

Embedding a Continuous Learning Culture across UK Ministry of Defence

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ABSTRACT

The role of workplace learning in workforce development has grown in emphasis over recent years, as organisations try to better exploit the limited training time and budgets available. Modern literature presents learning as a continuous process, not only ‘added to work’ but also ‘extracted from work’, realising better employee development, increased performance, and more flexible learning opportunities. Organisations are now beginning to recognise the potential benefits of moving to a continuous learning culture (CLC) where the whole workforce is actively engaged in promoting and supporting workplace learning. There are, however, some challenges, particularly in enabling and supporting the less formal elements of the continuous learning process.

This paper draws on the outputs of research undertaken on behalf of UK Ministry of Defence (MOD) by Edif ERA and the University of Leicester during 2014 – 16, investigating the wider benefits of embedding a CLC (also described in the research study as a ‘Workplace Trainer Culture’). Qualitative data were gathered from interviews with 206 UK military personnel and from a literature review of 17 multinational, non-defence case studies with a combined sample of over 2,300 participants. Key findings and conclusions are outlined in this paper, including: a set of characteristics which typify a CLC; associated benefits and barriers; a suggested Workforce Development model; and a conceptual model of a system to embed a CLC across UK MOD.

This research has informed UK MOD policy, processes, and practices to ensure Defence is well prepared to design and deliver learning for an agile force in the future, but the findings have applicability for all organisations looking to broaden learning capability within the workforce and across the organisation as a whole.

ABOUT THE AUTHORS

Daisy Mundy is an experienced educational and training specialist who has designed, led, and successfully project-managed several research and development projects on behalf of UK MOD. She has led a number of workstrands within the UK Defence Trainer Capability (DTC) Project, advising on training policy, strategy, and change management issues. Her research work has required her to develop a thorough understanding of the cultural and technical aspects of training and learning approaches including: organisational attitudes to training; concepts of trainer capability; modern training methods; and current media technologies. A former British Army Educational and Training Services (ETS) officer with over 25 years military service, she has a strong background in planning, developing, managing, and evaluating the implementation of bespoke learning and development solutions within both the military and commercial sectors.

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INTRODUCTION

What is meant by Continuous Learning Culture? Definitions vary depending on the author, but in the context of this study it is a culture in which the whole workforce is engaged in promoting and supporting learning in the workplace. There has been growing emphasis recently on recognising and capturing this less formal type of learning. This is evidenced by the renewed interest in concepts such as the 70:20:10 framework (Jennings, 2013) in which the greater proportion of learning is attributed to informal activities such as learning from others and from challenging experiences in the workplace. Increasingly, organisations are beginning to recognise that while formal training courses, whether classroom instruction or online learning, might initiate the start of a learning journey, it is in the workplace “*where learning attains its relevance and currency*” (Talbot, 2013: p164) and it is in the workplace that knowledge is shared, expertise is developed, and innovation is born. Learning is, therefore, a continuous process both for the individual and the organisation, and the workplace environment is a fundamental factor in how effective and productive that learning is.

This means that how organisations manage learning in the workplace is very important. In September 2013, the UK Ministry of Defence (MOD) initiated the Defence Trainer Capability (DTC) Project which focused on improving the training and development of military trainers in order to facilitate a more modern and agile approach to training. One particular area of focus for the DTC project was to improve the organisational approach to workplace training. The formal training system is well established and standardised across all Defence organisations as it mandates the application of the Defence Systems Approach to Training (DSAT). However, DTC project stakeholders were aware that while workplace training was an integral part of the formal training system, it was not particularly well defined or understood within Defence. An initial scoping study report for the DTC project (Mundy et al, 2014) had found evidence of confusion and differing perceptions at management levels, both in training establishments and working units, regarding the definition of ‘workplace training’ and ‘workplace trainer’. This affected how workplace trainers in different organisations were prepared and resourced for their job roles, which in turn had the potential to impact on the effectiveness and efficiency of the training system as a whole. A more standardised and robust approach to the training and development of Defence Workplace Trainers was therefore identified as an end-state goal for DTC.

The main challenge in addressing this end-state goal was to achieve a common pan-Defence approach to the training and development of workplace trainers. The initial scoping study report for the DTC project (Mundy et al, 2014: p45) identified potential good practice in the Infantry and Royal Marines, where all ranks were considered to be workplace trainers, “*...trainer skills are developed in all members of the workforce from an early career stage and subsequently reinforced at progressively higher levels during career courses.*” The report described this as a ‘*Workplace Trainer Culture*’ and suggested that this might offer a pan-Defence approach to the training of workplace trainers which could potentially have much wider associated benefits directly relevant to DTC aims and objectives. The overarching aim of the DTC project was to achieve a ‘through-life trainer capability’ in which those with potential to be high-performing trainers were attracted to volunteer for trainer posts, and then talent managed through successive trainer posts at appropriate career stages in order to provide a motivated and experienced hierarchy of trainers, trainer supervisors and trainer managers. The ‘*Workplace Trainer Culture*’ appeared to reflect a through-life approach to developing trainer capability in the workplace; this potentially would integrate neatly with a similar approach to developing trainer capability for formal training establishments. Such a culture also appeared to offer opportunities for promoting the job of military trainer on a broad basis, and for identifying trainer potential at an early career stage. However, while a ‘*Workplace Trainer Culture*’ appeared to work well for the Infantry and Royal Marines, it was not immediately clear whether it would be feasible or indeed desirable to try to embed it more widely in other organisations across Defence, given the cultural and functional diversity of organisations involved. In June 2014, a study was commissioned within the scope of the DTC project to explore the prospective benefits of a

‘*Workplace Trainer Culture*’, and to determine the feasibility of embedding this type of culture across the whole of Defence (Mundy et al, 2016). ‘*Workplace Trainer Culture*’ was the original term used in this study but subsequently, as part of the recommendations from the research, “*Continuous Learning Culture*” was suggested to Defence as a more appropriate alternative; this term has been used throughout the remainder of this paper.

