

# How effective is investment in training?

Aidan Harney assesses how those with responsibility for Training & Development in engineering organisations in Ireland can lay good foundations for evaluating their training interventions up to and including Level 5 – Return on Investment.

‘Human Capital’ is now much talked about as a crucial factor in agile, Ireland-based organisations that strive for international competitiveness. Yet despite our nation’s branding as a “Knowledge Economy” many of the Training & Development (T&D) interventions, designed to transfer knowledge, skills and new approaches to our engineering and technical staff, go largely unappraised.

## Lessons from the US

The US situation provides plenty of food for thought. A three-year study of US companies by the American Society for Training & Development (ASTD) “Profiting from Learning: Do Firms’ Investments in Education and Training Pay Off?” (data collection ’96-’98), showed that when companies were ranked by how much they spent on training (per employee), those that spent more on training did much better than those that spent less. Training Magazine in the USA capped this study with its discovery that leading companies not only invest more but, crucially, they also measure and evaluate more. The magazine’s Top 100 ranking of companies that excel in human capital development found 92% measure training effectiveness to Level 4 (see Panel 1) compared to the industry average of 11%. 67% measure Return on Investment (ROI), known increasingly as Level 5, compared to an industry average of 5-10%. The number 1 Top 100 firm was Pfizer Inc. In Ireland too – an ESRI study (Does Training Generally Work? The Returns on In-Company Training, 2003) has shown that training contributes directly to

increased productivity. It has been reliably estimated that less than 10% of Irish firms evaluate up to Level 4 but, more worryingly, barely 40% go even as far as Level 1 (Alan Nuzum, Programme Manager, Skillnets, & Gerry Doyle, Impact Measurement Centre, HRD Magazine, Spring 2005). The 2004 Skillnets study they participated in shows only a small number of companies have gone to Level 5 – full Return on Investment (ROI) analysis.

In brief then, top performing, best-practice US firms are increasingly able to present reliable data to show their T&D interventions not only transfer learning, but that they also present good value for money – or not, as the case may be. Some progressive Irish organisations have now investigated the ROI avenue too (see Panel 3). However, there is a huge void. At the same time as some progress, it is suggested that many organisations in Ireland do not even gauge the reaction of delegates to the training – the so-called “Smiley Sheets”.

## An Irish study – Skillnets pilot project

Among trainers, consultants, HR managers, Training officers and Managing Directors, this lack of data can be a real cause for concern. Accountability is the driver for better methodology however many think that implementing systems that effectively measure as far as Level 4 can be challenging and when they consider impact measurement and ROI at Level 5, it all becomes downright daunting.

The Skillnets Initiative in Ireland, funded by the Department of Enterprise, Trade and Employment, sees industries working together in sectoral, regional and other groupings to develop and

Panel 1

5 Evaluation Levels			Developed by	Of main interest to:	Percentage of programmes to be evaluated
1. Reaction and Planned Action	Measures participant satisfaction with the programme and captures planned actions	Did they like it? Did they use it?	Donald L. Kirkpatrick (1959)	Participants	100
2. Learning	Measures changes in knowledge, skills and attitudes	Did they learn anything?	Kirkpatrick	Participants	50
3. Application	Measures changes in on-the-job behaviour	Did they use what they learned?	Kirkpatrick	Participants, Supervisors	30
4. Business Impact	Measures changes in business impact variables	Did anything change as a result?	Kirkpatrick	Supervisors, managers	20
5. Return on Investment	Compares programme benefits to the cost	Did the result have a monetary benefit?	Jack J. Phillips (1978)	Managers	10

# Return on investment

Panel 2

Level	Data Collection Instrument
1. Reaction, satisfaction, planned action	<ul style="list-style-type: none"> <li>An anonymous questionnaire</li> </ul>
2. Learning, increased knowledge	<ul style="list-style-type: none"> <li>Questionnaires</li> <li>Tests and exercises</li> <li>Observations</li> <li>Job simulation</li> <li>Peer/self-assessment</li> <li>On-line testing</li> </ul>
3. Application/Behaviour	<ul style="list-style-type: none"> <li>On-the-job observation</li> <li>Completed action plans</li> <li>Supervisor survey (1-8 weeks after intervention)</li> </ul>
4. Business Impact	<ul style="list-style-type: none"> <li>Performance Monitoring Records (i.e. output, costs, time, quality, work habits etc)</li> <li>Action Planning</li> <li>Programme Assignments</li> <li>Follow-up sessions</li> <li>Follow-up questionnaires</li> <li>Follow-up Focus Groups</li> </ul>
5. Return on Investment	<ul style="list-style-type: none"> <li>(i) Isolate the effects of the training from other factors. (Methods in order of preference)               <ul style="list-style-type: none"> <li>Use of control groups, composed identically, with no cross-contamination</li> <li>Trend Line analysis</li> <li>Forecasting Methods</li> <li>Performers estimate of impact (with Statistical Error Quotient (SQT))</li> <li>Supervisors estimate of impact (with SQT)</li> <li>Managements estimate of impact (with SQT)</li> </ul> </li> <li>(ii) Convert the data to monetary value</li> <li>(iii) Tabulate the costs of the training</li> <li>(iv) Calculate Return on Investment</li> </ul>

