

# IAL ADVANCE

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## Exclusive Interview with SUSS President, Professor Cheong Hee Kiat

*As the Founding President of Singapore University of Social Sciences (SUSS), Professor Cheong Hee Kiat is an advocate of lifelong learning and innovation. In this special issue on 'Innovation', the IAL Advance Editorial Team interviewed Professor Cheong for his views on various aspects of innovation.*



1

**IAL ET:** You have, in your speeches, emphasised the 3Hs (Heart, Head, Habit) as the philosophy and approach to the development of innovative graduates who work for the good of society. 'Innovation for Excellence' is also one of SUSS' core values in SPIRIT. With these values guiding SUSS and IAL's efforts at innovation, what else do you see as inherently strong in SUSS and IAL that can be harnessed towards crafting new programmes, initiatives, learning experiences and more?

**Prof Cheong:**

Having the innovation spirit is very important for progress. As an applied university, SUSS is one of the earliest adopters of Infocommunication Technology (ICT) and mobile capabilities to enhance students' learning in a cost-effective way. In the past, we had been looking at creating niche areas to advance our effort at innovation. We use associates or adult educators, who have industry knowledge and expertise, to guide our students in innovative work. Both student and teacher can learn from one another. We innovate in terms of students' access to SUSS - for students who do not qualify to join directly, we find a way for them to learn and prove they are able to cope; and for students who have not been studying for a long time, we find ways to support these students.

2

**IAL ET:** 'Universities today are seeing shifts such as the growth of online learning, whose economies of scale are creating new competitive dynamics, and the growing scepticism among employers and parents (the actual "customers" of the university) over the value of a university

credential' [Ferrari, B.T. and Phan, P.H. (2018)]. At the same time, SUSS has thus far developed somewhat differently from mainstream university models, with its emphasis on the element of 'social good' and more. With evolving university trends and roles, what are your thoughts on SUSS and IAL staying the course of its current plans and developments, or moving to further innovate our University model?

**Prof Cheong:**

SUSS has been developing differently from other universities. In the past, we only had adult learners, but presently we have annual intake of younger undergraduate students as well on full-time studies. We constantly think of and improve on how we enable adult learners to be more mobile in their learning and fit learning into their working schedules. For example, students use digitalised study guides and textbooks which we provide, so that they can still continue their learning despite not being able to be physically on campus for classes. Hence, when the pandemic struck, students were able to switch to online learning fully and quite readily since SUSS has already been conducting online and blended lessons much earlier. However, as other universities are now adopting the hybrid learning model where students can study both online and on campus, SUSS will need to innovate its learning model and provisions to stay ahead and offer more to its students. In this regard, SUSS and IAL will need to innovate further - how to personalise online learning, how to make online lessons more effective, and how to get adult learners who are not intrinsically motivated to be more receptive to lifelong learning.

**3 IAL ET: SUSS and IAL both have strong set-ups for innovation collaborations with enterprises and other external partners (eg. CEL at SUSS, IC and CWPL / NACE at IAL). How can we further our achievements of recognisable outcomes through such partnerships, so that we are highly regarded for our influence and for being a major force successfully driving innovation of Singapore's economy through such efforts?**

**Prof Cheong:**

SUSS strives to provide training that is applied and relevant to learners. We do this in the classroom but we bring the workplace in as well. However, learning also occurs at the workplace, in two ways: On-the-Job Training (OJT) and sending employees for external training. This is where IAL comes in, that is, to change the mindsets of employees for them to think of purposeful training and make workplace training as effective as possible. Even with workplace learning, the employees must utilise and apply their new knowledge to retain it. IAL plays an important role to help companies formulate some ways to analyse the effectiveness of staff training.

**4 IAL ET: What are your thoughts on research powering and contributing significantly to the innovation of SUSS and IAL, and how can this be taken on?**

**Prof Cheong:**

In the years ahead, the modes of learning will be changed. There may be new demands, and companies may have better adoption of online learning since employees no longer need to be away from work for face-to-face training. Hence, IAL and SUSS will have to come up with new technologies to enhance adult learning. These include aspects such as developing and implementing appropriate emerging technologies as well as evaluating and assessing learning outcomes. Every person comes with his/her own set of knowledge and skills, and we will need to find a way to harness these strengths to elevate personal learning. IAL will need to foster collaboration with industry partners to strengthen employees' workplace learning capabilities and benefits.

