

## RESEARCH NOTE

## SEVEN ENABLERS OF AN INNOVATIVE LEARNING CULTURE

Centre for Work and Learning

## Introduction

Workers, managers and enterprise leaders are increasingly and gradually pulled into new and exciting conversations on and practices of innovation and learning, fuelled in part by the powerful and pervasive discourses of technology, jobs and labour transformation. The Singapore government has played a major role in directing both public and private enterprise energies towards the twin issues of innovation and learning through education, workforce development and enterprise support.

All these efforts aim to nudge people, organisations and society (through incentives, financial support, technology adaptation, human resource development, etc.) into a culture of self-improvement and adaptability to change, or what we in this case refer to as an “innovative learning culture”.

This research note discusses how an innovative learning culture can be enabled or supported through “Seven Enablers”. Drawing on organisational culture and workplace learning literature and qualitative research, we developed the Seven Enablers as a heuristic for thinking about and enabling innovative learning culture.

## The essence of an innovative learning culture

An innovative learning culture that enables people to constantly improve, develop and adapt on their own accord entails what the cyberneticist Gregory Bateson refers to as Learning III, “where a person or a group begins to radically question the sense and meaning of the context and to construct a wider alternative context. Learning III is essentially a collective endeavour” (Engstrom, 2001, p.136).

To be able to improve, develop and adapt or “to learn what is not yet there” (Nummijoki et al., 2018, p.4) requires the ability to radically question and shift contexts. This ability or skill unfolds through a sequence of (learning) activities, such as finding and defining problems, resolving contradictions and seeking solutions, which lead to new forms of work activities.

## Summary

- ▶ An innovative learning culture is a way of thinking about the improvement of work (including work practices and job quality) and workplaces from an organisational culture and learning perspective.
- ▶ An innovative learning culture is characterised by a sense of novelty, problem-solving and a tendency to think about new and better ways of doing things and to try them out in practice.
- ▶ It is also about a process that contributes to increased capability to act differently in the environment (Bound et al., 2018, p.89), which requires supportive conditions and workers’ engagement.
- ▶ Many innovations arise through workers’ everyday activities and interactions, in response to occupational tasks and challenges.
- ▶ Work is an important dimension and context for an innovative learning culture in which learning is dynamic and cannot be defined or understood ahead of time.
- ▶ Workers are key to an innovative learning culture, and workplace support for them to question, analyse, develop solutions and reflect is crucial. At the same time, learning and innovation cut across all levels in an organisation.
- ▶ The Seven Enablers focus on empowering workers and creating workplace affordances for an innovative learning culture, structured by trust and commitment, mutual agreement and collaboration.

The ability or skill to radically question and apply knowledge in different situations within the workplace environment are enabled by the workers' active participation in work, and their reflection on the work, processes and experiences. All of these are supported by organisational practices, structures and strategies that manage work and learning. The Seven Enablers enable trust and commitment, mutual agreement and collaboration, which create the organisational affordances for an innovative learning culture.

## The Seven Enablers of an innovative learning culture

In more practical terms, this means better engagement with workers, creating opportunities for workers to do different things and/or do things differently and building a culture of openness, structured by trust and commitment, mutual agreement and collaboration. The Seven Enablers are empowerment, communication and collaboration, tolerance for failure, recognition, alignment, knowledge flows and the nature of work.

The Seven Enablers are interconnected and interdependent. They help business owners to engage their staff in building an enterprise that is dynamic and to sustain a sense of curiosity (see quote from Spinoza et al, 1997, in box).

We group the Seven Enablers according to three key factors in an innovative learning culture (see Fig. 1 and Table 1): workers; supervisors and managers; and the workplace environment. These three factors highlight the importance of active participation, proximal and situational factors that create opportunities and support, and the context for an innovative learning culture.

