate the feedback of participants through other means. Other training providers and companies said that they cannot use the term 'basic skills', and instead have designed specific training with particular content and a strict evaluation scheme referring to this content. The most frequent response in telephone interviews was a certain aversion regarding the number of various surveys and questionnaires that respondents are required to complete and remain on file. The third category concerns the 'we have no interest' response.

Key issues identified

Specific courses are preferred, such as technical courses, special ICT courses, bookkeeping. Presentation and communication skills are available mostly for particular groups, which are expected to use them directly in a workplace context: middle and upper management, sales representatives, marketing agents etc.

The most common evaluation techniques are evaluation questionnaires to be filled in by the participants after finishing the course, personal feedback about satisfaction concerning content and relevance of the course, and 'mystery shopping'.

Respondents' views were positive on the benefits there might be to using the toolkit. It has the potential to provide complete and detailed information for the employer about the contribution of the course and the level of knowledge reached by the participant. As an evaluation method it is objective, easy to download via the Internet, and would be comparable for benchmarking if used by many companies.

Respondents' views on the barriers there might be to using the toolkit related to the huge diversity of businesses including staffing positions and jobsheets. They can hardly imagine a general evaluation tool which could be used by every company across industry sectors, specified according to the aims and content of the business. The administration of the questionnaire was considered overly complex with lack of clarity and incomplete choices, so that the participant has to choose between bad and worse options.

4.2.7 *Switzerland* (reported by SVEB)

Country overview

The ALL study shows that 22% (about one million) of the Swiss population have low basic skills (literacy, numeracy, problem solving). An additional recent study has found out that this group is more heterogeneous than politicians and researchers had expected. Another rather surprising result was that most of the persons showing low levels of basic skills are well integrated in the labour market. That is to say we do have a substantial number of persons who would need specific basic skills training.

In sharp contrast to this result, the issue of workplace basic skills is practically unknown to most SME representatives. The situation is a bit different for large enterprises. The latter are clearly more aware of the problem than SMEs and more likely to use specific tools to train basic skills. But given the fact that over 98% of the Swiss enterprises are SMEs, we focus our attention more on their lack of awareness and activities in the field of basic skills.

As a brief summary, we can say that in Switzerland there is a strong need to discuss the issue, to sensitise entrepreneurs and target groups as well as the politicians to the importance of basic skills training (and its evaluation). On a practical basis, the main concern for us at the moment is not evaluation, but training, although we think it will be very useful to implement evaluation tools into new workplace provision from inception.

There is a specific issue of a gap between entrepreneurs and training providers. Recent studies which analysed cooperation between stakeholders showed clearly that there is a problem of language: entrepreneurs and training providers often simply do not understand others ways of addressing the issue (this was also one of the main problems when trying to convince entrepreneurs to answer the WoLLNET questionnaire). Overcoming the gap between SMEs and training providers might be quite an important task to convince stakeholders to introduce and systematically evaluate workplace basic skills training.

To summarise: In Switzerland there are few activities in the field of workplace basic skills, but there is a rising interest and a slowly evolving consciousness of the importance of basic skills training including its evaluation.

Key issues identified

The questionnaires and personal contacts showed a particular interest in some issues: standardisation of basic skills training, and development of a database which gives an overview of staff competencies.

Respondents' experiences of evaluating basic skills

Benefits to using the toolkit include: quick access to the results in a database, new insights, reduction of errors and workplace accidents, flexibility, shared framework and language for stakeholders that have a common understanding of required skills, consistency in quality of training provision options, general availability for individual use, high degree of standardisation, and flexibility of use in timing, follow-up evaluation, and reporting.

Barriers to using the toolkit include: difficulties concerning the use of the Internet, limited access to computers or lack of computer-related skills, wide differences between various sectors and enterprises, data protection, heterogeneous workplace requirements, difficulty of evaluating specific skills in a specific enterprise and limited adaptability according to individual circumstances.

4.3   Results from online questionnaire survey

4.3.1   Closed questions

Section A – About You

Responses to the online questionnaire (included as Annex A) were well supported by data from partner country respondents, of whom nearly three quarters (72.4%) came from the UK. Following data cleansing and the removal of respondents who had not completed all sections of the questionnaire, a usable dataset of 250 cases was available for analysis. The charts below represent this overall survey population.

**Figure 4.1: Country of origin of respondents**

56
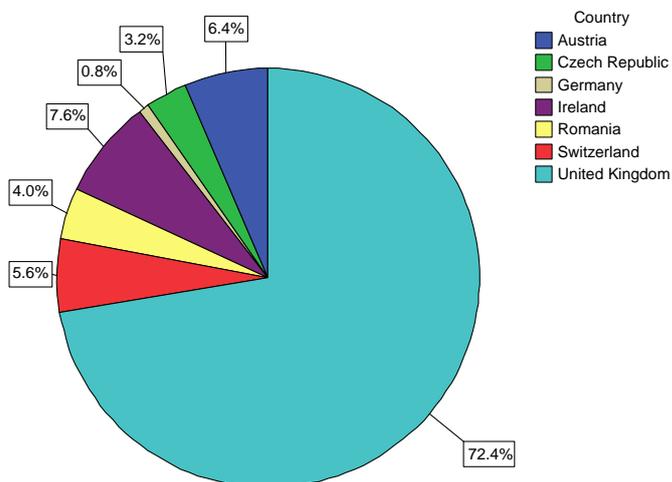
Stakeholders responding were asked the size of the organisation for which they worked. Smaller organisations with under twenty staff represented the largest single sector, but the clear majority of respondents came from organisations with more than fifty staff.

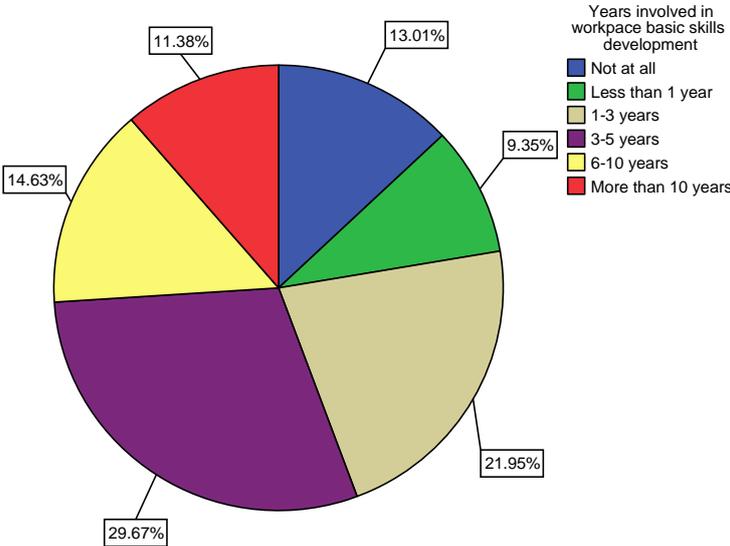**Figure 4.2: Size of stakeholder organisation**
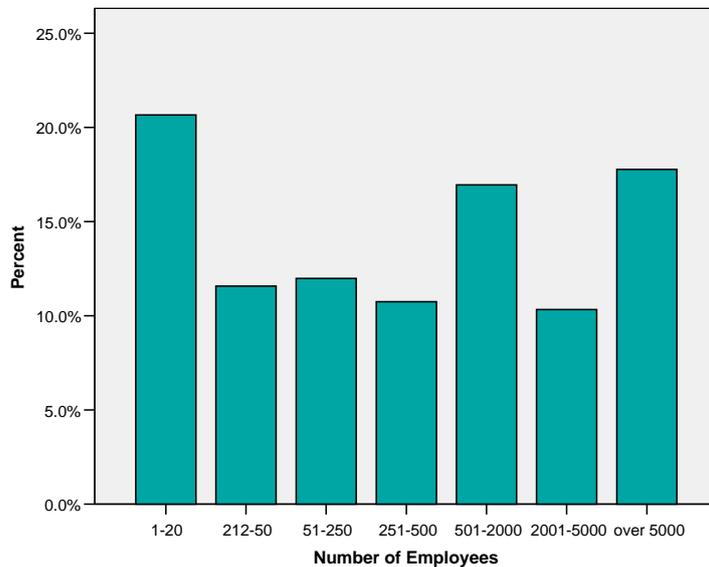
Respondents were asked as to their respective role in workplace basic skills delivery: as employer / manager, basic skills trainer, other trainer or tutor, other private or public provider staff, trade union or union learning representative, or other. The breakdown of roles appears below.

