



NATIONAL
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Learning that can save lives

Lianna Roast, BSc, MBPsS,
Disaster Management Centre,
Bournemouth University

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**This report highlights the key points
made in the original and complete study,
commissioned by the National Preparedness
Commission, which can be accessed [here.](#)**

(References used in this document connect to the original work.)



CONTENTS

FOREWORD	4
INTRODUCTION	6
THE CHALLENGE OF LEARNING	7
THE NEED FOR HUMAN PSYCHOLOGY IN LEARNING	9
THE 'LESSONS LEARNED' PROCESS	10
SUPPORTING THE LESSONS LEARNED PROCESS	13
CONCLUSIONS	17
References	18

FOREWORD

Albert Einstein is reportedly (although mistakenly) supposed to have said that ‘The definition of insanity is doing the same thing over and over again and expecting a different result.’ While this is a recognised human failing, there is human strength in that more often than not we do manage to learn from past failures or omissions to improve the future.

Learning lessons comes with experience, awareness, agility and insight. Yet, there is a world of difference between identifying lessons (hindsight) and applying them (foresight). Translating lessons through a learning process into meaningful actions is sometimes hard and painful, and often requires adaptation, imagination and transformation.

This report, supported by its original study, offers insights on the lessons learned process. It comes at an important time when we are facing great challenges that have no easy answers but do require wisdom and sound judgement from leaders in both politics and business who can apply lessons from the past. History is never repeated absolutely and trends can sometimes be deceptive but the report offers pointers on how to apply lessons learnt. We need the tools to help guide us and this report provides some indicators upon which we can build and act.

The UK needs new thinking when it comes to identifying lessons: if we keep using the same methods and the same people, we will keep getting the same lessons. A decision needs to be made on where learning sits nationally and within each organisation.

Key points from the report are:

- Clearly defined roles, responsibilities and lines of accountability for identifying lessons, implementing active processes and achieving learning outcomes should be evident at every level to drive required changes following a major incident.
- Lesson identification should draw on the widest possible experience and welcome diverse, critical perspectives from within and beyond the individual organisation to counter parochial practice and mindsets.
- The ‘lessons learned’ process should be inclusive and authentic, reaching beyond those managing the process to ground learning in lived experience and ensure the feasibility and acceptability of proposed changes amongst frontline workers.
- Employing evidence-based tools and techniques that help learning ‘stick’ and promote frequent, collaborative learning – through, for example, regular testing and exercising – is essential to embed changes in future practice.

The government’s Integrated Review calls for a ‘whole-of-society’ approach to building better resilience. This will need an ‘all-in’ learning strategy that applies across and within civil-military domains, public-private sectors and central-devolved governments.

INTRODUCTION

The adoption and application of a process for identifying and acting on ‘lessons learned’ from adverse events to inform future planning is a key characteristic of any preparedness system. It is also considered best practice in risk management, civil contingencies planning and international disaster risk reduction (DRR)ⁱ. However, the challenge of transforming knowledge acquired in adversity into practical actions that strengthen future preparedness is pervasive and persistent in the UK. This has led some to claim that ‘we don’t learn’ from disastersⁱⁱ.

‘In a world defined by increasing complexity, uncertainty and precarity, we must urgently re-examine and reimagine how knowledge and learning can best contribute to the global common good.’

(UNESCO, 2020, p.11)ⁱⁱⁱ

This claim is not based on in-depth empirical studies^{iv}. Instead, it condemns the ‘lessons learned’ process without investigating and addressing the real issues, limits and constraints in individual and organisational learning^v.

This paper explores these issues, limits and constraints in learning from a psychological perspective. The aim in doing so is not to reduce an international learning challenge to a function of human biology. On the contrary, it is to demonstrate that a re-examination of the individual and group-level learning in the civil contingencies’ context might provide a missing piece in a ‘lessons learned’ puzzle that institutions have been trying to solve for far too long. Given that improvements in post- pandemic resilience now rely in part on a national learning endeavour, getting all the pieces of the puzzle in the right place has arguably never been so vital.