**5 IAL ET: What has been your experience thus far, pushing for more innovation and growth in these pandemic-driven, disruptive, rapidly-changing and very different times?**

**Prof Cheong:**

We are more open to try new things and be innovative. Since we have had the experience

of conducting online lessons for students and learners, we were able to capitalise our resources and carried out online learning readily. Our associates, who had to switch to working from home, were more than willing to adapt and learn how to conduct lessons online. However, I do hope that we are not doing this only for personal or institutional needs, but as a national need. As a nation, if we do not learn to adapt quickly to contingency situations, we will suffer due to the unexpected disruptions brought about, such as by COVID-19.

**6 IAL ET: With some of our successes in innovating within our University – data-driven analytics of students' learning, experiential learning rooms and programmes, programmes in niche areas such as gerontology, employee-driven innovation at IAL and more – how can we inspire, motivate and persuade even more staff across SUSS and IAL to also get into the spirit of innovating?**

**Prof Cheong:**

We can put in place a reward system to motivate staff. However, what is more important is the purpose of engaging in innovative work. When employees are intrinsically motivated and believe in the mission and vision of SUSS and IAL, they

will be able to join in the action and benefit from learning through the development of innovative resources.

**7 IAL ET: If you think of the future of innovation at SUSS and IAL, what do you hope to see us achieving in 5 years' time?**

**Prof Cheong:**

We have thoughtfully and strategically planned our roadmap. In a nutshell, in 5 years' time, we hope to help SUSS students and adult learners take better control of their own learning. IAL and SUSS will work together to enlarge the innovative space for adult learning. We will become a resource hub for companies to learn to be better at training their own employees. We aim to build on our international footprint, where other countries take our successes as reference and follow our footsteps, thus promoting international collaboration to enhance adult learning. This is a pertinent role, especially since learning and education are the ways to close the gaps between those who have knowledge, skills and opportunities and those who do not have them.

"IAL and SUSS will work together to enlarge the innovative space for adult learning."

Prof Cheong Hee Kiat,  
SUSS President



## Expanding Possibilities through Learning Innovation: IAL Innovation Centre

*The COVID-19 pandemic has upended how learning may be delivered. To stay competitive in this new disrupted environment, innovation is a key factor to realise possibilities and embrace opportunities to uncover fresh solutions to reignite and accelerate learning and growth.*

**Ms Sim Soo Kheng**  
Director,  
Innovation Centre, SUSS-IAL



## 1 What are some of the new directions for the Innovation Centre?

In the five years beginning 2021, the Innovation Centre has expanded beyond the inlab to take on the elevated role of helping to bring to market promising innovation products that will contribute significantly to learning effectiveness.

## 2 As the go-to Innovation Centre for the TAE sector, what role will the Innovation Centre play to catalyse and galvanise innovation?

Our engagements with learn-tech entrepreneurs showed that many of them would benefit from more insights and understanding of the learning process, pedagogy and measuring learning outcomes, while our engagement with practising Adult Educators and Learning and Development (L & D) professionals showed they would benefit from more exposure and support in the use of learn-tech and translation of innovative practices to their context and needs. Hence, our Innovation Centre will move into mentoring and nurturing start-ups and aspiring entrepreneurs, alongside Training and Adult Education (TAE) and L&D professionals.

## 3 What are some new programmes / initiatives offered / to be offered at the Innovation Centre?

To support organisations that still struggle with designing and delivering effective tech-enabled learning, we have launched innovDev where consultants will work with them to improve their capacities and capabilities in this area. Another new initiative in the works is the Learning Innovation Sandbox, where organisations can explore how proven learn-tech can be incorporated into their learning systems and programmes, and how they can transit and manage the change.

## 4 How can we more strongly encourage the TAE sector to invest in and commit to greater innovation efforts?

In our study on *Learning Innovation in the Local Enterprises*, we found that innovation appetite is low, while the value of innovation is appreciated. We therefore need to find ways to ameliorate the risk averseness in our enterprises and provide necessary infrastructure support for innovation, e.g. ring fencing the risks to an area where the fallout from failure will be minimal, or allowing teams to work on innovation projects with minimal intervention from middle management.

## 5 Moving forward, what are some exciting outcomes / announcements / opportunities we can expect from the Innovation Centre?