Figure 4.3: Description of roles in workplace basic skills
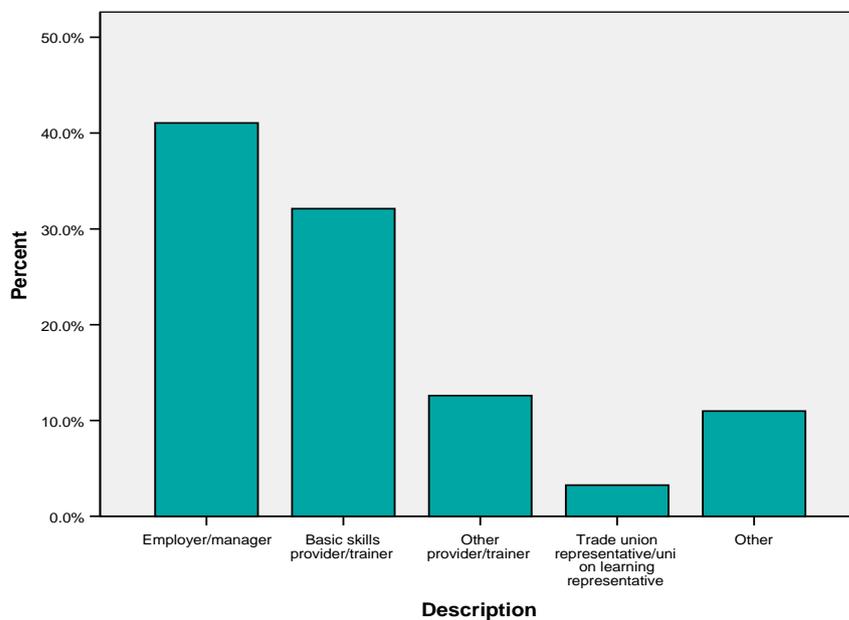
To gauge their length of experience, stakeholders were asked how long they had been involved in basic skills development in the workplace. More than half of respondents were well versed in the field and had been involved for over five years.

Figure 4.4: Years involved in workplace basic skills development

Of those stakeholders reporting themselves as employers, their organisations distributed as follows across areas and sectors of work.

Figure 4.5: Industry sectors of employer respondents
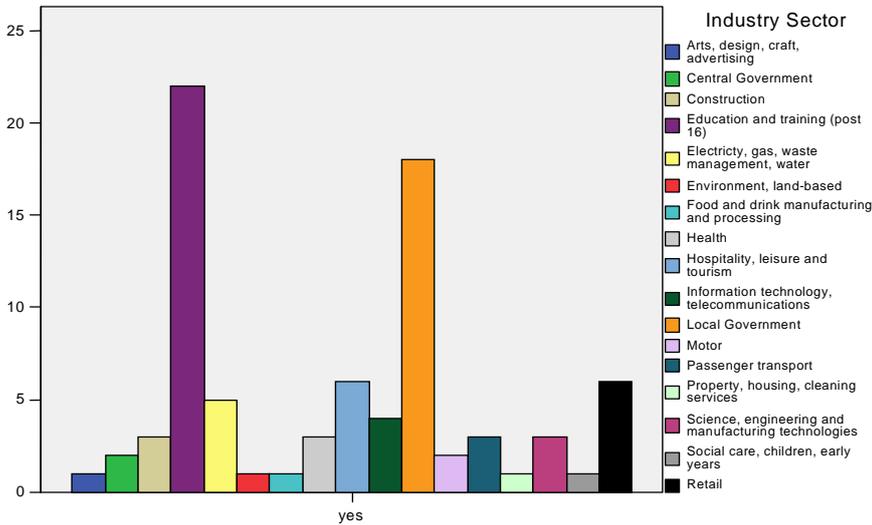
Section B: What evaluation do you do at the moment?

When respondents were asked whether their organisation formally or informally evaluated workplace training programmes, the vast majority (84.3%) indicated that they did. Only 7.3% said that they did not evaluate and another 8.5% were unsure. Of those who do evaluate workplace basic skills training, 60.4% reported that they evaluate both throughout and at the end of the training. Just over a fifth reported as evaluating only at the end of the training and 12.3% evaluate only throughout the training.

Of the employers responding positively to current evaluation practice in the survey (40.4%), 33.7% replied that they formally evaluated, 7% informally and 47.5% formally and informally. 5.9% of employers that evaluated did so throughout the training, 9.9% at the end of training and 23.8% throughout and at the end of training. These represented very different evaluation patterns than amongst the overall population.

Figure 4.6: Types of workplace evaluation of training
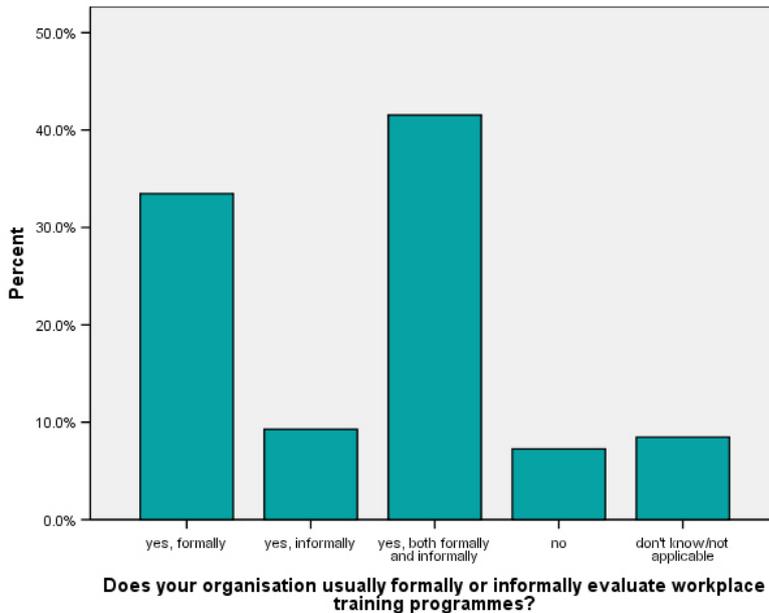
To determine additional features and patterns in responses, cross-tabulations, Chi squared tests and the Crammer's V statistic routines were carried out with variables from section A above, giving characteristics of respondents. Calculated together, the latter two tests indicate both strength and direction of a relationship between two variables. A small number of relationships can be inferred.