deliver training, which is cost effective and meets business needs. Anthony Foley, Dean, Dublin City University Business School, was the Evaluator of a Skillnets pilot project in 2004, reporting in 2005, involving 18 companies (see Panel 3) across nine networks to “test the detailed application of the Kirkpatrick (Level 1-4) and Phillips (Level 5) evaluation models in Irish enterprises...in evaluating the impact of training in companies.” The report presents good news for those with hang-ups regarding evaluation methodology. It concludes (i) the models are certainly applicable in an Irish business context and (ii) the models are usable with adequate training and support. So it can be done. But where to start, especially if you are part of a small organisation?

## Introduce a Level 0 approach

At the heart of all evaluations of T&D activity lies one thing - data. Without data, evaluations cannot be credibly completed. So before tackling even Level 1, the very first action must be to focus instead on the Planning Stage. What data do you need and how will you go about securing it? A four-step approach has been recommended by the Impact Measurement Centre, Ireland, which can be tailored to most engineering organisations, whether complex and large in staff numbers, or smaller with a limited training spend. The recommended foundation stones are:

- 1) Training Needs Analysis:** Identify performance “gaps” (or future gaps) at the organisational, departmental and/or individual/job level then decide what training method might suitably bridge the gap. It’s vital to ask: “Will training help?” Training is not always an appropriate solution for every gap or to every organisational problem.
- 2) Develop training objectives:** Agree the variables to be influenced - hard data and/or soft data. This will later allow

you to tell your internal trainer(s) or any outside consultants “I will accept this as evidence that this course has been well run.” You now have agreed measurable outputs.

- 3) Develop an Evaluation Plan:** You must have a data collection plan for each level of evaluation, incorporating the method, source, timing and responsibility. There’s no point standing in the boardroom in six month’s time, when the external consultant is long gone, telling your M.D. you can’t really evaluate the costly training because the trainer didn’t even give out Evaluation Forms at the end of the course. Even some large Irish organisations that have recently attempted to improve their evaluation strategy have ‘come a cropper’ here.
- 4) Collect baseline data:** After, obviously, but also before the intervention. Before? Yes. Examinations or simple self-evaluation methods (such as a Skills Assessment Sheets) prior to training can gather important data for comparison post training. More and more on-line solutions are available and merit investigation.

## Going from Level 1 to 5

Level 1-3 evaluation methods are relatively easy to use (see Panel 2). Level 4 is definitely more complex, with the aim of identifying the business impact. Time spent at ‘Level 0’ however means agreed performance-monitoring records are more likely to be available at this stage. All staff being made aware of the basics of the model as well as their expected input will also aid success at Level 4. Identifying barriers to successful evaluations is important, whether that involves lack of resources, support or skills.

In short, the key factors that will allow clear and credible Level 5 results are the ability to (i) Isolate the Effects of the training, (ii) Convert the data to a Monetary value and (iii) Tabulate the cost

of the training intervention. The process is standardised with 12 'Guiding Principles' and adheres to recognised accounting standards. It is worth bearing in mind that programmes to be evaluated to Level 5 should be chosen carefully based on frequency, scope, cost and the presence of accessible data. Also noteworthy, only 10% approximately of programmes should be evaluated at this level. The ASTD recognises and promotes Phillips Level 5 model and, if you'd like further information, in Ireland, the Impact Measurement Centre specialises in training in the ROI Methodology, representing the ROI Institute in Ireland.

On Thursday, December 1 next, Gerry Doyle, Consultant, Impact Measurement Centre, will be running an Open course "Improving Evaluation Techniques", in association with Engineers Ireland, aimed at training practitioners in engineering organisations. The half-day programme will be based on Levels 1 - 4 with a focus on Pre-Training preparation and Needs Analysis. For bookings and further details contact Andrea Baynes at Engineers Ireland. Tel: 01-6090228. E-mail: [abaynes@engineersireland.ie](mailto:abaynes@engineersireland.ie)



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Panel 3

What companies were involved?
Bord na Mona
Braun Oral B
Choice Hotels
Complete Laboratory Solutions
Constructive Solutions
Diageo
Eo Teoranta*
Glanbia (Agribusiness)
Glanbia (Meats)
Heineken
Hilton Hotels
Irish Biscuits
Kylemore Foods*
Läpple
Lionbridge Technologies
Masterchefs
Novartis
Pat the Baker
Pauwels-Trafo
Tara Mines
TG4*

\* Withdrew early due to lack of available staff for the project

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