We are excited about the initiatives that will bring concrete benefits to our stakeholders and partners. One idea we have is to crowd-source solutions and build on the collective wisdom of our community for ways to engage our stakeholders and partners. Another is the microsite which will help sustain our engagement with the community, and even build an online-offline community. We also welcome feedback from our partners and stakeholders on how we can better collaborate.

“Innovation is about realising possibilities. The more partners and stakeholders we can bring in to collaborate with us, the more we can achieve together and the greater the wins we can produce in the practice of designing and delivering learning.”

Ms Sim Soo Kheng, Director, Innovation Centre, SUSS-IAL



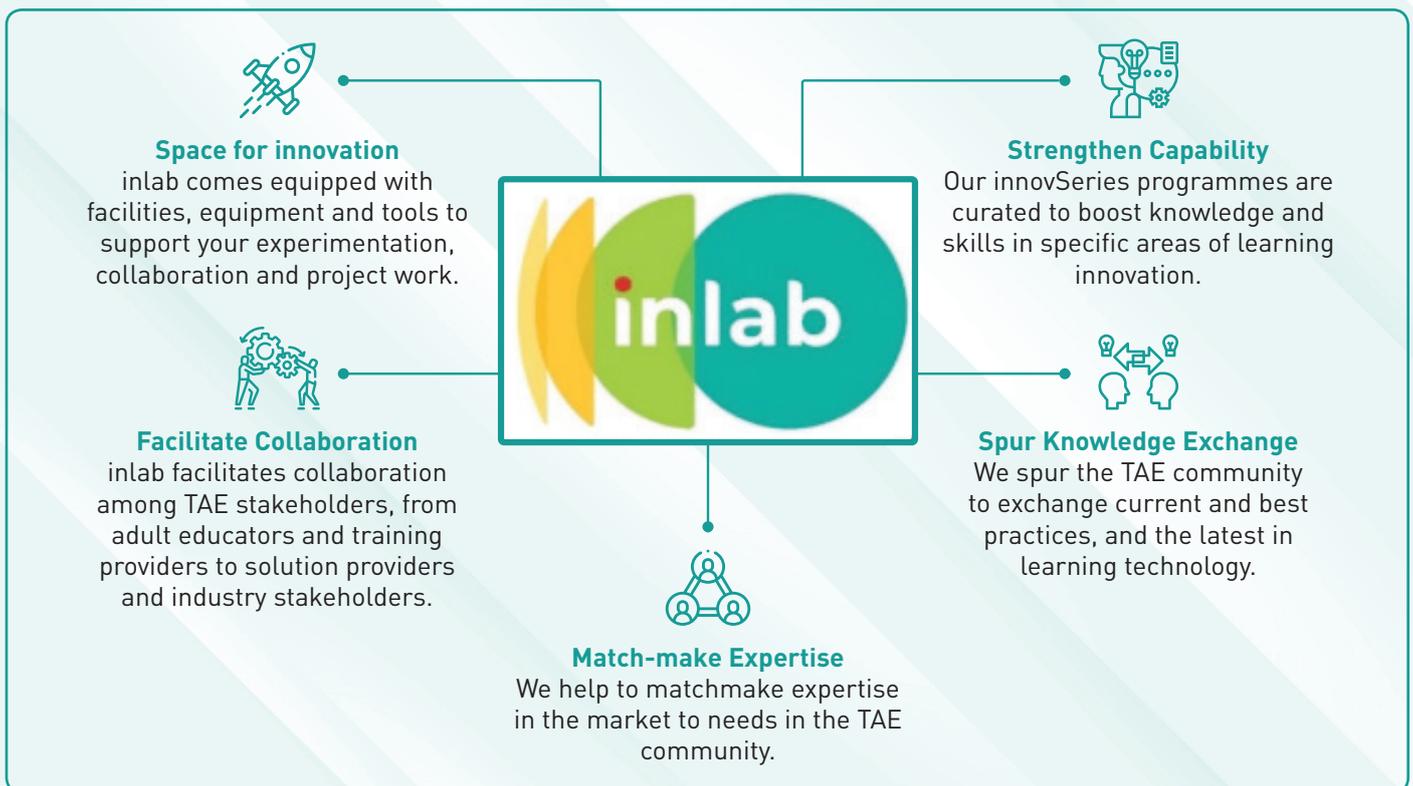
## Inlab: Catalysing Learning Innovation in Singapore's Training and Adult Education (TAE) sector

*As part of the Innovation Centre in IAL, inlab plays a crucial role to bring together enterprises and industry partners across the TAE community to explore, collaborate, and contribute to learning innovation and digitalisation.*