There is a weak positive relationship between formal and informal evaluation and organisation type. In other words, employers and managers are more likely to evaluate workplace basic skills training both formally and informally, while providers are less likely to evaluate both formally and informally than would be expected by chance. There is also a correlation between organisational size and propensity to evaluate: the larger the size of the organisation, the greater the likelihood of evaluating workplace basic skills training both formally and informally.

When asked to comment on what is evaluated, almost 90% of respondents confirmed that they assess learners' reactions to basic skills training and resulting changes in their knowledge, skills and/or attitudes. The impact of workplace basic skills training on job behaviour (e.g. how training is applied in the workplace) was also commonly evaluated (80.2%). The least evaluated aspect was the return on investment in training with only 36.9% reporting they evaluate this. Social impact was evaluated by 40.2% reporting, and 50% reported they evaluate the impact of the training on organisational performance.

Amongst employers that evaluated, patterns were as follows. 39.6% evaluated learner's reactions to basic skills training, 37.6% evaluated learning, 33.7% evaluated the impact of training on job behaviour, 17.8% evaluated return on investment from training, 15.8% social impact, and 21.2% the impact of training on organisational performance.

Using cross tabulations and the Chi squared test, the relationship between what is evaluated and respondents' characteristics were further explored. Only three significant relationships were found at the 1% level, which suggests that if an organisation is not based in the UK, they are less likely to evaluate learner reaction, social impact and the impact on organisational performance.

**Figure 4.7: What is evaluated?**
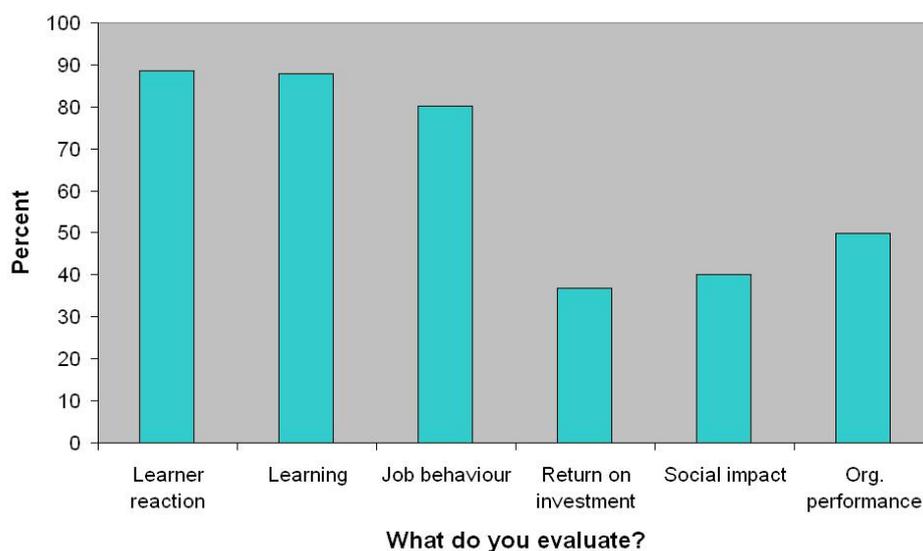
The methods used for evaluation varied, but the most popular approaches were learner reaction questionnaires (89%), data from basic skills assessments and/or

qualifications (70.6%), and the collection of observations from supervisors/line managers (57.6%). The least popular method was the analysis of financial data (15.2%). The 'other' category (15.3%) included methods such as focus groups, the use of annual reviews, and collecting feedback from training staff among others.

Amongst employers using evaluations, types of evaluation methods broke down as follows: 38.4% use learner reaction questionnaires, 27.3% use data from basic skills assessments or qualifications, and 26.3% consult with supervisors/line managers. Only 11.1% analyse productivity and service level data and 7.1% analyse financial data.

Figure 4.8: Evaluation methods used

What evaluation methods are used?
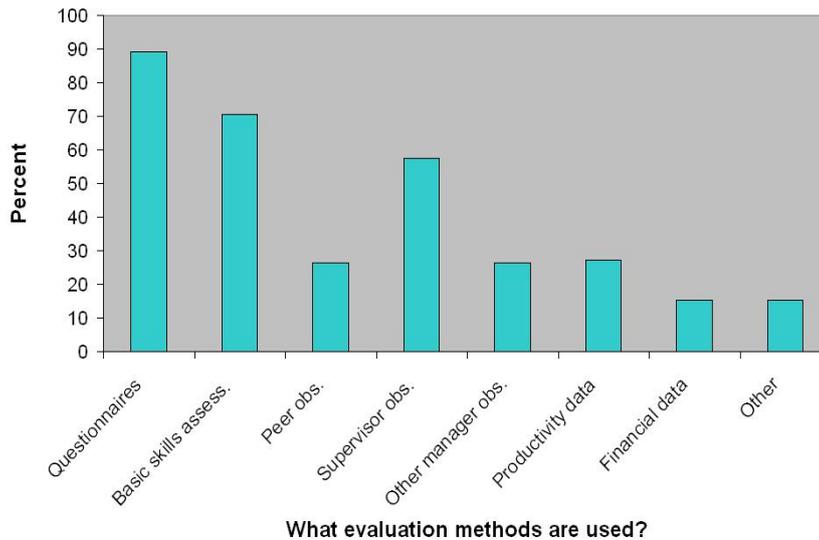
Again, using cross tabulations, Chi squared tests and Crammer's V, any linkages between methods of evaluation and organisational characteristics were further explored. A small number of significant relationships were discovered:

- organisations in the UK are more likely to use data from basic skills assessments and / or qualifications
- employers and managers are more likely to collect observations from peers and co-workers, with providers least likely
- the smaller the organisation, the more likely it is to collect observations from other managers
- the collection of data from other managers is more likely in countries other than the UK
- Trades Union representatives / 'others' are more likely to analyse productivity/service level data.

Relationships between what is evaluated and the evaluation method used were also investigated, and a number of tendencies can be inferred. If basic skills assessments are used as an evaluation method, they are more likely to include some sort of evaluation of the impact of workplace basic skills training on job behaviour, return on investment and social impact. Likewise, those collecting observations from peers and

or supervisors / line managers were more likely to collect information on the impact of training on job behaviour, return on investment and the impact on organisational performance.

Observations from other managers link solely to an increased likelihood of collecting information on the impact of training on job behaviour. Those who analysed productivity data were more likely to collect information on the impact of training on the return on investment, social capital, impact on organisational performance and, to a lesser extent (but still significant), the impact of training on job behaviour. The impact of training on organisational performance is also more likely to be collected by those who analyse financial data, as is return on investment. Those using methods classified as 'other' were also more likely to investigate the impact of training on organisational performance.