RESEARCH QUESTION

For the purposes of this study, a CLC was defined as an organisational culture in which the whole workforce is engaged in promoting and supporting learning in the workplace. The Central Research Question for this study asked “*What are the wider benefits of embedding a continuous learning culture (CLC) across Defence?*” Two Research Objectives were examined:

- Research Objective A: *What evidence exists that there are benefits associated with a CLC?*
- Research Objective B: *What evidence exists that similar benefits could be realised by embedding a CLC across Defence?*

The research question was considered from the individual and collective perspectives of all four Services (i.e. Royal Navy (RN), Army, Royal Air Force (RAF) and Civil Service) and included both Regular and Reserve Forces. This was a two-year study which aimed to support DTC stakeholder decision-making at a strategic level by developing a realistic vision for change, with defined goals and a plan for reaching them. The full detail of the study cannot be included within the constraints of this paper; instead the overall technical approach is summarised and the paper then focuses on two key areas of the findings and conclusions. These are: 1) the development of a common Defence approach to workplace training and learning through a Workforce Development Model; and 2) the development of a conceptual model of a system to embed a CLC across Defence. These models formed the basis for goal setting and action planning in this study, which culminated in a recommended Action Plan to embed a CLC across Defence. This Action Plan has since been refined and updated by DTC stakeholders, and early implementation has been initiated through a number of work packages which will develop over the next 12- 18 months.

TECHNICAL APPROACH

Research Objectives A and B were examined consecutively in a two stage approach.

Stage One – What Benefits Are Associated With a CLC?

For Research Objective A, the focus was on gathering evidence of the associated benefits of a CLC. However, this stage of the study also set out to identify the characteristics which typified a CLC in order to provide a baseline for the subsequent work on Research Objective B in Stage two. It was considered essential to explore this question in a Defence context, and so the primary source of evidence was gathered from live case studies within Defence. Four organisations (see Table 1) from the different Services within Defence were identified as having a CLC; this was based on evidence from the initial DTC scoping study report (Mundy et al, 2014) and advice from key stakeholders. These case studies offered the opportunity to examine varying approaches to CLC across the different Services, looking for common themes with regard to approaches to workplace training and learning, and any benefits associated with these. Individual working units were selected from within the four organisations, and semi-structured interviews and focus groups were conducted with a cross-section of the sample population. In order to ensure a balanced perspective, the sample population included three sub-groups: senior managers, work supervisors, and lower level workforce (i.e. junior non-commissioned officers and below). Table 1 shows the breakdown of the sample from across the four case study units by organisation and sub-group.

Table 1: Breakdown of the Sample for Interviews and Focus Groups by Organisation and Sub-group.

Organisation	Number of participants		
	Senior managers	Work supervisors	Lower level workforce
Army - Infantry (Parachute Regiment)	3	5	7
Royal Marines (RM) – 40 Commando Brigade	2	5	10
RN – Royal Naval Air Station (RNAS) Yeovilton	2	2	5
RAF – RAF Coningsby	2	8	4

Interviews and focus groups were conducted over one or two days for each case study and so provided a snapshot rather than a long term view of the units' approaches to workplace training. In order to capture data on the differing perceptions of workplace training and workplace trainers, interviewees were briefed that they should interpret '*workplace training*' as anything they personally considered to be related to learning in the workplace in their organisation, and '*workplace trainer*' as anyone that they personally considered to be involved in delivering, supporting, or facilitating workplace learning in their organisation. Interviewees were then asked questions about their organisation's approach to workplace training and learning, and their perceptions of the benefits associated with this. They were also asked to consider if there were any barriers which they thought might be impeding or threatening the current approach and/or associated benefits.

A literature review of 17 recent historical case studies from non-defence domains provided supporting, secondary source evidence for this stage of the research. (These case studies are annotated in the reference section with an asterisk (*) prior to the author's name). They included a wide range of standard workforce categories across public and private sectors, as well as more specialised workforces (e.g. emergency services, medical and aviation), and covered a combined sample of over 2,300 participants. No defence-related historical case studies were found which fulfilled all the inclusion criteria for this review, but literature relating to the Australian 'Adaptive Army' model (Talbot, 2013; Potter, 2009) and the United States (US) Army Continuous Adaptive Learning model (Training and Doctrine Command (TRADOC), 2011; TRADOC, 2014) was referenced, as this described current approaches to workplace learning in these military organisations.

Collectively, the live and historical case study data provided a robust basis for identifying potential benefits and barriers associated with a CLC, and for establishing a framework of characteristics which typify a CLC. Thematic analysis of the data was conducted in a whole team workshop and key themes were identified using the pre-determined headings of Benefits, Barriers, and Characteristics.

Stage Two – Could These Benefits be Realised in a Wider Defence Context by Embedding a CLC?

Research Objective B was quite complex and challenging as it required an assessment of feasibility and desirability across a very broad and diverse stakeholder population. One of the key concerns for stakeholders was that a common pan-Defence approach to workplace training would be impractical because each organisation operated within such different contexts, priorities and practices. The first step therefore was to examine the current approach to workplace training and learning in organisations across the whole of Defence. Only then would it be possible to determine whether a common pan-Defence approach was practical and, most importantly, whether this would be desirable to all. Having established this, the study then needed to provide clear evidence that it would actually be possible to embed a CLC more widely across Defence and that this would then result in benefits being realised.

Data were gathered on organisational perceptions of workplace training and learning across as many different employments and trades as possible within each of the four Services. Interviews and focus groups were used to gather qualitative data from both policy staff and working units to provide a comparison of perspectives. Training policy staff provided the wider, strategic perspective of respective Service and Defence contexts. In working units, the sample included sub-groups of senior manager, work supervisor, and lower level workforce, each of whom had different perspectives, experience and knowledge of the workplace training system within their organisation. Where possible, the sample from working units included at least one senior manager, two work supervisors, and two members of the lower level workforce. In total, 151 individuals were interviewed across 15 policy directorates, 12 Regular and six Reserve units, and two Civil Service departments. The sample comprised 20 policy staff (including two Reserves policy staff), 21 senior managers (including four Reservists), 40 work supervisors (including nine Reservists) and 70 members of the lower level workforce (including 13 Reservists).