**Ivan Lee**  
Senior Learning  
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inlab, SUSS-IAL

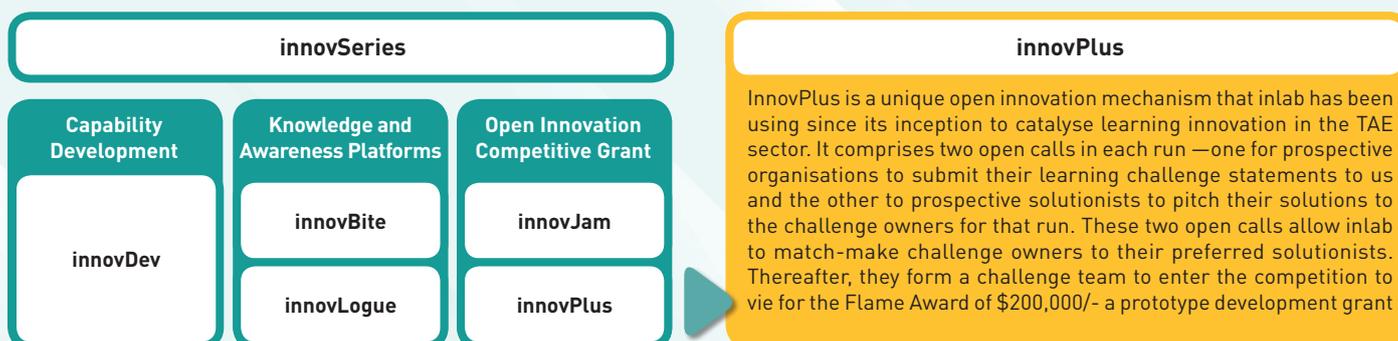
An initiative of SkillsFuture Singapore (SSG) and managed by the Institute for Adult Learning (IAL), inlab is a place where the TAE sector comes together as a community to explore and innovate learning solutions.



inlab created a suite of programmes called the innovSeries, which is designed to support and empower TAE professionals to continually innovate their practices, and help them go beyond the norm to maximise the efficacy of learning. The innovSeries are wide-ranging, targeting the varied needs and readiness levels within the TAE community. It enables TAE professionals to easily embark on their learning innovation journey of exploration and collaboration, resulting in innovations that will be meaningful to them.

The innovSeries comprises two open innovation competitive grant initiatives—innovJam and innovPlus—targeting ideation and prototype development; two knowledge and awareness platforms—innovBite and innovLogue; and innovDev—a capability development initiative to support tech-enabled learning implementation.

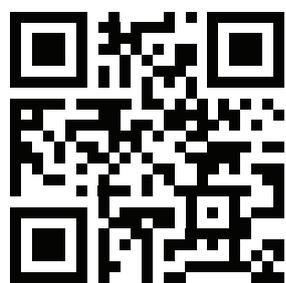
Figure 1:  
innovSeries



Having run 10 rounds of the innovPlus Challenge to date, inlab has been able to surface numerous TAE innovations. Two significant innovations that are ready and scalable for the industries are shared below.



**VISIONARYSCHOOLMEN**



<https://bit.ly/vsmvideos>  
Scan QR code or go to this URL to  
download the VSM demo videos.  
About 790MB.

VisionarySchoolmen (VSM) first won the Award in 2018 as the solutionist for Tan Tock Seng Hospital's (TTSH) learning challenge which aimed at rolling out their in-house communications training program targeting its entire 10,000+ staff population. The solution has to be easily scalable, impactful and yet able to assess learners effectively.

VSM built a prototype that married the various affordances of AI in video, facial and voice analytics to assess learners. This was done by putting each learner in immersive video-based scenarios commonly faced by TTSH staff. At relevant junctures, each learner would need to simulate how to respond to an 'angry next-of-kin' by applying the communications skills they have just learnt. The learner's tone of voice, content of the speech, facial expressions are all captured and fed into an AI-based rubric that assesses and grades the learner. If the learner performs well, the tricky scenario will be defused over time; otherwise, it will continue to escalate. At the end of each scenario, the learner will be graded as either a novice, practitioner or expert.