THE CHALLENGE OF LEARNING

The UK demonstrates an established institutional and legislative precedent for investigation into a range of disasters, accidents and emergencies to determine causes, identify lessons and make recommendations for improved preparedness^{vi}. This indicates that the process of identifying and acting upon lessons from major incidents and crisis exercises goes to the heart of UK governance. It also underscores the inherent connection between ‘lessons learned’ processes and the fundamental protection of both people and place in the UK.

Although learning is promoted in national governance, legislation plays a limited role in the assessment of whether learning from major incidents and crisis exercises is practicably achieved. This means that there is currently no direct means for assessing whether lessons identified are learnt effectively across contexts.

In the absence of standardised means for comparative assessment, post-event reports and public inquiries into ‘high-profile disastrous incidents’^{vii} have been used to evidence the existence a persistent problem with ‘learning lessons’ in the UK. ‘Evidence’ of learning (or lack thereof) is based on whether key lessons identified from major incidents resolve or recur in subsequent reports^{viii}. One such review carried out in 2013 on behalf of the Joint Emergency Service Interoperability Programme (JESIP) and the Cabinet Office applied this methodology across 32 reports, exploring learning related to the ability of the emergency services to apply interoperability principles during major incidents. The review cited ‘...numerous examples of inquiry reports identifying previous incidents where lessons were identified, and recommendations made but not acted upon’^{ix}.

A simple visual inspection of the language used to describe the persistent lessons identified supports the premise that learning is a root issue rather than a proxy for action or other process aspects. This is supported by cross-referencing persistent lessons with indicators that the Health and Safety Executive have identified as playing significant roles in the reduction of repeated mistakes and mitigation of major accident hazards^x. Across these indicators many of the persistent lessons identified within the JESIP review, such as issues with teaching, training, monitoring, auditing and achieving ‘sufficient’ learning to effect change, align with the ‘learning culture’ indicator^{xi}. This suggests that individual

and organisational learning practices, along with the ‘values, attitudes, perceptions, competencies, and patterns of behaviour...’^{xii} associated with learning from major incidents and disasters in the UK are negatively impacting a national ability to achieve sufficient learning. It is not therefore that ‘we don’t learn’, but that current learning (which is nonlinear and incremental by nature) is failing to produce the required outcomes. This can exacerbate existing vulnerabilities associated with managing major incidents and undermine national preparedness.

THE NEED FOR HUMAN PSYCHOLOGY IN LEARNING

The learning process is quintessentially human and inherently psychological. At an individual level it involves the restructuring of circuits in the brain^{xiii} to ‘inform and change the way we perceive, perform, think and plan’^{xiv} in response to new or updated information. By establishing, activating, rewiring and strengthening these neural networks, knowledge can be created, committed to memory and transformed into goal-directed behaviours.

It is this neurophysiological process that underpins the acquisition of knowledge in the workplace, the mastery of physical skills and the development of psychological ‘scaffolds’ (known as cognitive schema), that help to organise thoughts and behaviours in particular situations or settings, like the delivery of an emergency response^{xv}. Therefore, individual learning processes are inextricably linked to the achievement of learning goals and collective preparedness activity. In short, the ‘lessons learned’ process connects the humble neuron to the welfare of a nation.

Although people consistently outperform all other organisms when it comes to learning^{xvi}, a range of environmental and performance influencing factors^{xvii} can affect organisational attempts to ‘scale-up’ the individual learning process to achieve improved preparedness. The good news, however, is that there is a wealth of knowledge and expertise on the topic of learning to inform useful insights and practical improvements.

