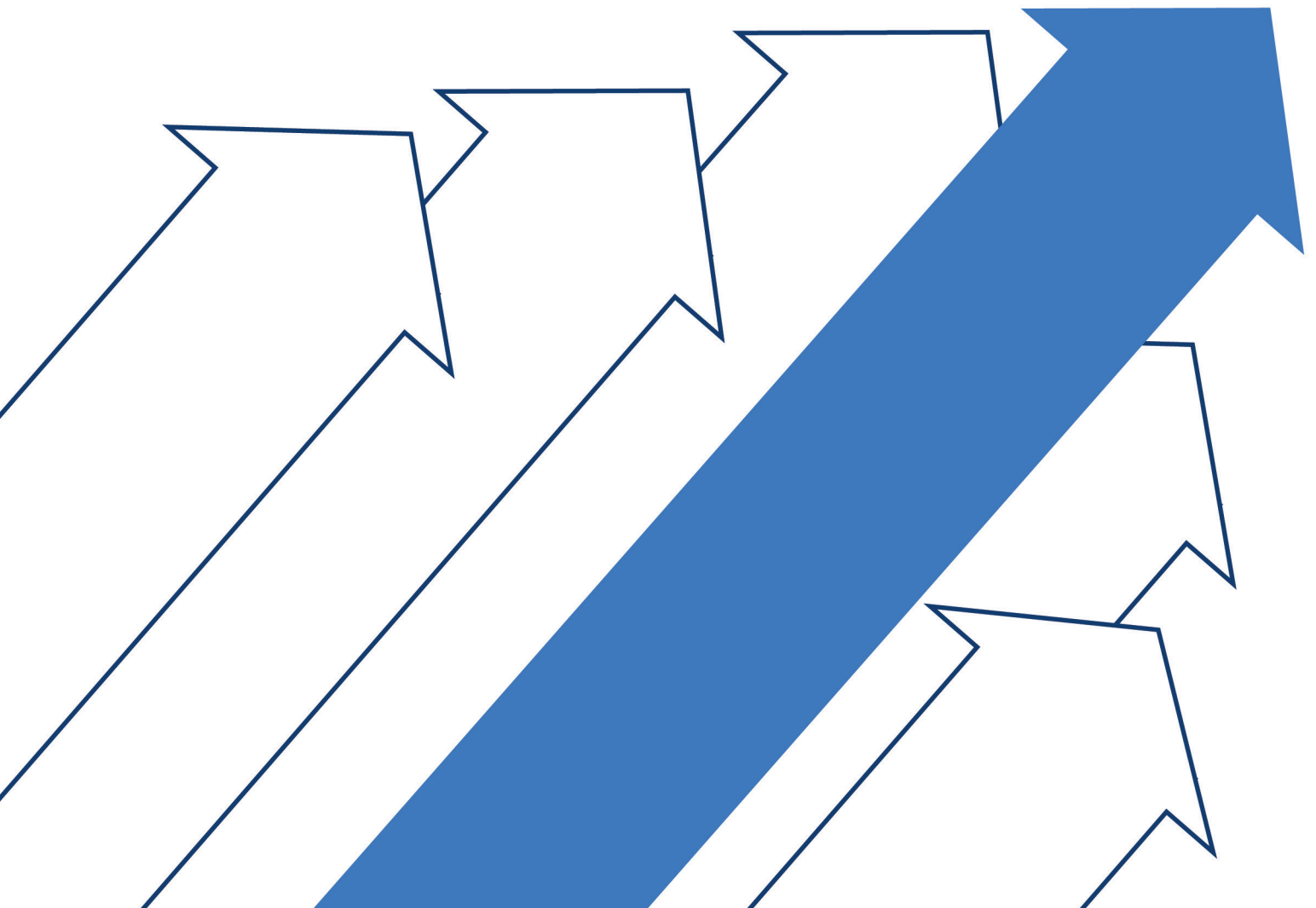


UK Futures Programme - Guidance Document:

How do we test a training solution?

**A five step approach to testing
training modules**



How do we test a training solution?

The UK Futures Programme has been established to increase our understanding of what works in tackling deep-rooted skills problems. An essential part of this process of searching out viable solutions is an ethos of testing. This requires projects to design methods to enable continuous learning, so the project is made more robust and is more likely to achieve optimum results. Many projects within the programme will include new training solutions within their project design. The continual testing philosophy requires evaluation of such training solutions because they are likely to represent a critical activity along the project logic chain. We need to know what works and what doesn't, particularly with innovative training modules.