The interviews and focus groups captured data on the differing perceptions of workplace training and workplace trainers; interviewees were briefed that they should interpret '*workplace training*' as anything they personally considered to be related to learning in the workplace in their organisation, and '*workplace trainer*' as anyone that they personally considered to be involved in delivering, supporting or facilitating workplace learning in their organisation. Interviewees were then asked to describe their organisation's approach to workplace training and learning, and to give their perceptions of the strengths and weaknesses of the current approach. They were also asked if they perceived any opportunities to improve the approach, or any potential threats, e.g. any planned changes within or outside the organisation that might prevent the approach from working effectively in the future. Document review was used to provide triangulation of data; this included a review of training policy documents that had been

provided in Stage one of the research, and seven recent Defence-commissioned research studies that had been identified as relevant to Defence approaches to workplace training. (These research studies are indicated in the reference section by a plus (+) sign preceding the author's name).

The first stage of the analysis drew on the data from the interviews and focus groups to determine whether basic approaches to workplace training and learning were sufficiently similar across all Defence organisations for a common Defence approach to be adopted (see Figure 1). The data gathered from all sources were then brought together in Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, which examined whether the characteristics of a CLC were present or had the potential to be embedded in all Defence organisations. Themes from the data relating to Weaknesses and Threats were developed further to define existing and potential barriers to embedding a CLC. This provided an evidence base from which to demonstrate the potential for the necessary Conditions, Mechanisms, and Hierarchies of a CLC to be embedded more widely (Strengths and Opportunities) and identify the likely barriers that would need to be addressed. A conceptual model of a system was then developed which would address existing barriers in order to embed a CLC across Defence.

A COMMON DEFENCE APPROACH TO WORKPLACE TRAINING AND LEARNING

Achieving a common approach to workplace training and learning was a key issue for stakeholders which essentially impacted on all other aspects of the study. Training was already standardised within the formal Defence training environment, but there was concern that training in the workplace was dependent on too many different contexts, priorities, and working practices for a common Defence approach to be feasible. The data from both Stage one and Stage two did find that workplace training and learning were being carried out across Defence in very different contexts and against very different priorities, but there also appeared to be a common set of mental models for the terms 'training' and 'learning' when in the workplace context. Interviewees across all Defence organisations tended to shift naturally between describing workplace training (formal, structured training) and workplace learning (informal on-the-job learning activities or self-directed study). The emphasis was largely on managing and delivering formal, structured workplace training (e.g. Induction training, Annual Training Tests) and most interviewees saw workplace learning activities as something that happened naturally or spontaneously, not requiring management or support.

This shared and apparently unconscious distinction between training and learning was also reflected in organisational approaches to resourcing workplace training and learning. Most interviewees associated the term 'trainer' with those who delivered formal training and expected only those directly involved in delivering formal, structured training activities in the workplace to be qualified or trained. It was acknowledged that there were wider aspects to workplace training and learning (e.g. leading, coaching/mentoring) but these types of responsibilities were considered an implicit part of the supervisor/manager job. There was no expectation that individuals would need to be trained, resourced and supported in meeting these responsibilities; generally it was believed that qualification would be by virtue of rank and experience. Consequently, effort and resources were being focused solely on training individuals, i.e. the Workplace Trainer, to deliver formal workplace training, while the requirement to lead and manage workplace training, or to support less formal learning activities, was generally not recognised, formalised, or resourced.

These findings indicated that there were similarities across Defence in the basic approaches to workplace training and learning in that most organisations were focusing on formal structured training and potentially missing the opportunities offered by less formal aspects of workplace learning. It was considered that a visual model would help DTC stakeholders to understand the shared aspects of their approaches and also highlight the potential issues. Figure 1 shows the Workforce Development Model that was developed for this purpose. This is an adaptation of the concept of '*Learning and Training Supply*' described by Van Zolingen and Wortel (2007) in their research on workplace learning, which was based on earlier work by Onstenk (2001). Learning Supply is defined as, "*the learning possibilities, in content and form, which a regular working place and everyday working environment have to offer.*" Training Supply is defined as, "*any activities that an organisation puts on that are explicitly directed at improving the competence of its employees; supporting, structuring and supervising learning.*" (Onstenk, 2001: p289-290). Van Zolingen and Wortel (2007: p3) envisaged this as "*a continuum running from work-integrated learning through learning activities at a workplace to structured training at a workplace,*" and observed that there is no clear dividing line between Learning and Training Supply.

This Workforce Development Model suggests a balance between the formal and informal learning activities that occur in the workplace, thus helping organisations to visualise learning as a continuous rather than an intermittent process. In this model, the emphasis is not entirely on ‘*adding learning to work*’ (Jennings, 2013) but also accepts that some learning can and should be ‘*extracted from work*’. Importantly, organisations are able to define the various workplace training and learning activities according to their own context; the activities shown in Figure 1 are examples but in each case these would be specific to an organisation. For example, Figure 1 shows mentoring as an informal activity but in some organisations this may be a more formal, managed activity, such as the Royal Navy’s ‘Sea Daddy’ scheme, which might sit more towards the right hand side of the continuum. This means that each organisation, while using a standardised continuum structure, can develop a picture of workplace learning and training which is specific to the organisation and so more meaningful.

