What does good learning look like?

The aim of workplace learning is to drive improved business outcomes. This paper sets out the evidence base for designing learning interventions that achieve this and a framework for designing learning under the new contract.

Part 1: How to achieve 'good' learning outcomes

Understanding what makes 'good' workplace learning means understanding the factors that influence whether learning leads to improved business outcomes. Evidence suggests four factors are fundamental.

1. The content needs to be right

The most fundamental requirement of good learning is to get the content right. This means having a very clear understanding of the capabilities we need to develop in order to drive business outcomes, then designing learning to target those capabilities. Each piece of learning should therefore aim to have a tangible influence on the skills, behaviours or knowledge needed in the Civil Service.

2. Learning needs to have 'transfer' at the heart of its design

Research has suggested that, on average, people forget 70% of what they are taught within 24 hours of the training experience ('the forgetting curve')[1], and as little as 10% of the expenditure on workplace training pays off in improved performance at work[2].
Providing learning that leads to improved business outcomes for the civil service means we need to do better than this, and we need to provide interventions that lead to changes in the workplace.

Fundamental to this is recognising that learning is a 'process', and simply attending an event will have limited impact. This is particularly true for learning a 'skill', given the very nature of acquiring a 'skill' requires practice. An event can simply introduce the skill, but being able to master it requires a longer term process[3]. Similarly, evidence from neuroscience on habit formation shows that people adopt new behaviours though applying very deliberate and conscious changes over a period of time, which again shows the importance of moving away from seeing learning as an 'event'[4].

The intervention itself clearly plays a big part in this, and designing learning that embraces this notion will lead to better outcomes. For example, we should seek to provide genuinely

[1] Thalheimer, W. (2006, February). "Spacing Learning Events Over Time: What the Research Says,"
[2] Merriam,S. & Leahy, B. (2005) *Learning Transfer: a review of the research in adult education and training* **http://www.iup.edu/mwg-internal/de5fs23hu73ds/progress?id=oG6J7Q5twpWCACCaj_juTHfRsWpNL5L8WwnOXUcZCgU,&dl**
[3] Dirksen, J (2012) Design for How People Learn
[4] CIPD research report (November 2014): *Neuroscience in action:* http://www.cipd.co.uk/binaries/neuroscience-action_2014-applying-insight-LD-practice.pdf;

blended programmes of learning that support individuals to learn and develop over a period of time. We should also look to include the following in our interventions:

- *Embedding 'post training maintenance' components in to the session.* Given the need for learners to deliberately practice and attempt to retain what they learn after the intervention, focussing parts of the session on getting participants to plan when and how they will do so has been shown to be beneficial. This may come in the form of a 'commitment' about what they will do, or specific techniques such as *Post-training Relapse Prevention (RP),* where trainees think about possible situations where newly acquired skills could be abandoned back at work, and they think of strategies to combat relapse into old ways.[5]

- *Incorporating techniques to aid retention.* It is commonly thought that people forget the vast majority of what they learn, but a number of techniques can be used to change the shape of the 'forgetting curve'. For example forcing a learner to recall information shortly after training has been shown to be effective in signalling to the brain what information to retain[6].

- *Providing the opportunity to practice and giving feedback.* Providing participants with the opportunity to practice new skills and behaviours in the classroom, and, crucially, providing them with feedback has been shown to boost the likelihood of learning being transferred into changes at work[7].

- *Providing post-training support.* As well as encouraging participants to practice and apply what they learn, supporting participants *after* they have left the classroom yields good outcomes. This may mean providing short 'booster' sessions after the main learning event[8], some form of coaching, or setting up action learning sets, to activate participants, and allow them to discuss issues they have faced in applying the learning[9].

In addition, we should also ensure we design learning that fosters the right mindset in participants, since the attitudes and beliefs of the learner is a key factor in whether learning successfully transfers into changes at work. This means ensuring they understand the need to put what they learn into practice, and there is evidence that some individuals do not always realise they need to apply what they learn. Learning can be perceived as valuable *per se*[10], and simply designing learning that convinces them they need to implement and practice new skills is essential. It is also necessary that they believe they have the ability to

[5] Ford & Weissbein EISSBEIN (1997).
[6] http://www.learningsolutionsmag.com/articles/1423/brain-science-enable-your-brain-to-remember-almost-everything
[7] Merriam,S. & Leahy, B. (2005)
[8] Mindgym offer 'booster' sessions to clients, in the form of a short (1-2 hour) tutor lead session several weeks after the main event.
[9] Merriam,S. & Leahy, B. (2005)
[10] Merriam,S. & Leahy, B. (2005)

improve through training, and they have the motivation to change. Evidence shows that when individuals assume they have a fixed ability, it creates a self fulfilling prophecy which is likely to limit the impact of learning, where as when individuals are made aware of concepts such as 'brain plasticity' and the 'growth mindset', learning outcomes can be improved[11]. Getting individuals excited about what they are learning is also a critical step in getting them to apply it, and central to this is fostering a belief that the new skills, knowledge or behaviours will have tangible benefits for them[12]

