Abstract
Project Odin is developing learning strategies that will enable Air Force to confront both an increasingly uncertain global strategic environment and massive demographic challenges. This paper charts the evolution of the Learning-centred Organisation (LCO) element of Project Odin and the strategies being employed, largely aimed at embedding the best of present and past achievements to the extent that they become the norm. The Odin mantra? We are what we repeatedly do. Excellence, then, is not an act but a habit.’ [Aristotle]

Keywords: Action learning, communities of practice, culture change, knowledge management, learning Organisations, lifelong Learning

Why the Need for Change
‘Learning isn’t compulsory, but neither is survival’. [W. Edwards Deming]

Strong Imperatives to Look Afresh at the Nature of Thinking and Learning

The Royal Australian Air Force, in common with many other organisations, faces a number of challenges, including:

- rapid and accelerating technological and geopolitical changes, demanding adaptive organisations;
- resource constraints, demanding efficient implementation of strategies;
- recognition that an organisation’s capability edge is increasingly dependent on its workforce;
- demographic changes, requiring a regularly refreshed approach to human resource development;
- increasing competition to remain an employer of choice;
- recruiting and retention of critical personnel, demanding strategies to engage their commitment;
- increasing and broadening expectations of the workforce, demanding dynamic learning strategies;
- proactivity at a premium, demanding a workforce that is forward-looking by inclination; and
- advances in metacognition, challenging conventional notions of thinking and learning.

The Genesis of the Learning-Centred Organisation

Background
In 2003, a group of young [under-30] Air Force Education Officers was given the task of describing how education/training ought to be conducted in 2020 and beyond. They were chosen for their records as education/training visionaries, their ability to identify with the age
groups to be targeted by the Air Force in the near future, and the likelihood that they would occupy leadership positions in the Air Force beyond 2020. During 2004, a Reserve Officer distilled their recommendations into two broad groups that would:

- integrate one of the most comprehensive educational and training programs in the country with its personnel management system, to deliver enhanced Air Force capability; and
- facilitate the transition to a ‘learning organisation’.

In 2005, the Air Force put together a team of three Reserve officers, one of whom was the author, to develop an implementation program.

**Foundations of the LCO Concept**

The Learning 2020 paper had advocated a ‘learner-centred’ philosophy. In a university or technical institute in a developed Western society, preparing individuals for one of many paths of ‘their’ choosing, being ‘learner-centred’ would be an article of faith for a learning professional. It would imply a stance based on individual need, aptitude and readiness, and with methodologies in harmony with individual learning preferences.

The Air Force, however, prepares individuals for a future of ‘its’ choosing, providing on-going training/education/experience to meet evolving strategic and operational conditions. That is no different from the vested interest that all organisations have in the learning in their workplaces. Hence, Air Force also draws on the ‘learning organisation’ literature that has transformed management thinking over two decades.

Consequently, it owes allegiance to two distinct, if closely related, strands in thinking - pedagogical and organisational - about how learning should be developed and managed. From that duality of stakeholder interests emerges the concept of the ‘learning-centred’ organisation: a response that reconciles individual and corporate needs, by focusing on the objective that both parties share unequivocally - learning.

**Fundamental LCO Strategies**

No element of the LCO concept is independent of any other, so the boundaries of the eight strategies underpinning it are arbitrary. However, each is dealt with independently, to better define its specific implications for the Air Force.

1. **Outcome-Driven Programs**

   *The great end of life is not knowledge but action.* [Thomas Huxley]

The Air Force is subject to two powerful forces that are similar to those challenging most organisations:

- The increasingly volatile geopolitical environment [substitute ‘global economy’ for commercial applications!] generates a ‘capability edge’ imperative.
- The demand for highly developed individual specialisation sits side by side - paradoxically and sometimes uncomfortably - with the increasing interdependence of untold individual inputs, generating a ‘network-centric’ imperative.