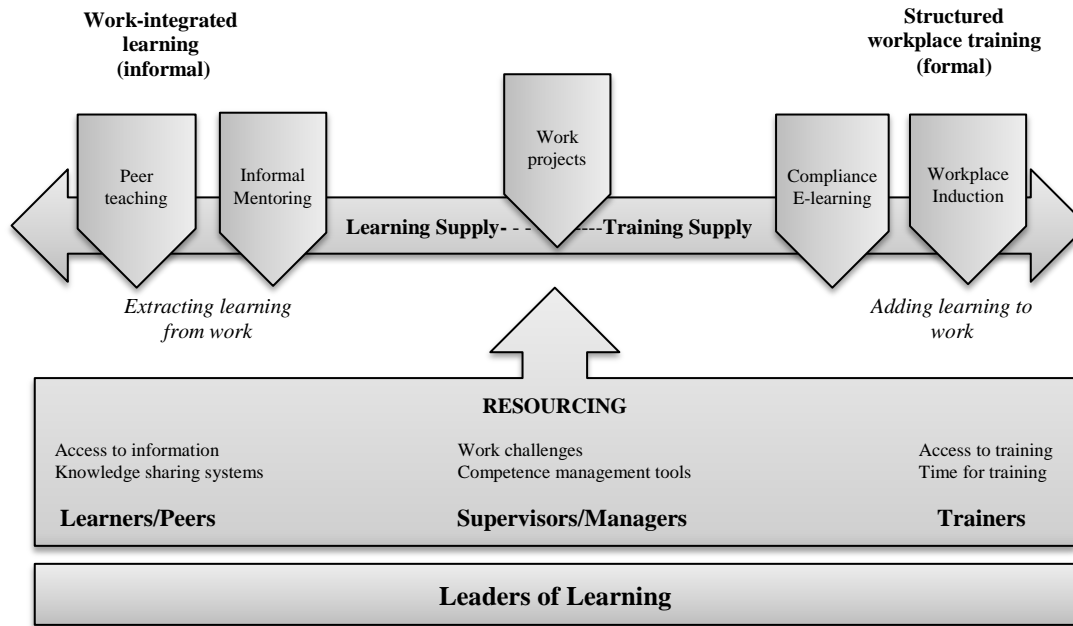


Figure 1: A Workforce Development Model

This model also encourages organisations to consider resourcing of the whole continuum. The Resourcing box in the lower half of the model identifies the different ‘actors’ involved in workplace training and learning; again these can be contextualised to an organisation. In Figure 1, for example, the model indicates that Learners/Peers have a role to play in teaching and mentoring each other and Supervisors/Managers have a role in setting work projects that challenge and develop individuals. This drives consideration of the knowledge and skills that Learners/Peers and Supervisors/Managers might need in order to fulfil these responsibilities, and the resources that might be provided to support them. Most importantly, the model acknowledges the importance of Leadership of Learning, which oversees all aspects of workforce development and is recognised and formalised as a job task in its own right.

In effect, this model moves the emphasis away from a ‘one-size’ Workplace Trainer concept and acknowledges that all members of the workforce are involved in some way in promoting and supporting learning in the workplace. Accordingly, it aligns well with the concept of a CLC. It also offers a standardised core concept which is sufficiently flexible to allow different Service organisations within Defence to define the various workplace training and learning activities according to their own context.

EMBEDDING A CLC ACROSS DEFENCE

Desirability of Embedding a CLC

Having concluded that a common Defence approach was feasible, the study then considered the implications of embedding a CLC across Defence. Thematic analysis of the data from the case study research in Stage one of the study had identified four strong overarching themes which indicated that there were benefits associated with a CLC;

these are summarised in Table 2. These benefits were either directly associated with trainer capability or were considered relevant to DTC aims and objectives in that they supported the delivery of effective and efficient training, and the wider enablement of organisational learning. It was therefore concluded that they would be very relevant and desirable to all organisations across Defence.

Table 2: Benefits Associated With a CLC

Benefit	Description
Development of a robust trainer capability	A culture which promotes and supports teaching and learning from each other in the workplace means that trainer-related knowledge and skills are developed organically in the workforce over time. This benefits the organisation and the individual, improving communication skills, problem-solving skills, team work and confidence. From a military perspective, there are also increased opportunities for the organisation to observe individuals' potential for military trainer posts and to manage talent for higher level posts such as trainer supervisor and trainer manager.
Increased effectiveness of training/learning	Learning in the workplace has a positive impact on motivation to learn. Learning from mistakes and from others in a contextualised workplace setting ensures relevance of learning and supports deeper learning. Individuals can learn at their own pace, and a flexible, tailored approach to assessment is possible. Learning in the workplace offers continuity of 1:1 support from managers, work supervisors, team members, and peers.
Increased efficiency of training/learning.	A balance of Training and Learning Supply (Figure 1) supports a blended approach to learning where the emphasis is not excessively on adding learning to work, potentially saving time and cost. Learning with and from each other in the workplace is encouraged, supported and, where appropriate, managed and assured. Learning can be flexible, delivered at the point of need, and immediately applied in context, reducing the risk of skill fade.
Improved organisational knowledge sharing	In a CLC, knowledge sharing is an embedded element of the Learning Supply, and learning is routinely shared and exploited across the organisation, upwards from the 'shop floor' as well as downwards from the management. Expertise within the organisation is recognised, exploited, preserved and shared, and new forms of knowledge and practice are generated.

Feasibility of Embedding a CLC

Themes also emerged from the Stage one data which suggested there were a set of common characteristics, described in terms of Conditions, Mechanisms, and Hierarchies (Table 3), which could be considered to typify a CLC. The findings indicated that benefits of a CLC were interdependent on these characteristics; where one or more characteristic was absent or constrained, then it presented a barrier to realising these benefits. Stage one of the study therefore concluded that realisation of the benefits associated with a CLC would be dependent on the required Conditions, Mechanisms, and Hierarchies of a CLC being in place.