Fig. 1 Seven Enablers of an innovative learning culture

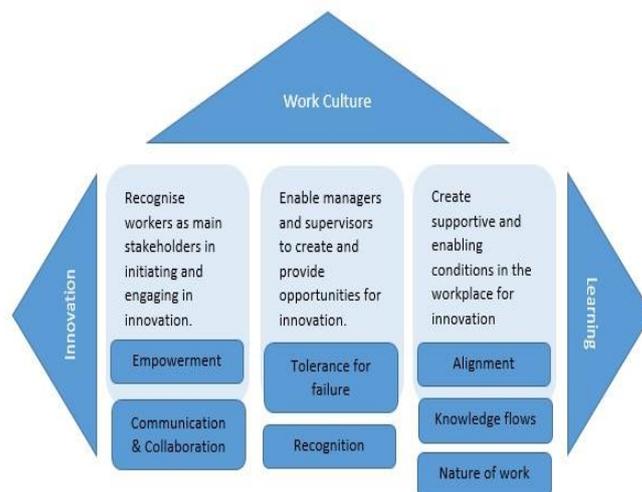


Table 1

Purpose	Enabler	Definition
Recognise workers as the main stakeholders in initiating and engaging in innovation	Empowerment	Worker empowerment refers to the discretion, trust and resources given to employees to make decisions on how best to do their work.
	Communication and collaboration	Communication is the process of passing and sharing information and understanding between people and organisations.  Collaboration is the process of negotiation and compromise.

### *The new, the strange and the unexpected*

“A company whose employees are complacent about their work lives is a company headed for disaster. Indeed, it was one of the paradoxes of IBM’s total-pastoral-care style that it produced the false belief that IBM and IBMers were invulnerable. The computers produced at IBM may at first have embodied something of the way the world looked before centralised processing made obvious sense but neither the products nor the company culture was able to retain this strangeness, and this failure, in turn, prevented IBMers from seeing and holding on to the anomalies in their work lives and continuing to come up with innovations. Thus, maximising both uncanniness and sensibleness serves not only a marketing function but provides for a company culture that promotes meaningful, historical innovations.” (Spinoza et al., 1997, p.54)

## An innovative learning culture: two case studies

Purpose	Enabler	Definition
Enable managers and supervisors to create and provide opportunities for innovation	Tolerance for failure	Processes in which employees or organisations deal with failure and risk.
	Recognition	The act of acknowledging and rewarding employees' effort in innovation and learning so that they feel valued and appreciated in their workplace.
Create supportive and enabling conditions in the workplace for innovation	Alignment	Processes in which an organisation's strategy can be made more responsive to external conditions.
	Knowledge flow	Knowledge flow refers to the exchange and production of knowledge, which enhance learning and performance for organisations and staff.
	Nature of work	Nature of work refers to a workplace environment that includes work complexity, work variety and exposure to change. Nature of work also refers to the type of industry or industry sector.

Two case studies – one from the eldercare sector and one from the advanced manufacturing sector – are presented here to discuss, explore and illustrate an innovative learning culture.

In the eldercare sector, we examine how an innovative learning culture of “holistic care” is enabled in a charity-run nursing home.

In the case study from the advanced manufacturing sector, we analyse the dynamics of the “open” innovative learning culture of a small high-technology company and highlight the implications for the company's going concern.

### Sunrise nursing home: an innovative learning culture of “holistic care”

Sunrise nursing home aims to provide a healing environment for many to rest, recover and improve their quality of life. It offers compassionate and holistic care to sick, frail elderly people who have physical or mental disabilities, with minimal or no appropriate caregiver support at home. The home is built around the needs of the residents. It comprises 14 residential living areas, with a capacity of about 400 beds. Each living area is designed to give residents a sense of home, instead of that of an institution.

The way Sunrise focuses on providing quality of care enabled staff to better understand the people for whom they care. Sunrise staff seek to get to know the residents well, in order to integrate them into the community, programmes and routines of the home, and design activities to help them recover and improve.

The ethos of holistic care or quality of care is reflected in the home's programmes and routines as well as the staff's approach to their work. For example, while it is a common practice for nursing homes to bathe or feed their residents on fixed schedules in the shortest possible time, Sunrise Home residents could eat or bathe whenever they wanted to. This, however, did not require additional human resource. In fact, it has generated a positive impact on the quality of life not just for the residents but also for the staff, as they are not stressed by the need to feed or bathe 20 residents in 2 hours. This innovative practice is explained by nursing manager Felicia:

“Not everyone feels hungry at the same time. So why must we insist that the breakfast is served to the residents all at the same time? Our residents can decide when they would like to have their breakfast (continued on next page).”

Because of this small innovative change, in the morning, the staff don't need to rush to prepare breakfast for all residents because the residents eat at different times. The times for eating, drinking, changing diapers are all staggered and the staff find that they can cope better with this staggered timing. Actually, they like it because there is no rush to complete this task or that task within a short period of time. And they learn about the needs and preferences of the residents better. So both staff and residents are happier."