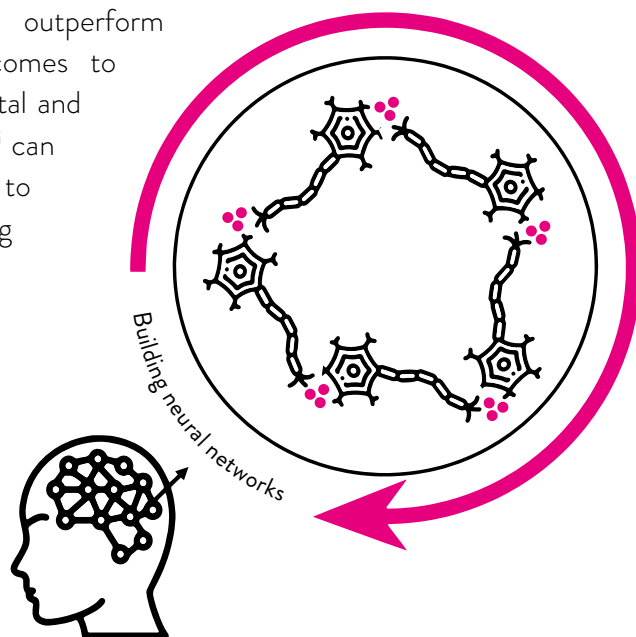


Figure 1: The learning process involves the restructuring of neural circuits in the brain

THE ‘LESSONS LEARNED’ PROCESS

The inability to address effectively the ‘lessons learned’ challenge has been attributed to a ‘failure to understand the process by breaking down the component parts’^{xviii} and a ‘lack of a formal, rigorous and systematic methodology for learning and understanding how people learn and retain information’^{xix}. This paper begins to address these issues.

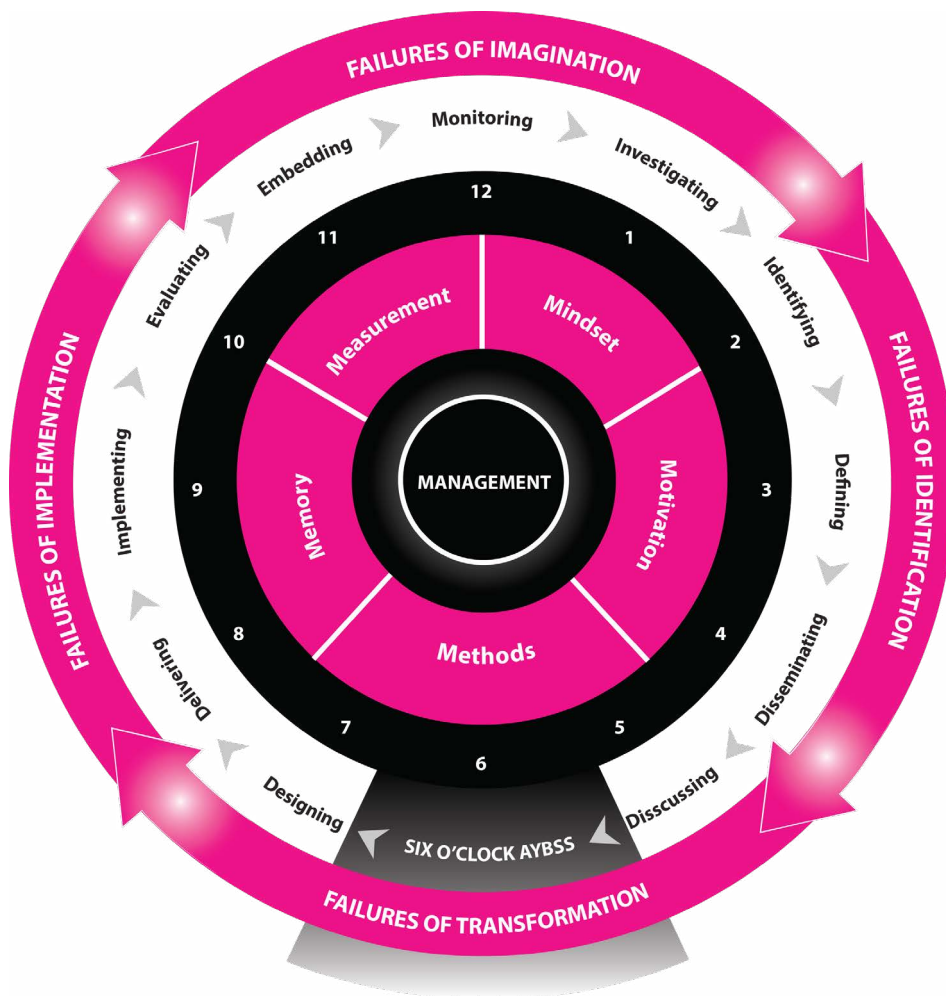


Figure 2: The Lessons Learned Cycle (Roast, 2021)



It provides a fresh definition of the lessons learned process, breaks down the cycle into 11 active processes and outlines four key process failures that lead to insufficient or absent learning. It also describes six central psychological components (Six M's) that can positively or negatively influence progress towards the achievement of learning goals. The aim in doing so is not to prescribe a one-size fits all model but to provide a novel conception of the process and new insights that can be applied in areas of (i) policy, (ii) pedagogy and (iii) practice moving forwards.