Figure 4.9: Other related activities carried out
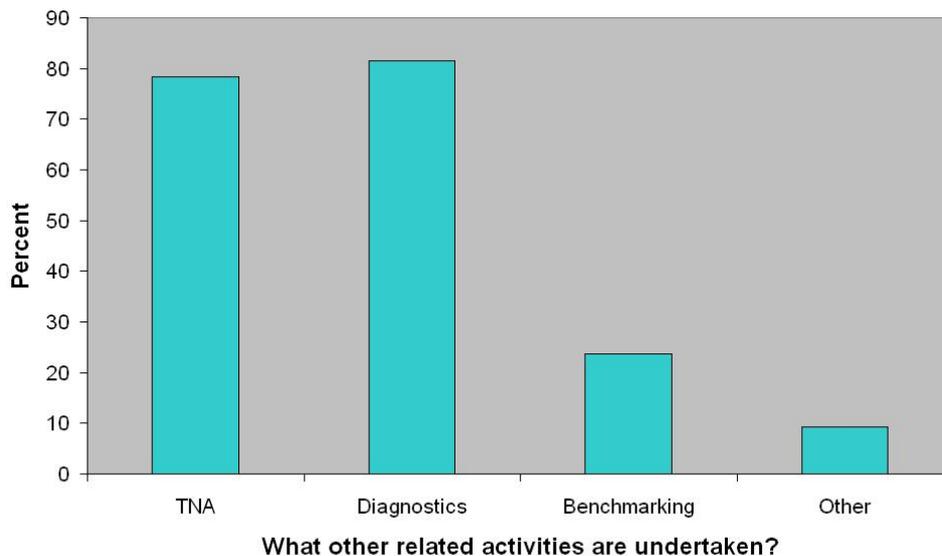
Of those who evaluate their workplace basic skills training, the majority (86.1%) state that the results of evaluation inform the design of future training. In addition to the evaluation of workplace basic skills training, 78.4% of respondents also reported carrying out training needs analysis, while 81.6 carried out other forms of diagnostics. Benchmarking saw much less uptake (23.7%) and only 9.3% reported other related activities, such as participation in employer change management forums and Business in the Community Skills for Life Awards and assessment processes.

Evaluating employers responded that 28.9% carried out training needs analysis, 34% initial assessment or other diagnostics, and only 9.3% benchmarking. Other related activities undertaken included bespoke training courses designed for business needs.

When respondents were asked as to the benefits of undertaking evaluation of workplace basic skills training, three key messages arose:

1. Benefit for the individuals: in terms of identifying training needs and getting the training right; ensuring it met their needs; and being able to demonstrate the effect of the training on the individual.
2. Benefits for the trainers and the programme: feedback and evaluation ensured that the quality of the training was sufficient; it informed future training delivery, ensuring it delivered at the right level; and it validated the relevance of training.
3. Benefits to the organisation: it allowed organisations to understand the value of the training; provided the evidence necessary to support future training programmes; illustrated their value for money; ensured training courses met the needs of the businesses and demonstrated the return on investment.

Importantly though, evaluation allowed organisations to understand what works best. Furthermore, it allowed a baseline to be generated and for organisations to be able to monitor their progress and the progress of the participants of the training.

Section C: Views on evaluation

Principal Component Analysis

This section analyses the views of the respondents regarding the evaluation of the impact of workplace basic skills training on learner achievements, job behaviours, aspects of employees' working lives and financial / organisational performance measures. The responses to these questions are strongly and significantly correlated with each other and show a high level of internal consistency. Principal Component Analysis (PCA) is used to summarise, or 'reduce', the data by grouping together patterns of similar responses. In this way, various common themes (factors) in how respondents view the range of evaluation of workplace basic skills training issues covered in the questionnaire can be identified.

In the present case, 33 of the 49 attitude questions were used in the PCA. Variables that contained large amounts of missing data or did not contribute statistically to the PCA were dropped. In total 167 responses were included in the analysis and eight factors were extracted from these data. These eight factors provide a statistically robust summary of how respondents answered the 33 questions.

The following table indicates how responses were grouped across the eight factors which appeared as significant workplace training issues.

Table 4.1: Factor structure and loading values

Factors
Factor 1: Communication skills   Ability to communicate verbally   Ability to listen to and understand verbal instructions   Ability to read and understand workplace documents   Ability to communicate in writing   Ability to understand and use numbers, charts and tables
Factor 2: Workplace behaviour   Attitude to work   Quality of work   Morale/self-esteem   Team working

Factor 3: Organisational performance
Improved profits, turnover or volume of business Development of new areas of business Sales Market share
Factor 4: Negative performance indicators
Errors Wastage Accidents at work
Factor 5: Educational and career development
Career development opportunities Progress in further education and training
Factor 6: Quality control
Quality of products and/or service Progress towards meeting quality standards
Factor 7: Spend on agency staff
Organisational spend on agency staff
Factor 8 Learner achievements
End of course basic skills assessment and/or qualifications Nationally recognised basic skills qualifications Vocational training qualifications

Cluster Analysis

During this process, each respondent is given a factor score for each of the eight factors emerging from the PCA. This score can be understood as how that respondent would have responded if they had been asked to provide a response to each of these composite variables (or factors) in the questionnaire. Using these factor scores, groups of similar respondents can then be identified using Cluster Analysis. Whereas Factor Analysis grouped the variables together into smaller groups, Cluster Analysis groups together respondents who provided similar patterns of responses. Significant groupings are represented in the five clusters below.

Cluster 1: Advocates of skilled in-house employees
Cluster 1 is the largest of all the clusters representing 35.3% of all respondents included in this analysis. Individuals within cluster 1 have a strong tendency towards evaluating the impact of workplace basic skills training on the organisational spend on agency staff (reflected by Factor 7) as demonstrated by their above average score in this factor. They are also interested in evaluating its impact on the workplace behaviour of staff (Factor 2), including attitude to work, quality of work, team working and individual self-esteem. They consider the impact of workplace basic skills training on communication skills to be of lesser importance. These findings suggest that this group sees a link between basic skills training and agency spend and would perhaps like to reduce expenditure, but would need to see improvements in non-agency staff workplace behaviour before doing so.

Cluster 2: Hard outcome advocates

This group scored particularly highly on evaluating the impact of workplace basic skills on learner achievements (Factor 8) including end of course basic skills assessment and/or qualifications, nationally recognised basic skills qualifications and vocational training qualifications. They are less inclined to evaluate the impact of workplace basic skills training on negative performance indicators (Factor 4, including errors and wastage) or workplace behaviour (Factor 2). In the debate over the importance of hard and soft outcomes to business performance, these individuals err on the side of hard outcomes and may not yet see the importance of softer skills.

Cluster 3: Soft skills and quality advocates

In contrast to cluster 2, cluster 3 constitutes a group of individuals who are, in general, more interested in evaluating the impact of workplace basic skills development on softer skills including communications skills (Factor 1), workplace behaviour (Factor 2) and general quality control (Factor 3) ('general quality control' includes variables such as progress toward quality standards and the quality of the product/service produced). Interest in the impacts of workplace basic skills training on the performance of the organisation and on hard outcomes is neutral and there is very little interest in evaluating the impact on agency staff spending. One may assume that agency spend on temporary staff is of little importance to the organisations that these individuals work for, hence the lack of interest.

Cluster 4: Seekers of organisational success

This is the smallest cluster to emerge, representing only 9% of the sample of respondents., However, it is quite distinct from the other clusters. The strongest interest of individuals in cluster 4 is in evaluating the impact of workplace basic skills training on organisational performance (Factor 3) such as improvements of profits, turnover and sales. There is also a slight interest in measuring its impact on career development of staff members (Factor 5) but this is cannot be considered a strong motivator. In actual fact, no cluster has a particularly strong interest in Factor 5, perhaps reflecting the difficulty in identifying direct links between workplace basic skills training and career progress. This group scored below the population mean for negative performance indicators (Factor 4) and learner achievements (Factor 8), suggesting a greater interest in organisational growth than improving internal procedures to reduce costs.

Cluster 5: Apathetic to measurement of impact of basic skills training

This last cluster represents almost a quarter of all respondents considered in this analysis. Members of cluster 5 only scored above average mean values for Factor 1 (communication skills), but this score is fairly close to zero and so does not indicate a strong interest. All of the other scores are below average, suggesting an apathy towards measuring the impact of workplace basic skills training in general. It is perhaps these individuals who will need the greatest convincing of the need for an impact evaluation toolkit.