Felicia's explanation of her work shows that she and her staff have been entrusted, **empowered** and supported to care for residents. It also demonstrates **alignment** between the home's mission statement of providing holistic care and its caregiving practices.

Here, staff empowerment is enabling the alignment of work activities and ways of doing the work with the home's mission of providing holistic care that is individualised and respectful of residents' needs.

There are variations of alignment and misalignment across the organisations in our research because, in their structural and cultural aspects, organisations are much more complex than their official mission/vision statements, and "misalignments" or the variations between operations and their mission/vision suggest that they never operate in the way originally intended.

The management of Sunrise encourages staff to actively try new ways of doing things, through various idea-sharing and discussion sessions, and managers take the lead in areas of continuous improvement efforts. Staff are well supported in adopting new technologies that help to provide customised care, such as "Gym Tonic" – an automatic system that tracks the performance of each resident's exercise regime and makes (incremental) adjustments to the resistance and frequency of workouts every time the resident logs into the exercise machines. The Gym Tonic initiative was the result of a management study trip to Finland in 2013, organised in collaboration with a Singaporean Voluntary Welfare Organisation (VWO), a local medical software company and a Finnish university.

The Gym Tonic initiative has also improved the quality and nature of work for some of its physiotherapy staff, such as Bernard. He is better able to monitor the progress of each resident and make individual changes. The system has also increased the residents' sense of ownership for their own health, because they can now track and become more aware of their own progress. This has alleviated Bernard's workload of manually recording, tracking and updating each resident's progress, and allowed him to instead focus on working more closely with them and becoming more attentive to their needs.

**Empowerment:** workers are recognised as the main initiator of innovation. They bring a lot of themselves to the work. Organisations can help by acknowledging workers' innovation and learning and provide them with material, moral and emotional support. Therefore, empowerment is about seeing and recognising workers as initiators of innovation, enabling discretion and trust, and providing support for workers to do their work.

**Alignment** means that the way in which an organisation operates is reflective of its strategy, and the extent to which workers agree on, understand and play a part in this strategy.

When variations are seen, it is with regard to how "mechanistic" – i.e. top-down direct control and task oriented – or "organic" the organisational forms are, i.e. empowering, decentralised and flexible. Such variations are influenced by the way organisational leaders and managers interpret and take into account various contingencies that affect their organisations.

*"Bringing new technologies (like the Gym Tonic) introduce new methods and ways of approaching the elderly. I think this is a good way to engage the elderly, keep them healthy, and active. It's a good quality of life for them. So I find it quite fulfilling. I think from the beginning of 2012 until now, my job scope has improved with the introduction of Gym Tonic. It has made my work easier, and it has helped me as a caregiver to provide good quality care, without compromising my own health and well-being" (Bernard, physiotherapist).*

**Communication and collaboration** have enabled the Gym Tonic initiative to be implemented and integrated successfully into the everyday life and practices of the home. Communication underlies the fact that people recognise what is expected of them and cooperate or comply in degrees of willingness and, as far as possible, whenever it suits their own purposes, interests and/or projects. Communication preserves and builds on this agentic capacity, which invites people to get involved.

Communication and collaboration also create **knowledge flow** or the production of knowledge, which enhances learning and performance for the organisation and improves the quality of work for the staff.

To encourage staff to think and do things differently and become empowered to provide holistic and individualised care for the residents, Sunrise management adopts a flexible approach to failure. Staff are not penalised personally if their innovations fail. Instead, failures are reviewed collectively as a team to address issues and make improvements. For instance, there is no “punishment” if a resident falls in the home. Instead, staff are counted on to report the incident, keep proper records, identify the problems to find solutions, and be accountable to the resident and his/her family.

The chief executive officer (CEO) of Sunrise says: “So for us, [resident] falls are not punitive. We will record the falls [and report them to MOH] but what is [more] important is to investigate and find the real reasons behind the incident, and find solutions to it, and communicate all these to the family members”.

A **tolerance for failure** is connected to the degree in which workers are empowered to do their work; the level of communication and collaboration that create mutual trust and shared accountability; workplace affordances enabled by knowledge flow; and enlightened management that supports and recognises workers who try, fail and learn.

### 3D Tech Pte Ltd: an innovative learning culture of “openness” and employee-led innovation

3D Tech Pte Ltd is a relatively new company – founded in 2012 – that offers a range of commercial 3D printing products, systems and services. It is an authorised reseller of several advanced 3D printing systems, which are used for rapid prototyping, design and modelling applications in the biomedical, architecture and manufacturing sectors. 3D Tech has a workforce of fewer than 20 staff members who are mainly under 30 years old, quite motivated and deeply curious, and who have a passion for 3D printing technology.