The lessons learned process is cyclical in nature. It is visualised in *Figure 2* and can be defined as: 'The process of identifying, transforming, and implementing learning from experience to change the way individuals and organisations perceive, think, plan and perform, for the purpose of achieving persistent, measurable improvements in knowledge, competence and collective preparedness.'^{xx}

The process is presented using a clock face, because time is always ticking down to the next emergency. The 11 active process components are positioned around the clockface. These are hemmed in by four common process failures which represent groups of issues acknowledged in emergency and disaster management literature. These failures are broadly conceived as follows:

- **Failures of Imagination:**
Absent or inadequate creation of meaningful, imaginative opportunities to consider, explore and exercise for future threats^{xxi}
- **Failures of Identification:**
Failures to identify the 'right' lesson(s) and determine applicability, due to faulty assumptions, inadequate investigation into an incident, or an unwillingness to examine and address enduring sub-surface issues that underlie the problem
- **Failures of Transformation:**
Failure to identify or accept the need for change and/or effectively engage others in the process of change to embed learning
- **Failures of Implementation:**
These failures span the Six M's: at the heart of cycle, which create limitations and opportunities in learning at any stage of the process. They include: management, mindset, motivation, methods, memory and measurement.



Failures of implementation across the Six M's include:

1.

Failure to lead learning and manage the change involved in the lessons learned process from the top down.

2.

Failure to adopt and develop positive mindsets about the potential to practically achieve learning goals at both individual and corporate levels.

3.

Failure to foster informed perceptions of risk, a positive learning environment or an understanding of how past learning applies in the present.

4.

Failure to adopt and apply an informed, engaging approach to learning design that recognises the psychological limitations of learners and the opportunities to maximise outcomes.

5.

Failure to repeat and retain learning from adverse events at individual or institutional levels.

6.

Failure to measure and monitor progress towards the achievement of key learning outcomes, due to the absence of a robust monitoring and evaluation framework, or a preoccupation with measuring other proxy indicators, such as 'number of training session delivered'.



SUPPORTING THE LESSONS LEARNED PROCESS

To promote learning progression, overcome the psychological challenges associated with the Six M's and prevent learning drop off between lesson identification and implementation (six o'clock abyss), this report provides recommendations to support policy, pedagogy and practice associated with the lessons learned process. Key recommendations are summarised under the headings below (*Figure 3*), with further suggestions for the practical, psychologically informed delivery of learning found in the full study.

A Management: Lead to Learn

Leadership and management set the organisational tone and commitment to learning from major incidents and disasters. They are also practically responsible for:

- **Providing** strategic leadership for learning;
- **Establishing** systems to capture and share learning;
- **Ensuring** sufficient resource to achieve learning goals;
- **Connecting** organisational learning across stakeholders and to the wider environment^{xxii}

Policy Recommendation: The lessons learned process is fundamental to the protection of people and place in the UK. It also plays a key role in the achievement of larger resilience goals. Legislation and best-practice guidance frameworks should be designed to afford the process sufficient priority and consistent accountability in the civil-contingencies context.

B Mindset: Commit to Change

Change sits at the heart of the lessons learned process. Change can be difficult to manage because it is often perceived by the brain as threatening, leading to feelings of uncertainty and anxiety^{xxiii}. Fostering a growth mindset^{xxiv}, which views change as an opportunity to grow and learn, at individual and organisational levels can be a positive, cost-effective way of reframing or reappraising the processes involved in transforming lessons identified from major incidents and disasters into active, embedded learning.