Table 3: Characteristics of a CLC

Category	Characteristic	Definition
Conditions	Supportive Climate	The workplace climate is supportive to learning. The value of the workplace trainer is recognised; the whole workforce expects to teach and learn from each other. Learning from experience and from making mistakes is encouraged.
	Commitment to Learning	The organisation clearly demonstrates commitment to a CLC. Workforce development is linked to continuous improvement and organisational excellence. Senior managers model learning commitment and reinforce the value of learning. As a result the whole workforce is committed to learning and is engaged in learning.
	Resourcing of Learning	Time and manpower is available in the workplace to support learning. The workplace environment is appropriately resourced for learning, and teams have the opportunity to learn together and share learning. Senior managers have the right knowledge and skills to lead workforce development. Trainers, managers, work supervisors, and peers have the right knowledge and skills for the workplace trainer job they are undertaking. Learners are given the right knowledge and skills to be able to self-regulate their learning.

Mechanisms	Requirement Setting	Training activities are based on a requirement that is clearly understood at all levels. Training and learning are linked to organisational objectives; individuals are given responsibility for their learning but they also receive support and guidance from the organisation. Responsibilities for promoting and supporting learning are clearly defined.
	Learning and Training Supply	Training Supply is provided by appropriately qualified and experienced trainers. Training is relevant, learner-centred and engaging. Work supervisors support the transfer of learning into the workplace and ensure a good Learning Supply, e.g. informal learning opportunities through mentoring, coaching, and challenging work experiences. There are supporting resources for Learning Supply, e.g. online resources, task books, communities of practice, shared projects, or peer support.
	Incentive and Reward	The desire to learn is encouraged through intrinsic reward, i.e. personal satisfaction at individual, team, and organisational achievement and improvement of performance, and organisational recognition of achievement. Learning is valued at all levels and this is reinforced by recognising and, where appropriate, recording it. Workplace trainers are valued and rewarded; trainer potential is recognised and developed. Subject Matter Expert (SME) and trainer knowledge and skills are exploited across the organisation.
Hierarchies	Leadership of Learning	Senior managers set the conditions and install the mechanisms and hierarchies required for a CLC. Leaders and managers at all levels of the organisation fulfil their own responsibilities in maintaining conditions, mechanisms and hierarchies. Benefits are monitored and barriers are addressed when they arise.
	Learning Partnerships	Learning occurs between individuals at all levels and is reciprocal. Learning activities are learner-focused. A 'business partnership' (Kirkpatrick et al, 2009) exists between the organisation's training department and the facilitators of workplace learning, ensuring a link between the Training and Learning supply.
	Knowledge sharing	The sharing of knowledge across the organisation is encouraged and supported at all levels, from bottom up as well as top down. In-house expertise is actively sought, recognised, and exploited. Knowledge sharing mechanisms are in place.

In order to assess the feasibility of embedding a CLC across Defence, it was necessary to establish whether the Characteristics of a CLC listed in Table 3 were already in place across all Defence organisations, or had the potential to be introduced. Wider Defence approaches to workplace training and learning were compared against these Characteristics using SWOT analysis. Themes from the interviews in Stage two highlighted the perceived Strengths of organisational approaches to workplace learning and training, which indicated where Characteristics were already in place. These themes also highlighted perceived Opportunities, which indicated where these strengths might be developed more widely across Defence. Weaknesses indicated existing barriers, while Threats indicated potential barriers in the future.

The fundamental strength that was evidenced across all the findings was the underlying learning culture that existed, particularly at lower levels of the workforce, i.e. the expectation and the desire to constantly teach and learn from each other. There was evidence of positive attitudes among the lower levels of the workforce towards learning from their own and others' mistakes, with individuals recognising the intrinsic rewards gained from engaging in workplace training activities such as peer learning. There was evidence across all the Services that a learner-focused approach was becoming a culturally accepted norm, and that learners were being given responsibility for their own learning. This indicated that some of the necessary Characteristics (Table 3) were in place, but there was also evidence of existing barriers. In the Workforce Development Model at Figure 1, Leaders of Learning are shown as overseeing all aspects of both formal and informal workplace training and learning, which ensures a balanced Learning and Training Supply. Findings from Stage two, however, showed that, at the senior management and policy desk level, the focus was firmly on formal, structured training in the workplace and the achievement of formal training objectives. Less formal aspects of training and learning were generally not considered ideal for meeting these training objectives, since they were difficult to manage and assure, which introduced an element of risk. As a result, only a limited amount of 'low risk' training was being integrated into the workflow to be delivered or facilitated by work supervisors and peers. The bulk of training was being added to work as formal, structured lessons, to be completed in addition to normal daily work. This meant that the workforce had to find time for frequent training sessions in order to remain current, competent, and compliant in their jobs. Consequently, both

work supervisors and learners tended to see workplace training as a series of tasks that they ‘needed to get done’ rather than an ongoing, collaborative process linked to continuous improvement and organisational excellence.

The data from Stage two indicated that because leadership of learning was focused on the formal, structured workplace training on the far right hand side of the Workforce Development Model continuum (Figure 1), there was a lack of defined boundaries, job roles and responsibilities for the less formal elements in workplace training and learning. The findings showed common strengths across the Services in the Requirement Setting and Incentive/Reward mechanisms (Table 3) for formal training, but again there was little evidence of a similar approach to the less formal aspects of workforce development. There was evidence that managers and work supervisors lacked the knowledge and skills to properly support the Training and Learning Supply, e.g. by providing opportunities for extracting learning from work, or even simply ensuring individuals had sufficient time during working hours to complete an e-learning package. There were examples where career and promotion courses were being used to develop trainer-related knowledge and skills at early career stages, but this tended to focus on developing skills for delivering formal training in a classroom rather than supporting continuous learning in the workplace. There were some examples of significant strengths within the Defence system, such as the use of the Defence Virtual Learning Environment (DVLE) by some organisations to expand and support the Learning Supply through knowledge sharing mechanisms and opportunities for self-directed study. Incentivising of self-regulated learning was also evident, e.g. some organisations were promoting nationally recognised qualifications through apprenticeships. These were highlighted both as strengths and as opportunities, with training policy staff in particular feeling that these had yet to be fully exploited to support workplace training and learning.