The prototype built by VSM is highly unique and innovative. Numerous other organisations have since started trials or adopted VSM's platform for their in-house training programs. Some of these organisations include: Singapore Airlines to train in-service cabin crew on in-flight announcement making; Civil Service College to train front-line service agents at key government organs; the Ong Teng Cheong Institute and NACLI of Peoples Association for skilling up of union and grassroots leaders. VSM has also won two other Flame Awards with Changi General Hospital (CGH), including a prototype on training of Accident and Emergency (A&E) triage nurses on good questioning techniques for the prioritisation of walk-in patients.

The other significant innovation, coming from an earlier run of innovPlus in 2016, involves the smart deployment of mobile learning across an organisation. While mobile learning has become prevalent, successful implementation requires detailed planning, incorporating good change management considerations. The focus of the innovation here is on the structured processes, methods and set of tools to lead the enterprise to achieve the desired outcomes.

PocketSeed is a mobile learning platform developed by Bootstrap to address training and onboarding challenges faced by Princes Landscape due to high staff turnover. Incorporating workplace learning methods that IAL has been championing, Bootstrap thoughtfully built a simple, light-weight mobile learning platform that was easy to use by the average blue-collar workers Princes Landscape employs. The solution fuses sound learning design principles with the creation and delivery of the training programs; as well as takes into consideration features that support effective

cross-team and cross-site communications that brought about productivity improvements for Princes Landscape.

With PocketSeed, Princes Landscape was able to shorten their onboarding programmes from five to two days. They now have the means to continually roll out and communicate timely learning content, accelerate learning and enable more effective working.

The Princes Landscape prototype is a noteworthy case study for companies which are interested to adopt mobile learning to boost their business productivity and efficiencies. To date, the PocketSeed platform has been adopted by more than 12 other organisations, which range from retail, Food and Beverage (F&B) to architecture and construction firms.

For more information on other innovSeries, please visit the IAL Website at <https://bit.ly/innovseries>



## Demystifying Innovation – Why and How innovation Matters to Work and Learning



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*There are no formulae, or Standard Operating Procedures to “innovation”. This article demystifies innovation by clarifying what it (innovation) means in terms of local needs and context; seeing how it is generated or enacted in and through work practices and activities, and understanding and incorporating learning or more specifically what individuals know, can do, and value as the basis for innovation. By drawing on the concept of Workplace Learning, innovation can be understood and facilitated via the “Seven Enablers of Innovative Learning Culture” that enable the environment and conditions for the kinds of interaction and relationship required in improvising and remaking work practices, initiating change, and generating new ideas and ways of doing things.*

### The Co-occurrence of Work, Learning, and Innovation

There are many definitions of ‘innovation’. Typically, innovation is defined in terms of product development and process improvement with an emphasis on industrial, scientific and technical innovations.

In the context of learning at work or for work, innovation may be facilitated with a focus on the everyday improvisations and problem-solving by workers in the workplace, and the ways in which they make “incremental changes” (Billett, 2012) to their work that improve the quality of work and performance, and contribute to the company’s production processes and products/services. Therefore, innovation and learning co-occur at work in the following ways:

**The generation and implementation of new processes, products or ideas in the organisation;**

**The re-making of everyday work practices, job enactments and social processes in the organisation;**

**The everyday work-related thinking and acting that lead to the remaking of practices, and the tendency to think about new and better ways of doing things and to trying them out in practice in the organisation; and**

**The environment or conditions that encourage and promote innovation and learning.**

Innovation *creates opportunities for learning*, as does their adaptation to practice, and are therefore constituted and shaped by both social and individual or personal factors and processes. This means that innovations are determined by the interplay between the individual and collective over time, leading to practices that are not only enduring and applicable from one context to another, but also those which can be adapted and evolved over time.

Innovation *as change occurs* as a result of workers' learning and their adaptations, which create new or refined work routines, practices and culture. Many workplace learning concepts are analogous to this expanded notion of innovation which includes learning something new; non-routine problem-solving or advancing a novel response to a complex problem; the application of skills and knowledge from one context to another or to a novel situation; and adaptability, i.e., being able to adapt what one knows and can do in new circumstances and/or application (Billett, 2018).

Innovation *as a continuous process of refining and making improvements to work* can only be realised through learning practices that involve workers, their

work and performance, and those who enable and support them. Learning creates the "intellectual, passionate, ethical and aesthetic attachment" (Gherardi, 2012, p.225) that binds workers to their work, the workplace and their co-workers.

At a conceptual and practical level, all these imply the *inseparability* of innovation from learning, working, and organising as the cornerstone for enabling innovation.