3. Learning needs to use the most appropriate and cost effective method to meet the required outcomes

'Good' workplace learning maximises the value added to the organisation, relative to the cost of providing it, and we should provide learning that uses the most appropriate and cost effective methods to meet the required outcomes. Given the costs of face-to-face learning (comprising trainer fees, venue hire, participants' travel and accommodation expenses, on top of design costs), we should therefore seek to use digital solutions where possible, since they offer a number of efficiencies. Whilst we know some individuals favour face-to-face learning, and we clearly need to consider the appetite for digital learning in the civil service, increased exposure to digital products more generally has created an opportunity for us to offer more of this type of learning. For example, the common use of video learning through platforms such as YouTube and TED talks suggests this is a viable method for the civil service. In addition, developments in technology gives us the opportunity to provide greatly improved digital learning, and whilst the current CSL e.learning offer comprises largely basic and passive products, we can now provide more interactive web-based methods, such as MOOCs and webinars, which allow participants to learn digitally, whilst offering many of the benefits of face-to-face learning.

Whilst we should seek to use digital methods where possible, face-to-face learning clearly has a range of strengths, and is particularly effective where learning is enhanced through high levels of interaction between participants and the instructor. A key consideration here is likely to be whether it involves learning a 'skill' or 'knowledge', given the need for interaction is likely to be limited for knowledge based learning (unless it is a particularly complex issue), whereas skills based learning is likely to benefit from a high level of interaction with others. This is because knowledge based capabilities are acquired through 'knowing', whereas 'skills' (as mentioned above) are developed through practical application. Giving participants the opportunity to try out particular techniques in a 'safe' environment and receive feedback is therefore necessary, which requires face to face methods, whereas knowledge transfer can occur more easily through remote learning. For

[11] CIPD research report (November 2014): *Neuroscience in action:* http://www.cipd.co.uk/binaries/neuroscience-action_2014-applying-insight-LD-practice.pdf; CIPD research report (February 2014); *Neuroscience and learning.* http://www.cipd.co.uk/binaries/fresh-thinking-in-learning-and-development_2014-part-1-neuroscience-learning.pdf

[12] Merriam,S. & Leahy, B. (2005) *Learning Transfer: a review of the research in adult education and training* http://www.iup.edu/mwg-internal/de5fs23hu73ds/progress?id=oG6J7Q5twpWCACCaj_juTHfRsWpNL5L8WwnOXUcZCgU,&dl

example, learning how to have 'difficult conversations' requires participants to actually practice having these conversations, whereas learning how to use the performance and development system or set objectives is unlikely to require a traditional classroom environment.

We also need to consider the use of blended learning, given not all aspects of skills based learning needs to be carried out in the classroom. The first step to learning a skill is knowing how to perform it, which could be done remotely. For example, the techniques for having difficult conversations could be taught through a video prior to attending a face –to-face session, allowing the time spent in the classroom to focus on applying and perfecting skills. Similarly, some level of face to face learning may also be beneficial for more knowledge based learning, through setting up action learning sets for example.

As well as the direct costs of learning, we also need to avoid many of the common inefficiencies that can occur in workplace learning:

- *People learning what they already know:* learning is inefficient if participants already know what they are being taught. Ensuring people make the right decisions about what learning to take up is key to this, but allowing individuals to have more control over the specific elements they learn, including taking a more modular approach, is needed. Traditional face-to-face learning tends to offer a 'one-size fits all' solution, which can struggle to take account of the fact that participants may have different levels of prior knowledge and different information needs, but digital solutions, or more 'bitesize' face-to-face courses, offer the opportunity for people to focus on learning only what they need.

- *People learning at a pace which does not suit them:* For participants to get the most out of learning, it needs to be delivered at a pace which is right for them. If it is too fast, they will fail to learn adequately, and if it is too slow they will not learn as much as they could. As far as possible, learning should be designed to take account of this, including providing learning at different 'levels', and ensuring the tutor takes account of different needs. However, digital solutions can be particularly conducive for allowing individuals to learn at their own pace, including repeating, or skipping, elements as required.

- *People learning at a sub-optimal time.* Evidence shows that learning works best when it takes place 'just in time'. Again, ensuring people make the right decisions is critical, but so too is ensuring individuals can access learning at the right time. This cannot always be achieved through face-to-face learning, given the course is likely to be run only at set times, and infrequently. If

individuals are not learning at the optimum time, they are less likely to be engaged with the learning and less likely to apply it, which is clearly inefficient. Digital solutions enable staff to access learning whenever it is needed.

- *Dead time.* Research with Civil Servants shows that some individuals believe CSL face-to-face learning involves a lot of 'dead time', where time in the classroom is not put to good use[13]. For example, it is quite common for CSL courses to involve group or 1-2-1 discussions amongst participants, which are sometimes perceived as too long and unfocussed. This is then typically followed by feedback from each group, and we should ask whether better use could be made of that time. Whilst we cannot assume that all perceived 'dead time' is having no benefit, we should look at where and why 'dead time' occurs, and ensure we avoid this in our interventions.