Validation of these clusters has been carried out using ANOVA to ensure that cluster membership is statistically valid and robust. Only Factor 5 (career development) does not have a statistically significant correlation with the observed clusters; this helps to explain why no cluster or groups of individuals has a particularly strong interest in this factor.

In terms of which types of respondents these clusters actually represent, Chi square tests are used to characterise cluster members by identifying statistically significant relationships between members of each cluster and descriptive variables such as:

country or origin; respondent status (employer, provider, trade union or other); and length of time the respondent has been involved in workplace basic skills development (i.e. the responses from Section A of the questionnaire). Some statistically significant relationships can be seen and these help to characterise the clusters:

- Clusters 1 and 2 are more likely to contain representatives from the trade unions/others.
- Cluster 5 is less likely to represent employers and trade unions/other and more likely to represent providers.
- Cluster 1 is more likely (and Cluster 4 is less likely) to include individuals who are not involved in evaluating the impact of workplace basic skills training (although these findings are not statistically significant at the 10% level).
- Cluster 5 is more likely to contain individuals from the UK (but again this is not statistically significant at the 10% level).

Almost 100% of responding employers indicated that end of course basic skills assessment or qualifications were either essential or important to their workplace training. Over 90% found nationally recognised basic skills qualifications to be essential or important, and almost 95% vocational qualifications to be essential or important (PCA Factor 8). These results may partly represent linkages between training subsidies and other financial support with staff achievement of qualifications.

Employers asked regarding the relative importance of various types of communications skills confirmed the findings in the PCA above (Factor 1). 64.1% considered verbal skills to be essential, rising to 73% for the ability to understand verbal instructions and 71.1% to understand workplace documents. Writing skills were thought less essential (by 47.8% of responding employers) whilst 35.6% considered the ability to use numbers, charts and tables essential. In terms of job behaviours (Factor 2), attitudes to work were thought essential by 47.8% of employer respondents, quality of work by 58.2%, self esteem by 46.1%, team working by 42.9%. When the percentages of those are added who felt the above were important rather than essential the great majority are positively represented for each factor.

Regarding relative importance of the impact of workplace basic skills training on organisational performance (Factor 3), almost 80% of employers thought effects on improved profits, turnover or volume of business essential or important; 60.7% development of new business areas; 54.2% sales; and 47.7% market share. 84.3% thought reduction on errors essential or important; 73.8% wastage; and 84.1% accidents at work (Factor 4). Successful promotion to other areas of work were essential or important to 85.5% (Factor 5).

4.3.2 Open questions

In addition to the closed questions above, survey respondents were also asked their views on the benefits and barriers to an Internet based basic skills training impact evaluation tool. Whilst we have not been able to disaggregate responses, the main themes arising from the surveyed population were as follows:

Perceived benefits of the proposed tool

- will help to engage employers by convincing them of the bottom line benefits
- can support making the case for piloting activity
- can help to provide structure for programme development at outset

- could be adapted to suit the needs of particular organisations
- ability to choose and use tools as appropriate
- will promote continuity and uniformity of approach to measuring impact
- potential to support benchmarking and comparisons with others using same system
- makes it possible to highlight trends
- less time consuming, easy to administer, instant results, easy reporting
- fewer distribution and data collection issues
- widely accessible to staff - can be done at any time
- more fun than writing out reports - people more likely to engage with ICT
- ease of storing and retrieving data
- will provide guidance about the process
- can link with other business tools (eg, accounts, HR, etc)
- responses seen as anonymous and therefore may be more valid
- ability to share effective practice
- will help in prioritising what workplace basic skills training is relevant
- there are no effective tools currently available
- more cost effective for the managing organisation.

Perceived barriers to the proposed tool

- lack of IT skills and internet access especially among small businesses
- fears around commercial and individual confidentiality, data protection and restricting access to the toolkit
- possible security and technical problems including access and loss of data (need for back-up facilities)
- getting managers and employees to use the toolkit and getting employees buy-in to participate: making sure interest translates into action
- attempting to produce a one-size-fits-all generic toolkit - different sectors (and sub-sectors) need a different approach even if just a 'skin' wrapped around a generic product
- effective advertising and uptake will be dependent on having quality tools available
- setting measures that accurately reflect the desired outcomes
- cost - if there is a charge, organisations will be less likely to use it due to limited resources for evaluation
- some organisations may wish to avoid evaluating impact or mistrust how information gathered will be used
- needs to be user friendly and easily understood
- may not identify 'softer, non-tangible' benefits of basic skills training; will need to measure 'distance travelled' as well as soft skills and the impact this has on the organisation and employee

Other comments

When asked whether they had any additional comments to make that may be relevant to the development of the toolkit, respondents' answers reinforced many points made above:

- it must be driven by employer needs, and if aimed at employers / managers then it must be really quick, simple and easy to use, including opportunities to practice
- needs to have clear instructions and use clear language appropriate to the sector
- the toolkit design should reflect the evidence that many employers / managers have basic skills needs themselves

- must meet the needs of 'micro-employers' with extremely limited resources and little experience of managing the development needs of employees
- should be treated as an essential tool rather than an add-on to training
- evaluation feedback should be sought from employers, providers, union learning representatives, and most importantly the learners
- how will it encompass all workplace situations?
- should remain Internet based, ie not necessary to download onto local servers, and should operate on a variety of software applications / systems
- should provide basic reports, graphs, charts etc which can be designed or selected by users and also present statistics for the business case
- set a time to complete questionnaires and use incentives to complete them. It should be introduced as a fun exercise so as not to pressure the employee
- it will need to generate results that are valued in the workplace by senior and middle management
- this will create a central best practice for all companies to tap in to and assess themselves against
- greater awareness needed
- needs to be aligned to adult education quality / inspection frameworks
- it is essential that the unions are involved throughout the whole process
- there needs to be an understanding of the differences between a language and literacy need - many believe basic skills and ESOL are the same thing
- incorporate a case study builder
- it may be useful to have a pre-questionnaire so that managers / learners can identify learning objectives prior to the course; the post evaluation would then be able to measure whether the learning objectives were met.

5 Discussion and recommendations

5.1 Discussion

5.1.1 Lessons from literature

Evidence collected from the literature survey conducted under WoLLNET suggests that the Kirkpatrick multi-level model for training evaluation remains well known, adaptable and fit for purpose across a range of training contexts. It is today conceived as not necessarily operating in a narrow sequential mode – for which it has been critiqued – but capable of being extended beyond use for individual training impact assessment towards capture of wider organisational effects of training. To be able to evaluate impacts of training more widely offers many benefits to organisations, their managers as well as employees, and raises the issue of how best to *align* individual and organisational goals to demonstrate and build practically on the interconnections between.

The Kirkpatrick model is flexible and amenable to adaptation according to the requisite outcomes of specific evaluation exercises. Not only is it capable of being expanded outwards to include organisational as well as individual measures of progress, but it can also be implemented along an extended timescale that enables it to cover all phases of a training intervention from initial planning stages through to impact analysis at some time after the training has been completed. Researchers confirm that there are many impacts from training whose effects would only be expected to be felt over time, and this is particularly the case with organisational impacts for which any changes in systems resulting from evaluations would need time to 'bed in'.

One of the strengths of the Kirkpatrick model is that it supports design of 'short feedback loops' or formative evaluation. Regular, continuing impact analysis that identifies the short term impacts of training enables these to be fed back to improve the ongoing experience. Inherent within the model is the assumption that training is not merely a one way street: in order to demonstrate that learning has occurred it is necessary to observe a change in practice, based on reflection and integration of what has been learned. Careful evaluation design can build on assessments at regular intervals to reinforce learning and ensure it is relevant to real workplace contexts.