In more concrete terms, innovation is characterised by participation in work, spaces like "community of practice" (Lave & Wenger, 1991), and practices including "conversations, the sharing of stories, and the construction of a common understanding materialised in tangible mechanisms such as documents, standards and action programmes" (Gherardi, 2012, p.225). All these enable an "innovative learning culture" (CWL, 2019) or an organisational ideal that optimises workers' experiences and augments their potential for learning (Billett, 2016) towards constantly improving, refining, and remaking work practices, initiating change, and generating new ideas and ways of doing things. In other words, it is about getting the personal, relational, and interactional matters "right" for innovation.

### Seven Enablers of Innovative Learning Culture

The "Seven Enablers of Innovative Learning Culture" (CWL, 2019) focus on empowering workers and creating workplace affordances for an innovative learning culture. In more concrete 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 (see Table 1). The Seven Enablers can be grouped according to three key factors in an innovative learning culture: workers, supervisors and managers, and workplace environment (see Figure 1). These three factors highlight the importance of active participation, proximal and situational factors that create opportunities and support, and the conditions for an innovative learning culture.

Figure 1:  
Seven Enablers of an Innovative Learning Culture

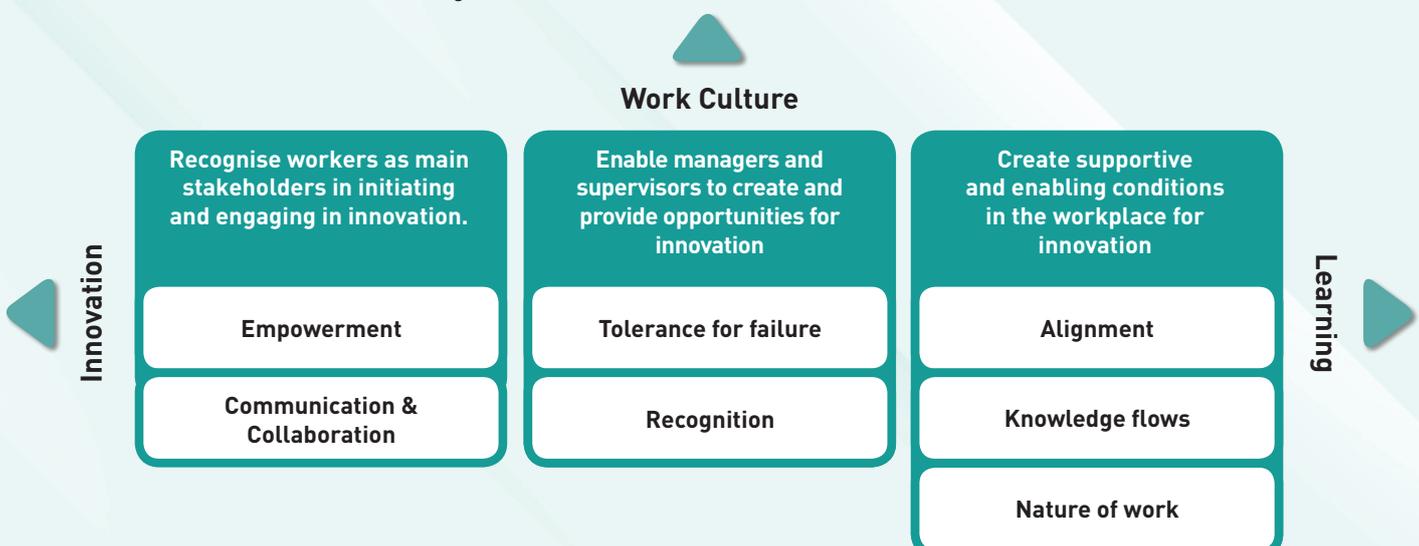


Table 1:  
Seven Enablers of Innovative Learning Culture (Explained)

Purpose	Enabler	Definition
<b>Recognise workers as the main stake-holders in initiating and engaging in innovation</b>	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.
<b>Enable managers and supervisors to create and provide opportunities for innovation</b>	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.
<b>Create supportive and enabling conditions in the workplace for innovation</b>	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.

Innovation, when conceptualised as inseparable from learning, working and organising, becomes a collective activity situated within supportive work environments. It can be enacted by a community or communities of practice towards constant improvement and refinement of work practices, initiating change, and generating new ideas and solutions.