- *Course length.* 'Cognitive load theory' and evidence from neuroscience suggests we should carefully consider how much we try to teach individuals in one intervention, because there are limits to how much the brain can take in[14]. As such, learning can often be designed with inherent inefficiencies, because it tries to teach too much.

4. The right people need to take up the right learning

An obvious condition for improving business outcomes through learning is that people in the organisation participate. Participation will be affected by a broad range of factors and we need to provide learning that people *want* to consume, and that they *can* consume. In-depth qualitative research with civil servants has suggested four further conditions are critical to driving take up:

i. People must realise they need to do better. People will make time for learning if they know they can, and should, improve their performance. This means being fully aware of their weaknesses, but also understanding and acknowledging that things can be done better. This research shows we need to focus on improving performance management, feedback, development discussions, and ensure individuals and managers fully understand what 'good' looks like.

ii. People must believe they will do better as a result of learning. To activate an individual to learn, they need to believe they will learn something of value to them as a result. In particular, they need to expect the time spent learning to have a

[13] CSL research (2015), *How to get people learning: qualitative research with civil servants*
[14] Clark,R et all (2006), *Efficiency in learning: evidence based guidelines to manager cognitive loads;* CIPD research report (November 2014): *Neuroscience in action:* http://www.cipd.co.uk/binaries/neuroscience-action_2014-applying-insight-LD-practice.pdf;

tangible impact on their performance. There is clear evidence that some people question whether the learning offered through CSL will provide this.

iii. People need more support and direction. Individuals do not have the time or knowledge to make the appropriate choices on their own. They need more support and direction from CSL, managers and colleagues, to identify their learning needs, and establish what learning is right for them.

iv. Taking up learning must be easy and quick. Time is at a premium, and we need to make it easier and quicker for people to learn. This includes making it less onerous to access and navigate the CSL website, making booking easy, and ensuring learning takes no longer than necessary. Providing shorter (bite size) interventions, and digital solutions that can be accessed flexibly is also likely to boost take-up.

Part 2: Design principles and framework

Based on the evidence set out above, we have developed a set of design principles for CSL interventions, and a framework for deciding on the most suitable mode of learning.

Design principles

All our products will all be designed to meet the following criteria:

1. Each intervention will seek to have a tangible impact on the capabilities that drive business outcomes. CSL products will have a clear link to a tangible business outcome. Products will be designed with an understanding of: the business outcomes we want to influence, the capabilities that drive those outcomes, and the skills and knowledge that underpin those capabilities**.**

2. Each intervention will have learning transfer at the heart of its design. All our products will be designed to maximise the impact of learning in the workplace. This means we should seek to influence the mindset of the learner to ensure they put what they learn into practice, embedding 'post training maintenance' components in to the session, incorporating techniques to aid retention, and making use of post-training support.

3. Each intervention will deliver the outcomes with maximum efficiency. CSL products will use the most cost effective and efficient method for achieving the outcomes. This means considering when blended, digital or other non-classroom learning can be used; how to avoid 'dead time'; how to avoid participants learning what they already know or do not need to know; and the optimum length of the intervention.

4. Each intervention will be designed to optimise take-up. We will provide products that people *want* to consume, and that they *can* consume. As such, our products need to be perceived as high quality and high value, and delivered in a way that allows people access them. This means considering costs to the user, length, location, and flexibility in when they participate.

Framework for design

CSL will use the following framework to support decision making on whether learning should be provided digitally, or face-to-face:

	Example
Step 1: identify what people need to learn and break it down into specific topics	*Under leadership and management, we may identify: a) setting objectives, b) giving feedback.*
Step 2. Decide if it's 'skill' or 'knowledge' based	*Setting objectives requires ' knowledge', based learning, giving feedback requires 'skill' based learning.*
For knowledge based learning: **Step 3:** Decide what level of knowledge it is (e.g basic, intermediate or expert). This may be due the nature of the subject, or the level of expertise participants require. ***Step 4:*** *For basic and intermediate levels*: Non-trainer lead teaching is likely to be appropriate. This could include a combination of: PDFs, videos, podcasts, passive e.learning, and directing people to external sources of free learning. *For expert level:* trainer lead learning is likely to be required. This could be delivered through face-to-face teaching, or digital solutions such as webinars or MOOCs.	*Setting objectives requires basic/intermediate level of learning.* *Non-trainer lead methods would therefore be appropriate.*
For Skills based learning: The aim should be to offer a blended learning product	*Giving feedback: requires knowledge of the techniques that work, when to use*

Step 3: Establish what knowledge transfer is required to teach participants the necessary theory/techniques. Non-trainer lead teaching is likely to be effective. This could include a combination of: PDFs, videos, podcasts, passive e.learning, and directing people to external sources of free learning. **Step 4:** Establish what type of practice and support is needed to develop sufficient expertise. Trainer lead sessions are likely to be most effective, where the focus is to allow participants to practice and hone their skills, and receive feedback.	*them etc, which can be taught through reading PDFs, videos, podcasts, passive e.learning.* *Participants can then attend a face-to-face session where they can practice the techniques.*