The findings showed that while a CLC was not currently in place in all organisations across Defence, there were sufficient related strengths and areas of good practice within Defence to indicate that a CLC could be embedded more widely. However, common barriers also existed and these would significantly constrain any associated benefits, so would need to be addressed in order for a CLC to be embedded. Overall, the findings painted a picture of organisations that were working very hard at training but which were constrained from realising their full learning potential due to a lack of leadership and resourcing for the Learning Supply.

A System for Embedding a CLC across Defence

In order to build on existing strengths and address the barriers to embedding a CLC, a conceptual model of a system was developed. This ‘CLC system’ focused first on developing primary embedding mechanisms in which leaders would develop a shared (rather than an imposed) vision of CLC, and then on secondary reinforcement mechanisms which would allow the culture to mature and stabilise over time (Schein, 2004). An effective system aims not to push growth, but to “*remove the factors limiting growth*” (Senge, 1990: p82) and it was clear from the findings that fostering the Conditions, Mechanisms, and Hierarchies required for a CLC (Table 3) would involve the removal of existing barriers. Based on the findings of Stage two, three principal barriers were identified:

- Attitudes to workplace training and learning, particularly at senior management level.
- Lack of ownership of the Learning Supply, requiring better defining of responsibilities and boundaries.
- Lack of resourcing of the Learning Supply, in particular knowledge, skills and attitudes.

The CLC system therefore needed to include elements to address these specific barriers. Exploitation of benefits was seen as a critical enabler to influencing attitudes and embedding the culture, and so there needed to be an element in the system which ensured that the potential benefits were realised and recognised. Based on this system requirement, four elements were identified as essential to the CLC system:

- **Influence** – The concept of continuous learning was not well understood across all levels of the hierarchy. In order to secure commitment to learning, all levels of the workforce needed to understand and accept the benefits and incentives associated with a CLC. This was particularly important at senior management level; senior managers would need to be convinced of the strategic benefits of a CLC if they were to be persuaded to take ownership of the system. With visibly increased commitment to learning at higher levels, it would be possible to harness the underlying learning culture that already existed amongst lower levels of the workforce and develop this into a shared vision of CLC.
- **Ownership** – It was not considered feasible for the whole continuum of Training and Learning Supply (Figure 1) to be owned and managed centrally by Defence. Basic approaches to workplace training and

learning were similar across all Defence organisations, but each organisation had very specific perspectives and priorities which required an informed and contextualised approach. By establishing levels of ownership within a Workforce Development Model (Figure 1), leadership of learning would be enabled at Defence, Service, and unit levels, ensuring that all learning activities were resourced and incentivised in context.

- **Empowerment** –Wider engagement in workforce development required all members of the workforce to have the appropriate knowledge, skills, and attitudes (KSA) to fulfil their respective responsibilities. Most importantly, leadership of learning was seen as an essential factor in a CLC, since it would put in place the conditions, mechanisms and hierarchies required for such a culture to develop and thrive. Leaders and managers therefore needed to be given the knowledge and skills required to properly fulfil their leadership of learning responsibilities.
- **Exploitation** – The risk of ‘change fatigue’ was considered very relevant in the Defence context, given the amount of change already presented, e.g. Future Force 2020 and the New Employment Model (NEM). Convincing senior managers to engage in further change would therefore present a challenge, particularly if there was limited evidence of the strategic benefit to the organisation. Hard evidence of real benefits was identified as an essential part of changing attitudes; ultimately this would establish a shared vision and reinforce commitment to learning at all levels.

Senge (1990: p82) describes the positive reinforcing and amplifying process which is set in motion by a system in order to produce a desired result. This creates a “*spiral of success*” in which the system initially grows and develops, eventually balancing out to become a routine functioning system. The four, mutually dependent sub-systems (Influence, Own, Empower, Exploit) at Figure 2 show the positive reinforcement cycle of the CLC system which aims, in the short term, to produce a spiral of success and, in the longer term, to embed a culture that continuously produces the desired results.