Job and training needs analysis and competency based techniques have only recently entered evaluation practice but are rapidly gaining popularity with their strong linkages to staff skills sets at work. They support standardised approaches which can build on validated human resource development strategies, acknowledge individual strengths and weaknesses and chart improvements, not only in employees' skills but how these relate to overall competencies required by organisations. Job analysis permits identification and benchmarking of individual skills whose development can be tracked over time against job roles and functions. They enable attention to be paid to desired knowledge, skills and aptitudes (KSAs) as a platform and goals for ongoing change.

Organisational performance measures are also becoming more important through such techniques as benchmarking, balanced scorecard approaches, productivity analysis, control charting, cost benefit analysis and return on investment (ROI). There is greater emphasis being placed on understanding the linkages between organisational performance and the effectiveness of its training initiatives, for which in house evaluation capacity is considered to be key. Building capacity towards evaluation can be holistic and may involve not only employees in peer review but their line managers and supervisors conducting 360 degree feedback exercises, human resources development practitioners, and senior managers themselves whose support is essential for obtaining strategic and practical benefits from initiatives.

Trainers' professional organisations recognise the need for training impact evaluation to include both 'hard' measures of achievement together with 'soft' incremental outcomes that may indicate changed attitudes or behaviour at intermediate stages of progression. They identify return of expectation to be as important as return on investment to ensure that training outcomes generally are appropriately valued across individuals and the wider organisation. Return on investment (ROI) to measure training impact is a key area for further development, as current practices are fragmented and the quantitative benefits of training generally under addressed. Cost benefit analyses based on input/output models help to identify and link individual and organisational returns.

Clarity of purpose, goals and objectives of training should be built in from the start, along with positive support frameworks to ensure transfer of training is embedded into job roles and practice. It is useful to identify specific measurable job outcomes defined in terms of changed approaches to tasks – along with organisational cost benefits accrued - that will indicate training has been successful. Experts propose various instruments and techniques to evaluate progress against training goals, of which setting course objectives and personal development plans enables specific milestones to be set for individual staff.

For those lower skilled members of staff involved in workplace basic skills training, evidence underlines that 'softer' outcomes of training may be initially more important to build confidence, self esteem and motivation. Participation in training has itself been found to be effective in raising individuals' own expectations of what they are able to achieve in the workplace and how far they are able to progress in their own development. Both direct and indirect benefits have been found for individuals and organisations and should be incorporated into workplace training of this type.

As to toolkit design, guidelines for good practice in effective Web based instruction have been provided by an institutional librarian in the US[49]. Dupuis points out that Web based instruction should include three considerations for preparing goals and objectives:

1. The type of technological teaching approach to deliver the instruction
2. The conception of the content embodied in the instruction
3. The overall instructional design and assessment embedded in the instruction.

Her suggestions for a practical piloting process to test an online resource for usability include the following stages, which also offer a useful checklist for impact evaluation more generally:

- Step 1. Identify tasks to test.
- Step 2. Build a post-test questionnaire.
- Step 3. Choose and train the test monitors.
- Step 4. Recruit test participants.
- Step 5. Administer the test.
- Step 6. Administer the post-test questionnaire.
- Step 7. Debrief with the group.
- Step 8. Make changes.
- Step 9. Start again.

Dupuis considers that the types of instruction and learning to be designed and measured in online environments are substantially different in nature from more conventional text based courses. Differences in online assessment techniques should take account of the following features and can offer distinctive opportunities:

- Differences – not necessarily seeing students, setting introductory tone, clarifying expectations, determining students' prior knowledge and skills, communicating more frequently; necessity for all students to participate, possibly more assignments and different methods of submission.
- Advantages – numerous, more frequent small assessments; absence of fixed time limits; quicker return of assignments/feedback; ability to log on and analyse feedback more easily. Permits/encourages online discussions which help assess learning.
- Disadvantages – focus on written word; difficulty to adapt to individual needs.
- Assessment options – include selected response, short answer/narrative, discussion/reflection, review of students' work, concept mapping, problems and cases, portfolio assessment.

In common with other experts in online learning, Dupuis agrees that the underlying mode of learning is *constructivist*. It is based on social interactivity between learners

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[49] Dupuis, E A ed. Developing Web-based instruction: planning, designing, managing and evaluating for results. London: Facet, 2003.

and tutors which enables them to share insights and perceptions. Meaning making is collaborative and builds on agreed ideas and mutual understanding of learning. In order to design a process for constructivist approaches to online learning, the following stages are recommended:

1. Identify core knowledge and abilities
2. Develop prototype set of goals and learning objectives
3. Modify goals and objectives
4. Identify methods of assessment
5. Develop learning experiences
6. Gather ongoing feedback through a 'conversational framework' between learner and instructor, learner and learner, or learner and instruction
7. Modify or adapt learning objectives to particular learning needs of students throughout the process
8. Require student reflection, student self monitoring, and student self awareness within learning objectives.

Additional types of learning to form the basis for interactive activities might include: incidental learning, simulation based learning by doing, learning by reflection, case based teaching, and learning by exploring. Categories of interaction might feature: social interactions, information transfer interactions, remote access interactions, knowledge building interactions, and virtual experience interactions.

Dupuis also provides the following useful questions to be applied at the initial needs assessment / pre-instruction stage when designing an online resource:

- What is the purpose and scope of your project?
- Will the instruction have complementary segments online or in person?
- How much time will learners spend on your site, and how much can you cover in that time period?
- What are the demographics and interests of your audience?
- How would you describe the tone and style of your site?
- What metaphor or theme, if any, have you chosen for the site?
- What are the educational needs of your audience?
- What is the level of technological competence of your audience?
- What technologies are available to your audience and project?
- What categories of interactivity meet the needs of your instruction?
- What navigation and design elements are important for your project?

It is instructive to note how well Dupuis' recommended stages for constructivist approaches to online learning mirror elements of impact analysis frameworks noted elsewhere in this report. To illustrate, we map her proposed design below against the initial four stages of an enhanced Kirkpatrick type model for evaluating training proposed by the Institute for Employment Studies (IES; see Recommendations).

Dupuis	IES
Identify core knowledge and abilities Develop prototype set of goals and learning objectives Modify goals and objectives Identify methods of assessment	Stage 1: Identification of learning need (assessment of appraisals, training needs analysis, individual training plans and organisational development strategies)
Develop learning experiences	Stage 2: The learning process (reaction level measures: difficulty, usefulness, motivation to learn)
Gather ongoing feedback through a 'conversational framework' between learner and instructor, learner and learner, or learner and instruction Modify or adapt learning objectives to particular learning needs of students throughout the process	Stage 3: Learning outcomes (training measures, before and after tests, self assessment, intention to transfer learning into workplace practice)
Require student reflection, student self monitoring, and student self awareness within learning objectives	Stage 4: Behavioural change (line manager reports, peer review, self reporting)

In their report on Kirkpatrick based models, the IES also touch on differences between online and traditional course based learning evaluation. They point out that online environments can facilitate methods for data collection at some levels of evaluation much more easily than traditional provision, such as in collecting reactions and examining learner behaviour online. They see advantages in using online techniques to assess trainees' understanding of system functions and training content, as well as supporting tracking of learner performance and eventual qualification.