In this paper we outline:

- **A five step model to testing and evaluating training**
- **Advice on how to apply the model in a simple, practical way**

How do I make a start?

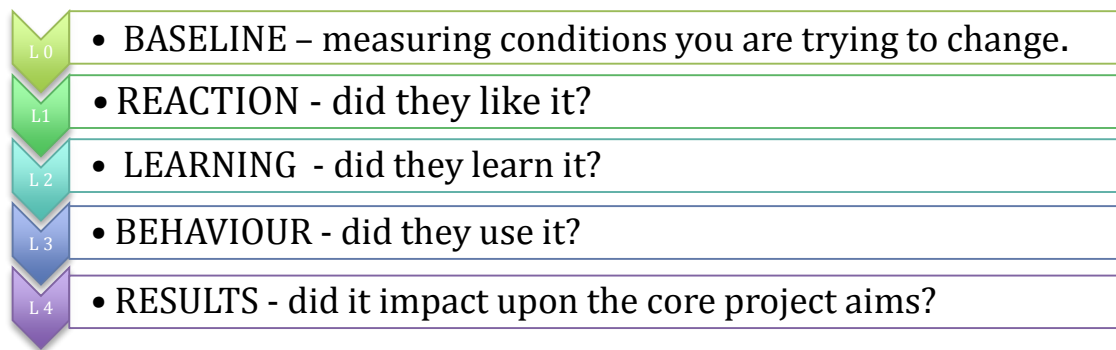
Testing and evaluation begins up-front. If you wait until you have delivered training modules before you start to think about testing, it is too late. Testing is a continuous process across time, so you need to have a model that helps answer the following questions:

- What do I want to find out?
- Why do I want to find these things out?
- Which testing methods are best?
- How do I test the effects of training across time?

This paper explains a five-step model that helps answer these questions so you can design a simple testing approach for your own project. Donald Kirkpatrick is regarded as the founding father of training evaluation. For the purpose of relatively short to medium timescales in UK Futures Programme projects, we suggest Kirkpatrick's model is the simplest to work with that does the job. It will enable you to test your training solutions, in short to medium timescales and in a relatively low cost way. The classic Kirkpatrick model is based on four stages to measure the effectiveness of training in an objective way. For the purposes of the UK Futures Programme, we have added a pre-stage to this –

collecting information at the outset on the factors you want to change (baseline data), which can then be re-measured at the final stage. The factors you want to change reflects back to what you proposed to do in your Application logic chain (though this may have been at a broader level and what the Kirkpatrick model tests is impact at the level of the firm and individual). Further guidance on identifying the right baselines and how to measure them is available separately. We have also suggested some additional ‘attitudinal’ data could be collected at Level 3.

The Kirkpatrick model - (adapted)



The idea of the five-step model is that the effects of training and upskilling tend to occur over time. Training is an input and its output does not stimulate an outcome immediately i.e. someone who undertakes a training activity and successfully completes it, then has to implement the learning from the training into their working role. This takes time. An outcome occurs from level 3 and then ultimately, results occur at Level 4, (ideally the results you identified up front that you wanted to achieve and can observe any change from your baseline collected at Level 0). You need to ensure you are tracking progress continually from a good reaction to training input (Level 1) through to results for the individual, work group or organisation (Level 4).

Testing your product at each stage also allows you to make modifications to the delivery along the way – for later workshops or cohorts - so you can make improvements during the project.

Another reason to test at every stage is the relatively short timescale of UK Futures Programme projects, which means that any impact at Level 4 may be difficult to measure. As such UKCES invests in projects that have demonstrated how they intend to create the potential for impact. Through intelligent testing at levels 1, 2 and 3 in sequence, you can confidently evaluate ‘progress towards’ the desired result. If a project is delivering results along its logic chain, at output and outcome level, we can have some confidence the learning is leading to the desired impact and will be a significant cause of that impact.

Testing at each of the levels illustrated above also allows the identification of potential obstacles to progression from one level to the next and whether these have caused the project to stall. For example, an individual may experience a **blockage to implementation** (e.g. they are moved to a different role which prevents them from applying new learning). They could also experience **training relapse**, which occurs when, by the time they come to apply the learning, much of the new knowledge has been forgotten.