Staff have to figure many things out by themselves in this emerging field where new problems and unknown and complex situations reign. Their capacity and ability

**Communication and collaboration:** effective communication is a fundamental practice that creates trust and commitment, mutual agreement and collaboration for an innovative learning culture. Communication practices such as dialogic questioning and respectful engagement enable an innovative learning culture of openness to the new, the different and the unexpected.

**Knowledge flow** refers to the exchange and production of knowledge, which enhance learning and performance for organisations and staff. The Gym Tonic initiative is the result of knowledge flow enabled by the collaboration between Sunrise management and other stakeholders, which has created affordances for improvements or changes to the staff’s work, as highlighted in Bernard’s case. This has also led to greater alignment with the home’s mission.

**Tolerance for failure:** failures are a key feature of an innovative learning culture. However, it is not so much about failures per se but what can be learned from failures. Tolerance for failure is reflected in how enterprise leaders, such as the CEO of Sunrise, have encouraged and supported their staff to question, analyse and try out new ways of doing things or different things.

to question, reflect, improvise and initiate innovation – which lead to or result in new solutions, ways of working and changes in established practices – are critical. They work in small teams and develop close friendships, which are undergirded by a strong sense of recognition or affirmation (of self) and alignment with what is valued by the organisation.

**Recognition** and respect also encourage two-way communication between managers and staff, which creates the space for bottom-up approaches and suggestions for innovation.

3D Tech’s founder–director, Tim, and his deputy, Trina, seek to create a respectful yet flexible environment and a flat structure in which staff are given the discretion to decide when and how to do their work. Staff are expected to work independently

and solve problems individually and as a team. Tim actively guides some of the more junior staff in their work, and he has also been key in initiating several projects that he personally oversees and leads.

Tim emphasises not only the importance of learning to improve work and performance, but that learning is achieved in collaboration with co-workers, clients and other stakeholders. This is to consolidate or bring people together to sustain new practices and work activities.

3D Tech's staff attest to the support for their work by describing how they are able to explore different things, make decisions about their work and seek help or guidance from Tim or Trina whenever needed. Staff also highlight the "freedom" in their work and workplace, which they contrast to larger organisations, such as a multi-national corporation.

The high degree of discretion or autonomy means that staff are expected to work independently, exercise discretion and, in Tim's words, "try novel or innovative solutions, as long as the problem gets resolved". Hence, innovations are generally bottom-up, and tend to be bold, exploratory and experimental, with a high degree of uncertainty.

The flexibility and openness afforded by the organisational structure and the immense potential of this emergent technology have shaped workers' capacity to innovate and learn. For example, Debbie, who is a product engineer of 3D Tech Pte Ltd, appreciates the openness to the new, the different and the unknown that an innovative learning culture affords. She thrives on working with her clients, who are medical doctors and surgeons, to explore and exploit the prowess of 3D printing technology. Together, they have developed 3D models of anatomical features of the human body, such as tumours based on readings of computed tomography (CT) and/or magnetic resonance imaging (MRI) scan reports.

Two key factors pertaining to the **nature of work** that enable Debbie's success in her work stand out. Firstly, 3D printing technology is a relatively new and emerging field (in the Singapore context), which creates the affordance for much exploration and experimentation. Secondly, because of the relatively lean and flat organisational hierarchy, Debbie has been entrusted to figure things out by herself and to initiate innovation that leads to or results in new solutions, ways of working and changes in established practices.

These two (structural) factors, which have enabled high work complexity, variety and autonomy, created opportunities for Debbie to explore and experiment with new ideas, and collaborate successfully.

While access to scientific knowledge, technological developments and market information/intelligence is essential for staff innovation, management guidance, knowledge and experience are equally important. In this respect, Tim and Trina exercise their role and authority in the company as "big brother and sister" who guide their younger staff, but also as managers

**Recognition** refers to the act of acknowledging and rewarding workers for their innovation and learning. It creates a sense of appreciation and gratitude, which pulls people together in an innovative learning culture of openness, structured by trust and commitment, mutual agreement and collaboration.

Collaborative learning can be achieved when workers have "shared goals, are mutually dependent and interact openly to reach agreement on roles and responsibilities" (Downing, 2015, p.45). Organisational and work cultures that provide a framework of shared language, situation and/or activity are key to collaborative learning. Collaborative learning needs to be facilitated and nurtured to enable mutual responsibility and a community of trust and cooperation.