IES had independently reviewed best practice in organisations and found that e-learning evaluations had been used to measure performance, competencies and intellectual capital, of which the most successful had evaluated job performance measures using Web enabled competency management systems.

5.1.2 Lessons from practice

Information from consultations carried out by WoLLNET partner countries provides the clearest lessons to emerge from this research into the current state of basic skills training practice across Europe. It is clear from country reports that there are wide disparities in policy drivers and national priorities and frameworks for basic skills across partners. It is telling that stakeholder focus groups were convened in the UK and Eire - based on existing levels of awareness by employers that enhanced literacy and numeracy skills are likely to offer real benefits for their businesses - and that policy drivers are strongest in these countries. In the UK the Skills Pledge for employers, Leitch Review, improved recognition for literacy and numeracy under the broker led Train to Gain workplace learning model and the new Skills for Jobs

initiative are all likely to continue to lead progress over the lifetime of the WoLLNET project.

Where other partner countries were not able to organise focus groups, they were able to tap into sufficient support from employers to provide other useful evidence through consultation exercises. There are positive signs that the European basic skills training context is dynamic and will result in enhanced activities in future. The Alphabetisation project in Germany looks set to make significant inroads into workplace based training in literacy and numeracy and the German literature reviewed strongly supports evaluation in context, both in the workplace and online. Other countries have traditional educational system divides to negotiate between compulsory age and adult learning, where workplace practice is often disconnected with community based training as in Romania. Some larger organisations may already be taking their own training impact evaluation in hand as in the Czech Republic, although wider reports of their practice have not yet been collated for external stakeholders. There is also however some fear of exposure by employers as in Switzerland and Austria, where workplace basic skills are considered 'taboo'.

Although biased towards a UK sample, employer responses surveyed online have given insightful feedback regarding their own training evaluation practice, although this has not always been in the context of workplace basic skills training. It was pleasing to note the largest number of survey responses having been received from organisations of less than twenty employees, and that employers themselves represented the largest sample of those stakeholders surveyed. It was instructive, however, that although the majority of respondents reported training evaluation practice, less than half of respondent employers reported experience of evaluation. Many are looking to the WoLLNET project and related initiatives for further guidance as to how to evaluate their workplace learning, including calculation of return on investment to determine bottom line benefits more precisely.

Employers who evaluated reported a good mix of formal and informal training evaluation in which formal methods were preferred. Nearly one quarter evaluated throughout and at the end of training, a larger proportion than at each stage on its own. There was a general preference for a mix of formal and informal evaluation of basic skills training amongst larger organisations.

Of those employers evaluating basic skills training, nearly 40% evaluated learners' reactions, almost as many evaluated learning itself, and almost one third evaluated the impact of training on job behaviour. Just over one fifth evaluated the impact of training on organisational performance although current evaluations of ROI were less well represented (under 20%). When evaluating employers were asked about methods used, learner reaction questionnaires were the most prevalent method and nearly 30% use data from basic skills assessments or qualifications. Subsequent questions confirmed that formal outputs from basic skills training were very important to evaluating employers to measure impact, particularly in the UK where national qualifications for adult numeracy and literacy have been developed.

Related practice carried out by employers confirmed existing experience with training needs analysis and initial assessment or other diagnostics. Bespoke training courses designed for business needs were also reported. Detailed statistical analyses highlighted the areas of basic skills training of most interest for workplace settings:

- Communications skills (especially reading and understanding skills)
- Workplace behaviour (especially attitudes to work and self esteem)

- Organisational performance (especially improved profits, turnover or volume of business, development of new business areas and sales)
- (Reduction of) negative performance indicators (especially errors, wastage and accidents)
- Educational and career development (especially successful promotion)
- Quality control (especially improved quality of work)
- Spend on agency staff
- Learner achievements.

Those stakeholders most strongly supporting the above priorities were also identified by numerical techniques into five 'clusters' of practice. These groupings emphasised the multiple roles stakeholders play in design and delivery of workplace basic skills training, with distinctive impact on trainees, trainer practitioners and the organisation. All levels would benefit from targeted training in evaluation of workplace basic skills, which for best results should respond to the preferences of staff clusters below.

- Cluster 1: Advocates of skilled in house employees
- Cluster 2: Hard outcome advocates
- Cluster 3: Soft skills and quality advocates
- Cluster 4: Seekers of organisational success
- Cluster 5: Apathetic to measurement of impact of basic skills training.

5.2   Recommendations

Together with highlighted points above, we base our recommendations for development of the WoLLNET project toolkit for workplace basic skills training impact evaluation on analysis of open ended responses from the online survey. In our view they illustrate areas for development and useful features preferred by stakeholders which are well aligned to the objectives proposed for the tool.

5.2.1   Functionality

- will help to engage employers by convincing them of the bottom line benefits and cost effectiveness for the managing organisation
- can help to provide structure for programme development at outset including making the case for piloting activity: should help to prioritise relevant workplace basic skills training
- will promote continuity and uniformity of approach to measuring impact and has potential to support benchmarking and comparisons with others using same system, raising awareness of best practice
- could be adapted to suit the needs of particular organisations and include the ability to choose and use tools as appropriate including linkages with other business performance tools (eg, accounts, HR, etc)
- less time consuming; easy to administer, store and retrieve data; instant results, easy reporting and trend analysis
- the tool should be user friendly, easily understood and widely accessible to staff: engagement with the tool should be done at any time and be more 'fun' than writing out reports - people are more likely to engage with ICT.

5.2.2   Methodology

- responses should be anonymised and respond to sensitivities around commercial and individual confidentiality, data protection and restricting access to the toolkit.

- the tool should be platform independent and address a perceived lack of IT skills and uneven Internet access, especially among small businesses. It should be flexible enough either to remain Internet based and / or also be downloadable onto local servers, and should operate on a variety of software applications / systems
- design should anticipate possible security and technical problems including access and loss of data, with the need for backup facilities
- measures should be set that accurately reflect the desired outcomes
- the tool should be treated as an essential part of the training process rather than as an 'add-on' to training
- it should provide basic reports, graphs, charts etc which can be designed or selected by user and also present statistics for the business case, to generate results that are valued in the workplace by senior and middle management
- the tool should incorporate a case study builder
- it may be useful to have a pre-questionnaire so that managers / learners can identify learning objectives prior to the course; the post evaluation would then be able to measure whether the learning objectives were met.

5.2.3   Content

- the level at which content should be pitched is important and should resist attempts to produce a one-size-fits-all generic toolkit. Different sectors (and sub-sectors) need a different approach even if its just a 'skin' wrapped around a generic product
- As well as 'hard' learning outcomes, the tool should identify 'softer, non-tangible' benefits of basic skills training; will need to measure 'distance travelled' as well as soft skills and the impact this has on the organisation and employee. For the latter we consider the framework proposed by the Conference Board to give appropriate guidelines as to coverage.
- needs to have clear instructions and use clear language appropriate to the sector, including guidance about the process with the ability to share effective practice
- for maximum uptake the tool should be aligned to adult and workplace education quality / inspection frameworks, including clear references to milestones of achievement in any national curricula of literacy, language and numeracy skills.

5.2.4   Target groups

- the tool must encourage managers and employees to use the toolkit and attract employees' buy in to participate: making sure interest translates into action
- it must be driven by employer needs, and if aimed at employers / managers then be really quick, simple and easy to use, including opportunities to practice. The toolkit design should reflect the evidence that many employers / managers have basic skills needs themselves
- must meet the needs of 'micro-employers' with extremely limited resources and little experience of managing the development needs of employees
- evaluation feedback should be sought from employers, providers, union learning representatives, and most importantly the learners.