At the heart of innovation are workers' participation in work, and their agency and voice. Workers initiate innovation but their actions are mediated by workplace affordances or what is provided, offered, and made available to them. Hence, empowering workers goes hand in hand with workplace affordances that support learning and innovation. All of these are structured by trust and commitment, mutual agreement, and collaboration.

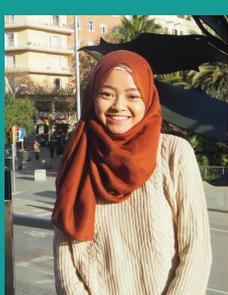
The Seven Enablers focus on empowerment and creating affordances that engage and inspire workers to think differently (or think big), do different things, try

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.

Innovation cannot be construed as a noun or a thing, and flips the conventional notion of "innovative best practices" on its head (Pfothenauer & Jasanoff, 2017). Instead, it explains how innovation is intertwined with work and learning, and dependent on factors like the spontaneity and initiative of workers, how it can be sustained organisationally, and institutionalised as a learning practice. Thus, the Seven Enablers suggest ways which take into account workers' capacity to use their existing skills and knowledge that meet work requirements, the support and encouragement needed to expand their capacities, and the workplace conditions that should be conducive for workers to work with each other in improving or varying work practices, creating change, and generating new ideas and solutions.



## Enterprises' Innovation: Appetite and Readiness



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SUSS-IAL

*Innovation is widely hailed as the key to the future, particularly for its role in economic growth and the subsequent ripple effect on the development of all corners of society. This article shares insights gleaned from inlab's study on the innovation appetite and readiness of Singapore enterprises. Findings will be used to inform learning innovation strategies in raising adoption and scaling up, as well as shape future measures of learning innovation promotion in Singapore.*

Innovation is a means used by nations around the world to remain competitive in the global economy and improve standards of living. To investigate Singapore's innovation landscape, a study surveyed 210 top-level management executives (i.e. C-suite, Managing Directors, General Managers) and conducted 13 semi-structured interviews to provide insights into innovation decisions of different business entities in the country. This study is the first in a series of studies ultimately focused on learning innovation in Singapore. It aims to capture the bigger picture of the innovation decision-making process while also comparing the differences in perception, priorities and practices within different types of innovation.

### Summary of Findings

#### A. Innovation appetite

While business owners may rate innovation as "Very important" and consider themselves "open and enthusiastic" on the matter, the issue of risk played a big role in moderating that zealotness. About half the respondents answered that their company was only "Somewhat willing to accept risk" (48.1%), which certainly undermines innovation and learning innovation appetite, where most companies were "Willing to adopt small to medium-scale innovation" (45.2%) and "Willing to adopt small to medium-scale learning innovation" (41.4%). Less than 5% of enterprises were willing to adopt large-scale innovation or learning innovation.

Once a company understands the importance of innovation, what factors play into how much or aggressively (the extent and the scale) a company is willing to invest in it? The literature review previously suggested that constraints would include low resource availability as well as a risk-averse culture brought on by fear of failure, and interviewees shared similar thoughts. Responses included factors of cost, prioritization of survival, lack of demand from customers and stakeholders, lack of space in high-touch industries and lack of knowledge.

#### B. Innovation Readiness

People and culture emerged as the strongest pillars of innovation readiness, with organisation and collaboration being the weakest. The two findings together make an interesting pair – while companies seem to emphasize creative problem solving, learning from failure, and the importance of innovation to their employees, these values appear to have only been expressed verbally or informally instead of through formalised processes and standards.

As a whole, findings revealed that although the rates of innovation-related knowledge, perception and investment decisions are encouraging, appetite and readiness are indeed vital and should be given greater emphasis in the innovation process. Specifically, tackling the scale of the innovations and the organisation and collaboration within an enterprise is key to increasing learning innovation investment and output.