Policy Recommendation: Where nations, institutions and organisations demonstrate excellence in learning from incidents, accidents and disasters, the UK should be inspired, collating expertise and experience to develop innovative, psychologically informed, world-class solutions. A review of factors that influence ‘Good to Great’ progression learning from major incidents in wider settings, such as healthcare or industries managing major accident hazards, could help to connect the dots across domains to inform increasingly effective policy that reduces risk and improves performance.

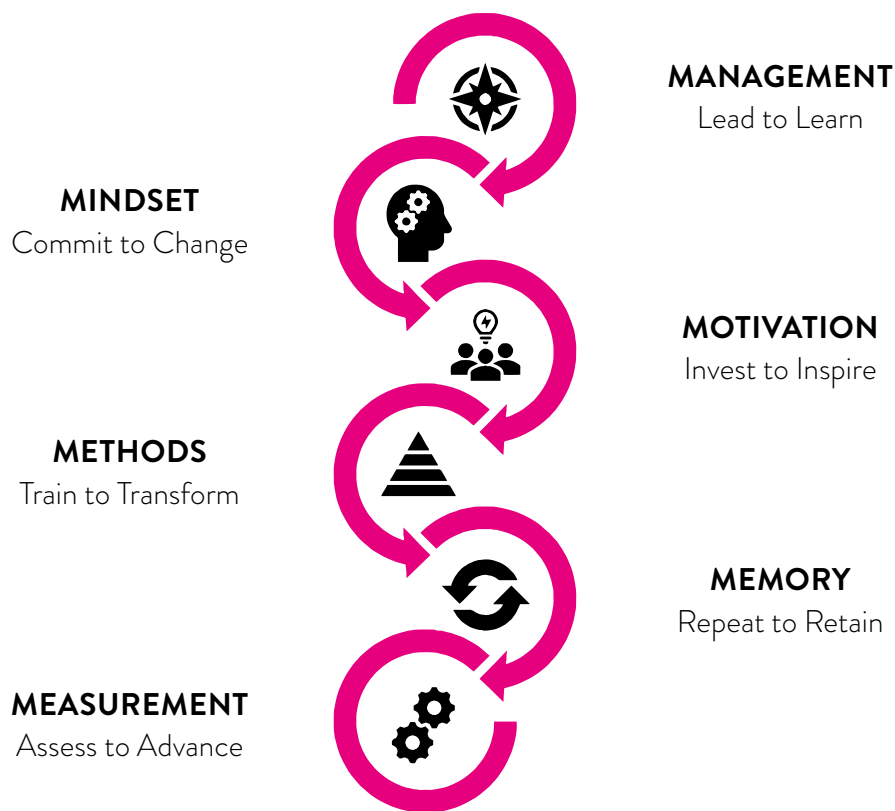


Figure 3: Key messages associated with the six M's

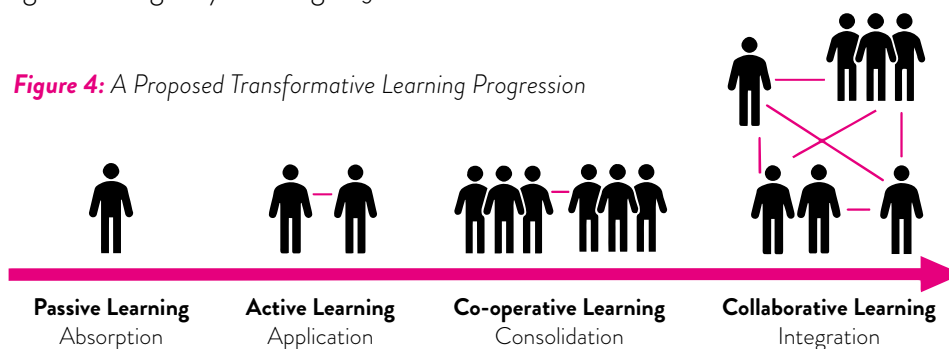
C Motivation: Invest to Inspire

Those with responsibility for a lessons learned process should always seek to underpin and improve motivation amongst learners, because it influences engagement with learning, commitment to learning goals^{xxv} and activities and the achievement of behavioural change^{xxvi}.