Such a climate demands a bias towards outcomes: the enduring legacies of a learning program or process; rather than outputs, for example, the number of graduates of a program, relative to the numbers who commenced. It also demands an organisation far less focused on
what it does than what it is about: being responsive to rapidly changing capability requirements. The use of ‘learning’ rather than 'training', therefore, is anything but semantic fine-tuning.

➔ In LCOs, learning outcomes are the prime determinants of educational, training and experiential programs.

Change implications
Any change of focus confronts the difficulty that most people face in abandoning the relative security of the short-term and measurable for the relative insecurity of the enduring and often speculative.

2. Fluid Learning Boundaries

By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.
[Confucius]

One of the most common but, equally, most fruitless, debates in life centres on notions of the ‘real world’ and, in particular, the respective merits of ‘education’, ‘training’ and ‘experience’. Since personal history usually shapes one’s standpoint on such matters, the debate invariably changes nothing, and generates little more than ‘heat and light’. At best it is futile; at worst it engenders, and certainly aggravates existing, counter-productive tensions in the workplace, severely limiting perceptions of the totality of learning. There are close parallels with the interminable, but largely pointless, ‘leadership versus management’ debate that serves only to obscure the complexity of the executive role.
In an LCO, these divisions no longer - if they ever did - serve a useful purpose, because, inevitably, most:

• training is contextual, whether the context is organisational, social, political, strategic, etc;
• education is shaped to a degree by considerations of application, and rarely operates in isolation; and
• experience depends on critical roots in education/training for optimal effectiveness.

➔ In LCOs, the demarcations implicit in the educational/training/experiential classification become irrelevant, as the three components progressively coalesce.

Change implications

• ‘Real world’ issues will remain, if only because of the paradox there is no such objective entity as the ‘real world’, but equally also no objective means of refuting its existence.
• Changing that mindset might only be achieved completely through generational change.
3. Critical Theory-Practice Linkages

*Do not put too much confidence in experimental results until they have been confirmed by theory.* [Sir Arthur Eddington]

The increasingly porous boundaries between advances in ICT and entertainment/information media, combined with on-going generational change in the workforce, have led to radically changed expectations of education systems and the workplace. More recently, rapid advances in the sophistication and integrity of synthetic/virtual/simulated learning have further whetted appetites for a revolution in methodology.

The increasing running cost, and/or reduced availability, and/or risk, of using ‘real’ equipment have unleashed powerful - but often poorly informed - pressures to adopt cutting-edge synthetic/virtual/simulated learning strategies. Conversely, even if such options are demonstrably more ‘effective’ than conventional strategies they may be dismissed out-of-hand if they do not deliver a tangible ‘efficiencies’, thus the need for an objective, theory-based framework to underpin method/media analysis in the development of learning programs.

During the late 1990s, the Defence Efficiency Review led to an ‘efficiency and effectiveness’ tag in virtually every official communication. However, a letter to the Editor of the Air Force News in 2000 pointed out that, while an organisation’s prime concern was ‘effectiveness’ - with ‘efficiency’ a critical, but always secondary, concern - the subtle, but powerful, message in prevailing usage was that ‘efficiency’ predominated. The letter was promptly reproduced in the Army and Navy equivalents, and ‘effectiveness and efficiency’ eventually replaced the former usage. That the author is still in the Air Force, indeed has written this paper, says a great deal about the organisation. Therefore, in the spirit of that enlightened change:

⇒ In LCOs, learning theory drives all effectiveness inputs to decisions on learning methodology.

**Change Implications**

- Method/media analysis will have to be more robust, to manage the appeal of technological options that:
  - arise particularly from the aspirations of younger members; and
  - resonate powerfully with a strongly technologically based organisation.

4. Unbounded Learning

*Whenever and wherever people shall have occasion to congregate, then and there shall be the time, place and means of their education.* [Alfred Kilpatrick]

All people learn from doing their jobs and/or associating with others doing theirs, a fact long acknowledged in the terms ‘incidental’, ‘tacit’, ‘informal’ or ‘social’ knowledge, that arises from learning outside formal programs or strategies. It is also central to the ‘learning organisation’, and the ‘action learning’ concepts, and even challenges the independent existence of ‘work’ and ‘learning’ as discrete entities. Note, however, that the LCO has preferred the term ‘Personal Practical Knowledge’ (PPK); while ‘incidental-tacit-informal-social’ learning implies an almost ‘osmosis-like’ experience, ‘PPK’ connotes a more active engagement.