**Nature of work** refers to the kind of industry and workplace environment that enable or constrain an innovative learning culture. They shape quality of work, including work complexity, variety and autonomy for innovation and learning.

who need to make difficult decisions at times. Trina in particular is stressed by this tension.

One of their priorities as managers is to develop leadership but at the same time preserve the more or less egalitarian team dynamics that have thus far sustained staff enthusiasm and passion for the work, and teamwork. Rather than control work processes, Tim and Trina focus on creating camaraderie and friendship and motivating staff. They realise that explicit work management processes, such as staff movement charts, are perceived by staff as restrictive and controlling, but a managerial "style" (Spinosa et al., 1997, pp.25-26) that invites people to join in the process of planning and scheduling tends to be better received and accepted by staff.

The flat organisational hierarchy of 3D Tech has enabled communication and collaboration and knowledge flow across the company, which helps to create a sense of openness to new and different things, and camaraderie among staff, who appreciate the openness, access to managers and opportunities to bond with each other at work and outside work.

## Conclusion

Workers' participation in work and their agency and voice are key to an innovative learning culture. Workers initiate innovation, but their actions are mediated by workplace affordances or what is provided, offered and made available to them.

Empowering workers goes hand in hand with workplace affordances that support learning and innovation. All of these need to be structured by trust and commitment, mutual agreement and collaboration.

Hence, the Seven Enablers focus on empowerment and creating affordances that engage and inspire workers to think differently (or think big), do different things, try new ways of doing things, etc. They also direct attention to the conditions and quality of work and practices that value and respect workers' agency, i.e. their capacity to make decisions and act independently.

## References

- Bound, H., Evans, K., Sahara, S., & Karmel, A. (2018). *How non-permanent workers learn and develop: Challenges and opportunities*. London: Routledge.
- Downing, J.J. (2015). *Applied learning design in an online teacher-education course*. PhD thesis. Murdoch University.
- Engeström, Y. (2001). 'Expansive learning at work: Towards an activity-theoretical reconceptualisation.' *Journal of Education and Work*, 14(1), pp.133-156.
- Nummijoki, J., Engestrom, Y., & Sannino, A. (2018). 'Defensive and expansive cycles of learning: A study of home care encounters.' *Journal of Learning Sciences*, 27(2), pp.224-264. DOI: 10.1080/10508406.2017.1412970.
- Spinosa, C., Flores, F., & Dreyfus, H. L. (1997). *Disclosing new worlds: Entrepreneurship, democratic action and the cultivation of solidarity*. Cambridge, MA: MIT Press.

### The “innovative learning culture in SMEs” research project

This research project examines factors that shape an innovative learning culture in Singaporean small and medium-sized enterprises (SMEs) and aims to provide insights into organisational practices of and support for innovation and learning. Using a qualitative case study approach, the research focuses on seven SMEs in the healthcare and advanced manufacturing sectors. It draws on data consisting of semi-structured interviews with staff at all levels in the participating organisations; work shadowing with staff; document analysis; and discussions with various industry bodies and government agencies.

## CWL

**The Centre for Work and Learning advances a holistic understanding of individual and enterprise capability development and responses amid a dynamically changing context by focusing its research on the relationships between work, learning and labour markets. With this focus, CWL employs an interdisciplinary approach, as well as a variety of qualitative and quantitative methods to inform policy and practice. Our efforts to translate research to address real-life challenges include supporting innovative approaches to workforce development, and deepening engagement with partners and policy and research communities. Our research supports efforts to empower individuals to develop their fullest potential throughout life.**

### Address

11 Eunos Road 8  
#07-04 Lifelong Learning Institute  
Singapore 408601

The views and analysis presented in this Research Note are those of the authors as researchers. The content of the Research Notes is intended for discussions and generating ideas. It is not necessarily the views or policy prescriptions of the Institute for Adult Learning (IAL).

This publication should be attributed as Institute for Adult Learning. (2019). <Seven Enablers of An Innovative Learning Culture>. <Centre for Work and Learning>.

This publication remains the copyright of IAL, Singapore and may not be reproduced without the permission of the Director of Research and Innovation, IAL. For further information on this publication, please email to [research@ial.edu.sg](mailto:research@ial.edu.sg)

For more information, see <http://www.ial.edu.sg/>