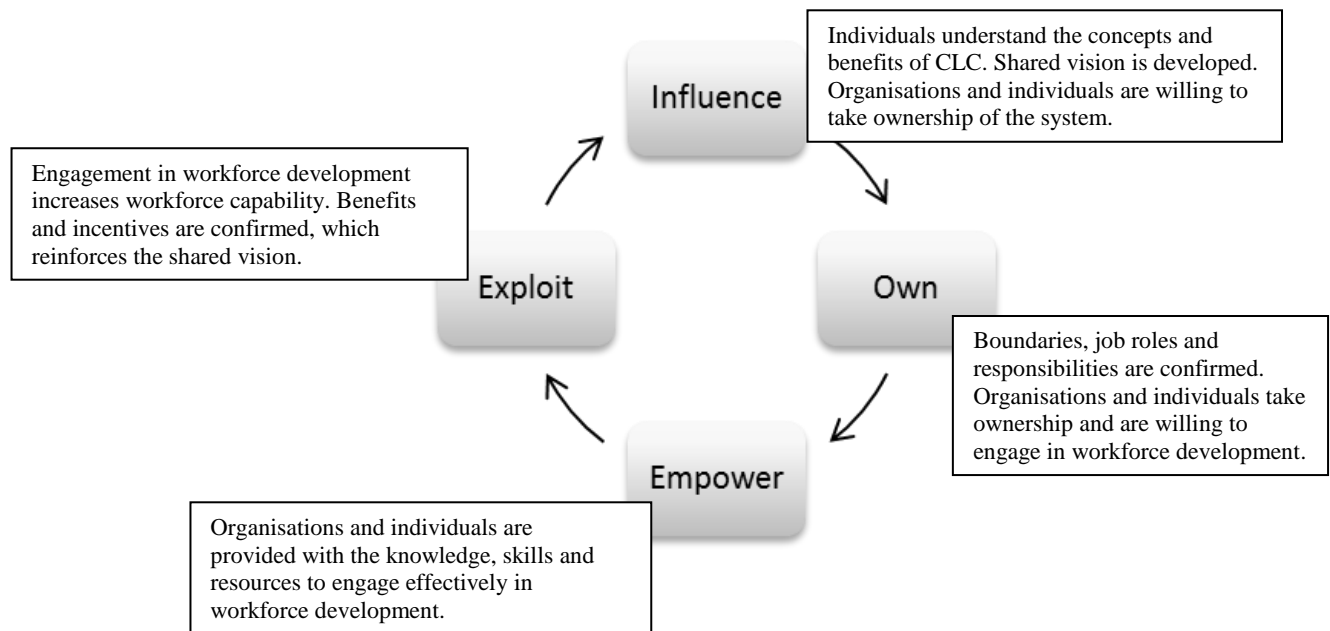


Figure 2: A Mutually Reinforcing CLC System

RECOMMENDATIONS

In order to facilitate implementation of the CLC system at Figure 2, recommendations were presented as an Action Plan. In the study report, the actions were set out in an order of priority reflecting the fact that the system is a spiralling and iterative system, but in Table 4 they are summarised as a list of actions at Defence, Service Command, and unit level.

Table 4: Recommended Actions for Implementing the CLC System

Organisation	Actions
Defence Training Policy	Influence: Clearly define the CLC concept, identify the associated benefits and promote these to senior stakeholders in the four Services.
	Own: Work with Training Policy stakeholders in the four Services to set the boundaries, core job roles and high level responsibilities within an agreed Defence Workforce Development (WD) model.
	Empower: Identify the knowledge, skills and attitudes (KSA) required for core Defence WD job roles and establish resources, policy and guidance to support these.
	Exploit: Develop policy and guidance on the identification/selection of individuals for military trainer posts which includes identification of potential in the workplace.
Training Policy for each Service	Influence: Communicate CLC concepts and benefits through formal learning events at all levels (e.g. career courses) and through Learning Champions.
	Own: Set the boundaries, job roles and responsibilities for WD within the context of the Service. Communicate these through formal learning events (e.g. career courses).
	Empower: Adapt Defence resources, policy and guidance to support Service-specific needs. Facilitate the development of KSA through formal learning events (e.g. career courses).
	Exploit: Review and recognise ongoing improvement in WD capability based on feedback from working units. Review and recognise improvement in the balance of Learning and Training Supply.
Commanders of Working Units	Influence: Incentivise continuous learning by recognising and rewarding good performance in workplace training and learning, and knowledge sharing.
	Own: Reinforce understanding of WD job roles and responsibilities at unit level through local policy directives and job specifications, and through supervision and management.
	Empower: Reinforce the development of KSA for WD job roles at unit level through local policy directives and the provision of appropriate resources (including time).
	Exploit: Visibly recognise and reward WD capability and publicise the tangible benefits of engagement in knowledge sharing at all levels of the organisation.

This approach envisaged that Service Commands would identify existing training courses at different career stages which could be used as appropriate vehicles from which to communicate job roles and responsibilities in a CLC and develop the KSA required to perform them. Recruit training, for example, would begin to encourage and facilitate self-regulated learning, and would routinely make use of peer-peer teaching methods. Promotion courses for non-commissioned officers (NCOs) would introduce the concept of CLC and define the responsibilities of an NCO in supporting workplace learning, also developing the necessary KSA to fulfil that role. Similarly, promotion courses for Warrant Officers (WO) would focus on CLC as a vehicle for knowledge sharing and continuous improvement in the unit, again defining the responsibilities of a WO and developing the necessary KSA. A similar developmental approach would be taken for Civil Servants as they progressed through employment grades.

In a CLC, however, the formal learning event is only the start of the learning journey. It is in the workplace that the concepts and potential benefits of a CLC become reality. Senior managers and unit commanders therefore play an essential part in setting expectations for WD, providing direction and guidance, and recognising and rewarding trainer potential. They must be leaders of learning, with the necessary KSA to be able to put in place the Conditions, Mechanisms, and Hierarchies that will enable a CLC to develop and thrive. This approach therefore also envisages that an understanding of: the CLC concept and benefits; organisational job roles and responsibilities; and the necessary individual KSA would be developed from initial officer training through to courses for senior staff officers or Civil Service equivalent. An organisational culture in which the whole workforce is engaged in promoting and supporting workplace learning must be driven from the top and modelled at all levels of the organisation's hierarchy.

Following this study, DTC stakeholders reviewed and refined the recommendations in the Action Plan (summarised in Table 4) to align with current Service/Defence priorities and related projects. In June 2016, as a first step towards implementation of the CLC system, a new study was commissioned within the scope of the DTC project to identify the knowledge, skills, abilities, and competencies required by leaders and managers of learning, and to identify opportunities to develop these through learning interventions and learning pathways. This study will report early in 2017.

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REFERENCES

Note:

* preceding the author's name indicates a reference that was selected for literature review in Stage one of the research.

+ preceding the author's name indicates a reference that was selected for document review in Stage two of the research.

Braun, V. & Clarke, V. (2006). *Using Thematic Analysis in Psychology, Qualitative Research in Psychology*, 3, 77-101.

*Ellinger, A.D. and Cseh, M. (2007). "Contextual factors influencing the facilitation of others' learning through everyday work experiences." *Journal of Workplace Learning* Vol. 19 (7) pp. 435-452.

*Elshafie, M. (2014). "The Neglected World of the Workplace Trainer". *International Journal of Education & Literacy Studies*, Vol. 2 (2).