Level 0 illustrates why it is so important to consider this upfront. Your project logic chain which you completed as part of the application process should help identify the problem you are trying to solve and therefore the factors you want to change for the individual or firm. From here you can identify what to measure and collect data on at the outset to re-measure at Level 4. Additional guidance is available on this (*to follow*).

Another factor to consider at Level 0 is a **lack of awareness and acceptance among learners**. This can be an obstacle to progression through the levels can manifest prior to administering the training solution. This should be ideally tested for before training is administered, with learners asked about whether they are aware that they need the training and how it can help them to enhance their individual performance and that of their team. In the context of the UK Futures Programme (where projects may be piloting new solutions), a question can be asked at Level 1 about whether the learner agreed a need for the training beforehand.

The following table explains in more detail, by level, how to set about testing at each stage. The columns in the table clarify, from left to right:

- What am I measuring? (what essentially will I find out)
- Why should I measure this (what does it tell me)
- Which testing methods are best (2/3 simple tools suggested)
- How does this testing help over time? (understand progress towards the end result)

Level	What am I measuring?	Why would I measure this?	Which testing methods are best?	How does this testing help test over time?
0. Baseline	The factors you want to change for firms and/or individuals	To understand the baseline conditions To measure change at the end (Level 4)	Management information on existing business indicators; Surveys to collect special measures	Provides vital baseline against which to track change.

1 Reaction	Whether delegates thought there was a need for training beforehand. How delegates felt about the training and learning experience	Do delegates think <ul style="list-style-type: none"> • it is relevant • it is of adequate quality • it helps them in some way 	<ul style="list-style-type: none"> • verbal feedback • post training survey 	Quick; easy; practical; immediate. Only checks participants' opinions of a module, not tangible benefits
2 Learning	Measure increase in knowledge before and after	To test whether there is new learning	<ul style="list-style-type: none"> • pre/post skills & knowledge test • interview (pre/post) 	Confirms a tangible gain. Knowledge gain needed to change behaviour
3 Behaviour	<p>3.1 Whether learning has been applied (e.g. on the job within a specific training project)</p> <p>3.2 Whether wider attitudes to training have changed</p>	<p>To be more effective individuals and teams need to change (enhance) what they do</p> <p>To measure long term effects from an initial project: - will employers invest further in training in the future? - will they pay (invest) for training in the future?</p>	<ul style="list-style-type: none"> • observation • manager/peer interview • delegate interviews over time • senior manager interviews (esp. SMEs) • participant interviews • key training indicators 	<p>The first level of benefit - change is occurring. If others agree (e.g. the manager) this is evidence of progress</p> <p>The second level of change - transforming attitudes to the value of training</p> <p>Identifies if individuals are more willing to invest in training e.g. their time</p>
4 Results	The effect on team and/or project results	The rationale for training: we must measure the benefits we said we wanted to achieve in the first place	<ul style="list-style-type: none"> • existing business indicators: value, volumes, sales, quality, staff turnover, waste, cust. satisfaction • 'Special' measures: set up to test project specific aims 	Ultimate test if training has worked. Downside - can be a long elapsed time before we can measure

If you are not experienced in using training testing tools, it will pay to talk to a colleague or specialist who has such experience. A UKCES colleague is also assigned as 'testing and shared learning support' for each competition, and can provide help and advice where

needed. The design principles of such tools are relatively simple, but there are many types of testing tools and experience teaches you how to apply them and how to frame questions. The CIPD, the professional body for HR and people development, is a good online source of advice and examples:

www.cipd.co.uk > HR Topics > Training evaluation

The following table summarises some practical questions that may be asked at each of the four levels in the Kirkpatrick model, and the tools you might use to do so. Additional guidance is available for Level 0 (to follow).