However, whatever the preferred label, one conclusion is indisputable: it has been inadequately understood, measured, captured and exploited, and routinely under-valued. This
is despite its critical roles as a source of the ‘capability edge’, and a key effectiveness/efficiency factor, not to mention its being fundamental to individual and group commitments to organisational goals.

➔ In LCOs, learning that occurs outside formal programs, with or without structure, or assistance from learning professionals, is as highly valued as any other form of learning.

Change Implications

- Traditional boundaries between work and learning will not easily disappear, if only for the fact that they provide familiarity/predictability/inevitability for members. In an LCO on any given day, a member could play the role of ‘worker’, ‘learner’, ‘trainer’, ‘facilitator’, or even two or more simultaneously, initially challenging those who were more comfortable with clear role demarcations and relationships.
- It will also demand adaptations by supervisors/team leaders, and perhaps even change the ways in which they describe themselves and their roles.
- Reward/recognition/advancement strategies will have to consider achievements hitherto under-valued.
- Defence is substantially integrated, with many civilian employees and contractors working alongside, and supporting, uniformed elements. Each group can bring quite different perspectives to the workplace.

5. Collaborative Focus

If you have knowledge, let others light their candles in it. [Margaret Fuller]

The term ‘esprit de corps’ has military roots, but is used widely to describe something intangible that binds members into a coherent, cohesive whole. Central to that bond are common experiences that sustain the group’s identity. Conversely, commitment to the group lends additional importance to those experiences, heightening readiness for them and, hence, their learning potential. Thus, ‘team’ and ‘training’ both feed, and feed upon, each other.

‘Action learning’ takes the process further by inculcating an institutional project management ethos that overlays a ‘group learning’ methodology on project strategies and outcomes, which is then applied to all tasks, whatever their duration or complexity. In a mature LCO, all members have sufficient sense of commitment - and knowledge of learning theory - to enable them to complement, participate in, and even facilitate, the learning of others. Central to achieving that objective is the exploitation of advances in the application of metacognition, in simple terms, the process of both ‘thinking about thinking’ - in order to develop a broad repertoire of thinking strategies - and consciously applying those strategies to the enhancement of facilitation, negotiation, problem-solving and decision-making skills.

A practical example of Air Force’s collaborative refocusing has arisen from the widespread adoption of the individually based Competency-Based Training and Assessment (CBTA). Its concentration on the smallest components of individual capability has generated counter arguments for an effective means of ‘collective’ evaluation, in part a reaction from an increasingly ‘systems’ or ‘network’ perspective to what is broadly perceived as CBTA’s unduly ‘reductionist’ standpoint. One response to the collective imperative has been Crew Resource Management (CRM) - now more commonly referred to as ‘Group Interaction in High Risk Environments (GIHRE) - originally developed to formalise the non-specialist behaviours that aircrews need, to minimise risks and/or respond effectively to emergencies.
It has since been extended to include airline cabin crews, and has also been adapted to serve such diverse groups as operating theatre teams and nuclear power plant operators. GIHRE clearly has ramifications for the inherently collectivist culture of the archetypical military organisation - with its wide range of mission-critical collective behaviours - that extend well beyond CRM's original application to multi-crew military aircraft.

The LCO is developing a generic Air Force GIHRE framework as the basis for a wide range of specific local applications. Since the Australian Government can, and does, task the ADF at short notice to deploy specific elements to critical locations, such a framework could be used as a tool to determine whether a group of individually competent members was also collectively effective.

Conversely, it could be used to establish whether that ad hoc team, despite lacking some individual competencies, could nevertheless function effectively as a collective. At other times it could serve as a diagnostic tool to allow a commander to check the collective readiness of his/her unit, and institute additional integrative measures where necessary.