+Glynn, D., Goode, M., Webb, S. and Cahillane, M. (2014). *TIN 2.032 Implications of Flexible Military Careers for Training and Education Requirements, Final Report*. Reference number UC-DHCSTC_I2_T_T2_032/004

Jennings, C. (2013). *Rethinking Workplace Learning: extracting rather than adding*. Internet Time Alliance. [Online] Retrieved Jun 27, 2015 from: <http://internettimealliance.com/wp/2013/02/14/re-thinking-workplace-learning-extracting-rather-than-adding/>

+Jones, B., Johnson, J., Rebdi, A., Ross-Smith, K. and McGuiness, B. (2014). *TIN2.010 Task 1 Continuous Training Delivery (Expansive Learning Organisation) Final Report*. Reference number UC-DHCSTC_I2_PTH_T2_010/005

*Jönsson, S. and Schölin, T. (2013). "Potentials facilitators of workplace learning in a TPS [Toyota Production System] based company." *Journal of Management Development* Vol. 33 (10) pp. 1004-1018.

+Kent, J., Dudfield, H., Smyth, K., Donaldson, J., Scargill, E. and Glover, P. (2014). *TIN 2.036 The Long Term Ability of E-learning to Deliver Training and Education in Support of Military Capability*. Reference number UC-DHCSTC_I2_T_T2_036/008

*Kyndt, E., Dochy, F. and Nijs, H. (2009). "Learning conditions for non-formal and informal workplace learning." *Journal of Workplace Learning* Vol. 21 (5) pp 369 – 383.

*Lancaster, S., Di Milia, L. and Cameron, R. (2013). "Supervisor behaviours that facilitate training transfer". *Journal of Workplace Learning*. 25 (1) pp. 6-22.

+Lister, S., Cahillane, M., MacLean, P., Brennan, S. and Whysall, Z. (2014). *TIN 2.006 Training Intervention Optimisation, Final Report*. Reference number UC-DHCSTC_I2_T_T2_006_2.6/008

*Margaryan, A., Littlejohn, A. and Milligan, C. (2013). "Self-regulated learning in the workplace: strategies and factors in the attainment of learning goals." *International Journal of Training and Development*, 17 (4) pp 245 – 259.

*Mavin, T.J. and Roth, W. (2015). "Optimizing a workplace learning pattern: a case study from aviation." *Journal of Workplace Learning*, Vol. 27 (2) pp. 112 – 127

+McKeown, R., MacLean, P., Russell, H., Kelly, C., Ralston, B., Heath, N. and Maitland, A. (2014). *TIN 2.014 Task 2 Understanding Training Delivery, Final Report*. Reference number UC-DHCSTC_I2_T_T2_014_2/004

Mundy, D. (2014). *TIN 3.084 Exploiting Training Delivery Research*. Reference number: UC-DHCSTC_I386191_T_T3_084/007.

Mundy, D., McLay, S., Steele, C., Bicknell, A. and Solowiej, K. (2016). *TIN 2.051 – Phase 2: The Defence Trainer Capability – Trainer Selection, Reward and Career Management, Final Report – Research Question 2-2:*

What are the wider benefits to organisations of embedding a workplace trainer culture across Defence? Reference number: O-DHCSTC_I2_T_T2_051/014.

- *Naweed, A. and Ambrosetti, A. (2014). "Mentoring in the rail context: the influence of training, style, and practice". *Journal of Workplace Learning*, 27 (1) pp. 3-18
- *Newton, J.M., Henderson, A., Jolly, B. and Greaves, J. (2015). "A contemporary examination of workplace learning culture: An ethnomethodology study". *Nurse Education Today* Vol 35, pp 91–96.
- Onstenk, J. (2001). *Ontwikkelen van bekwaamheden tijdens het werk. [Developing competences at work]* In Kessels, J. W. M. & Poell, R. F. (Eds.), *Human Resource Development: organiseren van het leren*. Groningen: Samsom, 285-300.
- +Parry, E., Hirsh, W., Robinson, D., McKeown, R. and Williams, M. (2014). *TIN 2.013 Generating and Retaining Talent, Final Report*. Reference number UC-DHCSTC_I2_P_T2_013/005
- *Poell, R.F., Van der Krogt, F.J, Vermulst, A.A., Harris, R. and Simons, M. (2006). "Roles of Informal Workplace Trainers in Different Organizational Contexts: Empirical Evidence from Australian Companies." *Human Resource Development Quarterly*. Vol 17 (2) pp 175 – 198.
- Potter, G. (2009). "The Army Community of Practice, Becoming a Learning Environment." *Australian Army Journal* Vol VI (2) pp 91 – 102.
- Rail Safety and Standards Board (RSSB). (2013). *Good Practice Guide on Competence Development*. Rail Safety and Standards Board Ltd. [Online] Retrieved June 15, 2015 from: <http://www.rssb.co.uk/rgs/standards/rs100%20iss%201.pdf>
- Schein, E. H. (2004). *Organisational Culture and Leadership*. San Francisco: Jossey Bass.
- Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organisation*. New York: Currency Doubleday.
- Talbot, S. (2013). "Learning to Add Value: Fostering Cultures of Effective Learning in the Australian Army." *Australian Army Journal*, Culture Edition Vol X (3) pp 158 – 171.
- +Tamkin, P. and Bowyer, S. (2013). *TIN 2.028 Task 1 The Personal Development Pathway, Final Report*. Reference number UC-DHCSTC_I2_P_T2_028_1/005
- TRADOC, (2011). *The U.S. Army Learning Concept for 2015*. TRADOC pamphlet no. 525-8-2.
- TRADOC, (2014). *The U.S. Army Human Dimension Component*. TRADOC pamphlet no. 525-3-7.
- Tyler, M.A. and McKenzie, W.E. (2014). "Training by the dashboard lights: Police training officers' perspectives". *Studies in the Education of Adults*, Vol 46 (1), pp. 74-90 (17).
- *Van Zolingen, S. J. and Wortel, L. (2007). *Workplace learning: a new model applied in a case study in the Netherlands*. Paper (refereed paper) for Innovative approaches to supporting learning and teaching in Human Resource Development (HRD), 8th International Conference on HRD Research and Practice Across Europe.
- *Warhurst, R.P. (2013). "Learning in an age of cuts: managers as enablers of workplace learning." *Journal of Workplace Learning*, Vol. 25 (1) pp. 37-57.