Level	Typical questions you might ask	What tool might you use?
1 Reaction	<p>Did you believe you had a training need beforehand?</p> <p>Do you consider this training relevant?</p> <p>Was it a good use of your time?</p> <p>Did you enjoy the training?</p> <p>Did you like the venue, timing, domestic arrangements?</p> <p>Was there an appropriate level of participation from the group?</p> <p>Did you respond well to the trainer's style of delivery?</p> <p>Was this training practical with potential for applying the learning in your job?</p>	<p>A written questionnaire administered at the end of a module or key workshop. Can ask open ended questions at this stage. Or use a simple 4 point scale (e.g. 'very good' to 'very poor') - use an even number of points on any such scale so respondents do not choose a safe middle option.</p> <p>These questions can also be asked verbally (if the group is confident in expressing opinions openly)</p>
2 Learning	<p>Testing questions will be determined by the subject of the training. You could also ask learners:</p> <p>How well did you understand the content of the session?</p> <p>What new knowledge have you gained?</p> <p>What new skills have you gained?</p> <p>How can you apply new learning in your job?</p> <p>Are there any areas of content that require re-visiting or reinforcement?</p>	<p>Pre/post tests are good for assessing the 'gain in learning'. You can also ask via surveys or interviews what individuals know and/or what they can do (on a scale) beforehand and afterwards.</p>

3 Behaviour	<p>3.1</p> <p>Whether learning has been applied e.g. on the job (in brackets, who is asked each question)</p> <p>Did the learner put the learning into effect when back on the job? (delegate)</p> <p>Was there noticeable and measurable change in the learner's performance when back in their role? (employer)</p> <p>Were there any barriers to the learner applying new knowledge or skill in their job? (delegate and employer)</p> <p>Has the new level of knowledge and skill been sustained? (delegate and employer)</p> <p>Would the learner be able to transfer their learning to another person? (delegate)</p> <p>Is the learner the best in their workgroup at this task? If no, what would they need to know or be able to do to be comparable to the best worker? (employer)</p> <p>3.2</p> <p><u>Employers:</u></p> <p>Whether the organisation's wider attitudes to training have changed and their propensity to provide training (including funding for training)</p> <p>Is the employer more likely to provide training to staff (generally and for the specific type of training provided through the project)?</p>	<p>Learners' perceptions of their own performance and improvement (if any) are vital here. Learners' managers are also well placed to observe changes in behaviour. This can be identified in interviews or observation of learners performing their role.</p> <p>Internal customers can also have valid views e.g. where they are recipients of work outputs from learners: use interviews.</p> <p>Best/average worker comparisons can be useful in very practical jobs - identify who is best at a task in a workgroup, understand what they do and why - and transfer/reinforce the learning.</p> <p>Interviews are usually the best tool for these questions, often best asked towards the end of The UK Futures project. Encourage a dialogue, not just tickbox answers, you will learn more about why respondents</p>

	<p>Is the employer more likely to pay for this type of training? Have they identified any tangible benefit which would outweigh any cost?</p> <p>Is the employer now more likely to use external support and expertise for training in the future?</p> <p>Will the employer undertake more innovative training e.g. in new areas, involving new staff, tackling new problems, finding new solutions?</p> <p>Any other attitudinal or behavior change that might have been expected due to the training? E.g. greater collaboration with other employers or other partners?</p> <p><u>Staff/delegates:</u> Has your experience (in the UK Futures project) made you more likely to undertake training in the future?</p> <p>Where are the priorities for your training and development in the future?</p> <p>Would you undertake future training in your own time if it was sufficiently valuable?</p>	<p>hold the views that they do. You can also consider asking these questions towards the beginning of the project. This can set a baseline to identify change <u>prompted by the project</u> (pre/post testing).</p> <p>As with employers, dialogue based interviews are the best tool for such questions. Questions can be asked on a scale of possible responses, rather than just yes/no responses.</p>
4 Results	<p>Measures will typically be existing organisational key performance indicators (KPIs), such as:</p> <p>Value, volumes, sales, quality, profit, customer satisfaction, complaints, staff turnover, wastage, yield, failure rates, on time delivery.</p> <p>In a project environment, there may be project specific measures that need to be created relating to: on time, on budget, to quality standards.</p>	<p>Data gathering is typically used - a valid baseline of performance needs to be established against which progress can be assessed. Such measures often already exist - it is the creation of the baseline that can be challenging e.g. is the business seasonal; or do KPIs fluctuate due to several factors.</p>

Any enquiries regarding this publication should be sent to:

UK Commission for Employment and Skills

Renaissance House
Adwick Park
Golden Smithies Lane
Wath-upon-Dearne
South Yorkshire S63 5NB

Tel: 01709 774800

If you require this publication in an alternative format, e-mail enquiries.futuresprogramme@ukces.org.uk, or call 01709 774800