Policy Recommendation: Policy activity can become removed from frontline response. Opportunities for connecting policy makers with to the experiences of first responders and stories of victims or who have been directly involved and impacted by adverse events can be a powerful tool for motivational engagement. It can also strengthen learning associated with the event and inform innovative policy design.

D Methods: Train to Transform

Applied methods in the lessons learned process should be purposed to effectively transform lessons identified into lessons learnt through teaching, training, testing and exercising to achieve transformative change. Adopting a ‘Train to Transform’ approach helps to mitigate failures of identification, transformation and implementation by encouraging individuals and organisations to assess and articulate the change they want to achieve through learning. It also promotes progression from passive learning through to active application^{xxvii}, co-operative consolidation and on to collaborative integration through multi-agency learning (Figure 4).



Policy Recommendation: Lesson identification (passive learning) should welcome diverse, critical perspectives to challenge underlying assumptions and ensure the right lesson underpins learning progress. There should be clear roles, responsibilities and accountability for (i) articulating and communicating the learning aims, outcomes, objectives, indicators and outputs that guide strategic change and (ii) designing engaging learning experiences to embed it (see The Lessons Learned Process).

E Memory: Repeat to Retain

People are limited capacity processors^{xxviii}. This means that if information imparted during teaching and training is not periodically retrieved, recalled or rehearsed, failures of implementation can result. Regularly testing and exercising of people, plans and procedures during the implementation phase of the lesson learned cycle provide a key opportunity for recall and rehearsal of new knowledge and skills^{xxix}. It is also an effective means of helping learning 'stick' because of the opportunity for social information generation and collaboration with others^{xxx}.

Policy Recommendation: An applied understanding of human aspects in teaching and learning, such cognitive processing, memory, decision-making and the development of expertise will support improved learning outcomes. Increased access to, and frequency of, testing and exercising is also essential to embed learning.

F Measurement: Assess to Advance

The development of a robust monitoring and evaluation framework to assess measurable progress towards clearly articulated goals is an essential component of any change programme. It is important from a psychological perspective because it provides feedback in response to activities undertaken, generates self-awareness, indicates the effectiveness of learning a programme and fosters a sense of reward when goals are attained^{xxxi}.

Policy Recommendation: Provision for the robust monitoring and accountable evaluation of learning from major incidents and disasters should be evident at national and organisational levels. Existing best practice in Learning and Development and Health and Safety management could be drawn upon to inform a consistent, integrated, assessment framework.



CONCLUSIONS

In conclusion, persistent problems with the process of learning lessons from major incidents and disasters stand to undermine preparedness in the UK. This leaves the nation vulnerable to repeating past mistakes and incurring avoidable losses to life, livelihoods and the environment in future emergencies.

This report has demonstrated that psychological aspects at the individual, organisational and institutional learning levels must be acknowledged and addressed to make progress. For example, the enthusiasm of a new generation of emergency managers could be integrated with existing expertise to reinvigorate and motivate the learning process. This would put new people and perspectives around the table when identifying lessons, whilst retaining scope for investigating lived experience of barriers to change, perhaps using anonymized methods.

Access to frequent training, testing and exercising is absolutely essential to embed learning, prevent the atrophy of knowledge and skills and promote improved collaborative capabilities at strategic, tactical and operational levels. Finally, by deciding where learning sits at national and organisational levels, consistent, coherent learning policy, strategy, frameworks and standards could be developed. By deploying these across public and private sectors, military and civilian domains, as well as central and devolved governments, there is real potential to realise increasingly robust, systematic preparedness and resilience. It is this kind of innovative, integrated, 'whole-of-society' approach that could set the UK apart as uniquely committed to leading national learning that can save lives.

By acknowledging and addressing the problem directly, national leaders have much to gain. A robust and effective process for identifying and acting on these lessons can fundamentally improve the protection of people and place in the UK. It will also support the achievement of wider resilience goals and serve the vision set out in the Integrated Review for a 'stronger, safer and more prosperous' global Britain. Finally, by addressing the problem at what appears to be a critical juncture in human history, leaders can prevent key lessons from Covid-19 from being lost and maximise learning gains in the post-pandemic era.

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