→ In LCOs, learning is both a collaborative and an individual activity. All members actively complement, and facilitate, the learning of others.

Change Implications

- Traditionally, organisations say that they value teamwork, but reward members on the basis of individual achievement. Corporate ‘team-building’ strategies frequently fail to deliver anticipated benefits in the face of an embedded individualist culture that daily reminds members of the ‘real’ rules of the game: in Emerson’s words, ‘what you do speaks so loud, that I can’t hear what you say’.
- The workplace will be characterised by less-differentiated roles and responsibilities, and fewer opportunities for an individual to dominate on knowledge alone, since ‘ownership’ of learning outcomes will be far more diffused than at present.
- It will require high levels of emotional intelligence on the part of leaders, who will continue to hold formal legal authority, but will increasingly be judged by the learning outcomes of their members.

6. Lifelong Learning

The object of education is to prepare the young to educate themselves throughout their lives. [Robert M. Hutchins]

Most professional associations list ‘on-going professional development’ and/or ‘contributing to the totality of the profession’s body of knowledge’ as indicators of professionalism. Furthermore, an adaptive organisation demands adaptive personnel. Air Force, no less than any other operating in a competitive environment, needs to continuously refresh itself, and continuously regenerate its capacity to anticipate, ie both predict and prepare for, changed circumstances.

From a personnel management perspective, the lack of opportunities to ‘grow’ in organisations is already a serious impediment to personnel retention, but has often been accorded scant attention in the past. Perhaps Generations X and Y have done us a favour by raising the bar on personal and professional development - which may well be the single most important factor in securing their engagement for extended periods - thus alerting employers to the implications of earlier missed opportunities for organisational growth.
In LCOs, lifelong learning is regarded as a natural part of one’s personal and professional development, and of one’s obligations to the group/organisation.

**Change Implications**

- The key challenges will be to create both opportunities and incentives to learn, while recognising that no one learning strategy is either suitable or desirable for the Air Force. Indeed, a diversity of learning experiences would appear to be critical to the long-term health of any group in any organisation.
- Of overriding concern would be the potential for perceptions that the organisation was insatiable in its expectations of its members’ learning, which would certainly be counter-productive.

7. **Enhanced ‘Lessons Learned’ Processes**

*The real object of education is to have a man in the condition of continually asking questions.* [Bishop Creighton]

‘Briefing’ and ‘de-briefing’ are terms of military origin that are now widely used elsewhere, and continue to be a critical part of all Air Force operations and operational training. However, no review or de-brief process is ever perfect, in the sense of identifying all potential stakeholders in a particular piece of feedback.

Two recent innovations promise significant advances, on the one hand, in the attribution of learning responsibility for operational shortcomings and, on the other, in the transmission of lessons learned directly to the appropriate learning authority. The Air Force Capability Evaluation Reporting Tool (AFCERT) enhances the attribution process, while the creation of Training System Teams (TSTs) in the major Air Force operational groups, and with direct links to Air Force Training Group, more systematically ‘closes the loop’.

The LCO project will also engender a more robust ‘close-the-loop’ culture, sustained by ‘triple-loop’ learning that rigorously challenges the status quo, to complement those two structural advances already underway. Single loop learning is essentially reacting according to standardised procedures, with evolutionary adaptations to changed events. Double loop learning involves Single loop, plus the routine seeking of additional insights or understandings. However, triple loop learning involves Double loop learning, overlaid with the habitual questioning of underlying values and assumptions.

In LCOs, all operations and operational training are followed by the communication of any lessons learned to all elements of the organisation with potential influence on future learning outcomes.