Having examined all the frameworks and options presented, the research team concur with the IES in recommending a six stage model based on Kirkpatrick's levels for training impact evaluation of workplace basic skills as below. We believe that the following structure represents the greatest opportunities for alignment between individual and organisational objectives which will strengthen support from employers

and make the bottom line of basic skills training more visible to participating organisations.

- Stage 1: Identification of learning need (assessment of appraisals, training needs analysis, individual training plans and organisational development strategies)

- Stage 2: The learning process (reaction level measures: difficulty, usefulness, motivation to learn)

- Stage 3: Learning outcomes (training measures, before and after tests, self assessment, intention to transfer learning into workplace practice)

- Stage 4: Behavioural change (line manager reports, peer review, self reporting)

- Stage 5: Impact on organisational performance (attitude survey, retention, morale, commitment, innovation, practice)

- Stage 6: Organisational outcomes (productivity, profitability)

Based on existing organisational evaluation practice, we consider that key to implementing the above approach will be regular assessment of learner progress throughout the basic skills training. Pre- and post-test analyses of job, competencies and training needs, with early identification of desired learning outcomes, will build training objectives and milestones into the toolkit from start and facilitate complementary and effective evaluation and review procedures. Following the training programme, subsequent analyses of the extent to which new learning and practice has been embedded into individuals' job functions and organisational outcomes should be carried out after appropriate intervals.

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Education and Culture

Leonardo da Vinci

Workplace Basic Skills Impact Evaluation Toolkit Project

Stakeholder Questionnaire

The aim of the Workplace Basic Skills Impact Evaluation Toolkit Project
is to research, trial, and develop an Internet-based, user-friendly Toolkit to allow
employers, providers and unions to evaluate the impact of workplace basic skills
(literacy, language and numeracy) training programmes.

We are keen to make sure that the development of the Toolkit takes into account
stakeholders' experiences, views and needs. Your answers to the following questions
will contribute to this process.

Section A - About You

1   Your Country:

    Your Name:

    Your email address* (optional)**:**
    *This will only be used to send you email updates and newsletters about the project.

    Your Organisation:

    Size of Organisation: Employees: 1 to 20; 21 to 50; 51 to 250; 251 to 500; 501 to 2.000;
    2.001 to 5.000 more than 5.000

    Industry sector (e.g. health, social care, retail, transport)**:**

2   What describes you best?
- Employer / manager
- Basic Skills Trainer
- Other trainer/tutor
- Other private or public provider staff
- Trade Union Representative / Union Learning Representative
- Other – please specify:

**3   How long have you been involved in workplace basic skills
development?**
- Not at all
- Less than 1 year
- 1 to 3 years
- 3 to 5 years

- 5 to 10 years
- More than 10 years

Section B – What evaluation you do at the moment

4   Are you or have you been involved in evaluating the impact of workplace basic skills?
YES / NO
If NO then please leave out the rest of Section B and go straight to Section C - Your Views on page X

If YES:
Do you evaluate impact:
- **Throughout basic skills training (eg formative evaluation)?**
- **At the end of basic skills training (eg summative evaluation)?**
- **Do you undertake other related activities (eg training needs analysis, initial assessment or diagnosis, benchmarking)?**

Are results of the evaluation fed back into future practice?

If YES, please briefly describe your role in the evaluation(s):

6   What was evaluated? (please tick all applicable boxes)
- Learner reaction (what the participants thought of the programme)
- Learning (changes in knowledge, skills and/or attitude)
- Impact of training on job behaviour (how employees apply their learning to their work)
- Impact of training on organisational performance (e.g. quality, customer satisfaction, staff retention, health and safety) - please specify which areas:
- Return on investment in the training
- Social impact (e.g. environment, economy) – please specify:
- Other – please specify:

7   What evaluation methods were used? (please tick all applicable boxes)
- Learner reaction questionnaires
- Data from basic skills assessments and/or qualifications
- Collecting supervisor / line-manager observations of changes in employees' job behaviour
- Collecting other manager observations
- Collecting observations from peers or co-workers (360 degree feedback)
- Analysis of productivity / service level data
- Analysis of financial data
- Other – please specify:

8   What were the main problems that were faced in doing the evaluation(s)?

9   What were the main benefits from doing the evaluation(s)?

Section C – Your Views

12   In your view, how important is it to evaluate the impact of workplace basic skills training formally on these learner achievements?

Please choose from the following responses:
E = Essential, D = Desirable, U = Unnecessary

- End of course basic skills assessment and / or qualification results
- Results of nationally recognised basic skills qualifications
- Results of vocational training qualifications
- Other performance test results – please specify and state whether Essential or Desirable:

Do you undertake informal assessments or evaluations post training?

13   In your view, how important is it to evaluate the impact of workplace basic skills training on the following job behaviours?

Please choose from the following responses and rank them in order of priority:
E = Essential, D = Desirable, U = Unnecessary

- Ability to communicate verbally
- Ability to listen to and understand verbal instructions
- Ability to understand workplace documents
- Ability to communicate in writing
- Ability to understand and use numbers, charts and tables
- Attitude to work
- Quality of work
- Morale/self-esteem
- Team working
- Ability to cope with change in the workplace
- Ability to take part in on-the-job and other work-related training
- Ability to think critically and act logically
- Ability to evaluate situations, make decisions and solve problems
- Ability to use computers and other technology, instruments, and tools and information systems effectively
- Other changes in job behaviour – please specify and state whether Essential or Desirable:

14   In your view, how important is it to evaluate the impact of workplace basic skills training on these aspects of employees' working lives?

Please choose from the following responses:
E = Essential, D = Desirable, U = Unnecessary

- Job satisfaction / interest
- Career development opportunities
- Work-life balance
- Job security
- General engagement with working life
- Other - please specify and state whether Essential or Desirable:

15   In your view, how important is it to evaluate the impact of workplace basic skills training on these financial / organisational performance measures?

Please choose from the following responses:
E = Essential, D = Desirable, U = Unnecessary
- Improved profits, turnover or volume of business
- New areas of business
- Change in organisational structure or mix of personnel
- Progress towards meeting current organisational objectives
- Output of products and/or service
- Quality of products and/or service
- Progress towards meeting quality standards
- Sickness / absenteeism
- Customer satisfaction and retention
- Sales
- Market share
- Errors
- Wastage
- Accidents at work
- Staff retention
- Staff recruitment
- Employee participation and achievement in other job-specific training
- Successful transfer / promotion of employees to other areas of work
- Industrial relations
- Time spent managing / supervising staff
- Organisational spend on agency staff
- Equalities and diversity
- Other financial / performance data – please specify and state whether Essential or Desirable:

16   In your view, how important is it to be able to measure the return on investment (ROI) in workplace basic skills training? E = Essential, D = Desirable, U = Unnecessary

At what stage of evaluation are they involved?

20   What might be the main <u>barriers to</u> using an Internet-based toolkit to evaluate the impact of workplace basic skills training?

22   What might be the main <u>benefits</u> from using an Internet-based tool to evaluate the impact of workplace basic skills training?

25   Please use this space to make any other comments that you think may be relevant to the development of the Workplace Basic Skills Impact Evaluation Toolkit:

26 **Finally, trials of the Toolkit will take place at various times over the next 2 years. If you would be interested in trialling the Toolkit in your organisation, please let us know how to contact you here:**

Thank you for taking the time to complete this questionnaire.
Please return it to: XXXX