**Change Implications**

- The ‘too busy fighting fires to attend to fire prevention’ syndrome is a universal phenomenon. Military organisations, no less than any other complex organisations, have experienced substantial structural and resourcing shocks in recent years that have challenged their ability to simultaneously deliver timely ‘outcomes’ and attend to the long-term ‘health’ of the enterprise. Fortunately, the Air Force is already closing the loop, as a result of the significant number of related processes already in place.
8. Capture and Incorporation of Learning

In times of drastic change, it is the learners who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists.[Eric Hoffer]

Organisations have long lamented the loss of ‘corporate knowledge’ on the departure of key employees, but have lacked the means to deal effectively with the matter. The ICT revolution has partly addressed that issue by providing some sophisticated tools, but the essential paradox of the ICT revolution - that technological advances simply raise expectations - has ensured that, before organisations could begin to confront the original dilemma, the goalposts had already moved.

What was formerly a largely ‘reactive’ issue - ie anticipating departures by the capture and retention of vital corporate intelligence - quickly became of critical ‘proactive’, ie strategic, importance. Globalisation, and the ‘borderless’ perspectives that it engendered, had ensured the almost universal availability of critical hardware, systems and support, to the extent that the key differentiating factor is how effectively organisations manage the whole ‘workplace learning-knowledge management’ relationship in the corporate interest.

➔ The outcomes of learning are managed for the benefit of the organisation. Members readily access relevant sources of information, while proactively contributing to the ongoing ‘health’ of those sources.

Change Implications

- A ‘systems/network’ orientation is not easily developed in a national culture that is essentially individualist, although military organisations do at least have the advantage of a strong ‘collectivist’ ethos, while the place of network-centrism is becoming more widely acknowledged.
- Many Air Force elements have well developed knowledge/information management systems, and its importance has been recognised with some key appointments at the upper levels of the organisation. Furthermore, one of the Air Force’s five operational groups has established a network in which the Knowledge Management function subsumes the ICT, Information Management, Quality Management, Training Management and Project Management roles, thus harnessing all major generators and users of workplace learning. It could well serve as a model for the rest of the organisation.
- The critical challenge for the LCO is the inculcation of an on-going collective commitment to the continuing good health of the Air Force’s learning-knowledge capability, to provide a critical under-pinning for the excellent work already underway at the system level.

A Work in Progress

Fundamental rules
In most change programs, the number one rule of culture change - to never under-estimate the task ahead - is routinely ignored.

- Most people see no contradiction in dealing effectively with the new at an essentially intellectual level, while continuing to identify with the old at an essentially emotional level.
• Parting with the old is usually more difficult than adopting the new, and even apparently committed individuals may revert to familiar ways under pressure.

However, Project Odin, while subscribing to the number one rule, is driven principally by the even more critical rule of culture change: to never over-estimate the task ahead.

• The designated change agent is rarely the sole owner of the ‘great idea’, and many others will already have been quietly working away in closely related, if not identical, fields.
• The principal challenge is to find, acknowledge and engage them. To do otherwise is to commit the cardinal sin of assuming everyone to be inherently obtuse, obstructive and self-serving. Treated this way, many people adopt the second and third characteristics anyway!

The central imperative

• Most people already know what an LCO looks like because they have been there at one time or another and reflect fondly upon the experience. Individual workplaces that are both highly effective and personally satisfying exist in most large organisations.
• Our task is to show that those special conditions can become the norm, and to develop tools that help to embed those characteristics.

Some over-arching strategies already in place

• Understanding the critical cultural imperatives of the organisation
• Adapting change strategies to fit with existing cultural norms where possible
• Engaging ‘top-down’ and ‘bottom-up’ processes simultaneously
• As a baseline, adopting a minimalist philosophy towards structural change
• Aligning with existing change initiatives
• Identifying existing models of closely related strategies
• Learning from any significant changes already achieved by forward thinkers
• Framing initiatives in terms of extant processes by:
  ▪ building islands of learning, then networks of islands, then networks of networks, etc
  ▪ raising the expectations of key potential beneficiaries
  ▪ engaging:
    ♦ the ‘sharp end’
    ♦ close allies in collaborative, mutually beneficial dialogues
    ♦ induction training and initial employment training programs
    ♦ existing professional development programs
    ♦ learning professionals
    ♦ HRM professionals