Figure 1:  
Summary of Findings

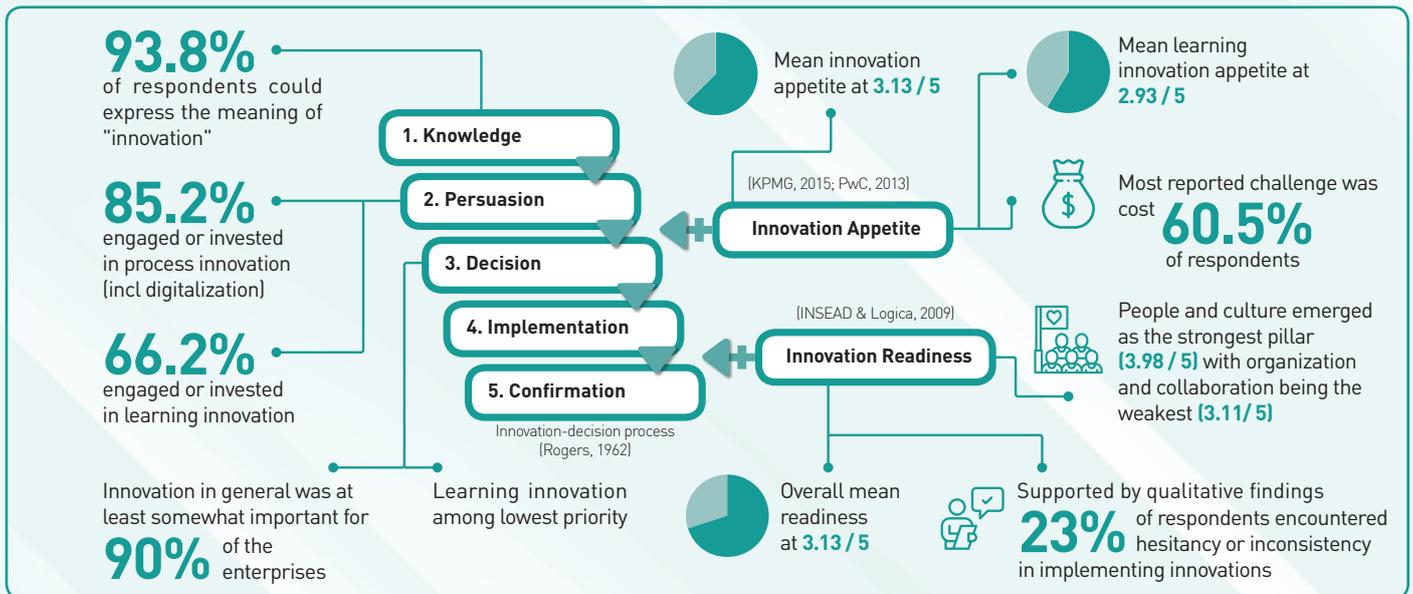


Figure 2:  
Future Plans

## MOVING FORWARD

Enterprises looking to raise innovation appetite and readiness could leverage inlab initiatives such as its microsite, sandbox, innovSeries to address pain points from each step in the innovation flow discovered from the study.



### Cognitive and mindset-related

- (Bite) Benefits of innovating as an SME (less bureaucracy, fewer stakes, agility)
- (Bite) Benefits of innovation and learning innovation geared towards the older generation
- (Logue) Importance of learning from failure (sharing/examples from real companies)



### Internal capabilities

- (Bite) Measurements and evaluation processes for innovation investments to discourage leakage
- (Logue) Tips and tricks for a clear topdown approach on handling hesitance towards innovation



### External Support

- (Website) Grants and related support for learning innovation
- (Website/CPD) Successful case studies with SMEs
- (Bite) Tools that have been tried-and-tested by SMEs
- (Sandbox) Pilots with SMEs in a minimum risk environment

These findings serve to capture the state of play in the area of enterprise learning innovation and general innovation practices. They will first be used to inform the strategies of inlab, the heart of the Innovation Centre at the Institute for Adult Learning, a key driver of iN.LEARN 2020 in catalysing learning innovation in Singapore. The different initiatives of the centre such as its microsite, sandbox, and the trademark innovSeries serve as platforms to address the pain points within each step of the innovation decision-making process flow as discovered from the study, from a cognitive and mindset-related viewpoint as well as within the internal organization of an enterprise. Findings also suggest the need for external support in the larger ecosystem; for instance, as mentioned in the discussion, more case studies on SMEs, tools that have been tried-and-tested by SMEs, or pilots with SMEs preferably in a minimum risk environment.

Finally, the completion of this study paves the way for future research projects, including an index that is more narrowly focused on learning innovation and acts as a 'health-check' on the state or level of learning innovation in an enterprise. In recognition of the diverse sectors and differing needs from one workplace to another, having a tool to assess learning innovation in the workplace guides the learning needs diagnosis stage to offer insights into the current learning innovation stage within the organisation, craft targeted learning interventions to enhance upskilling or training efforts as well as promote the development of a learning innovation culture within the organization. The index will also allow inlab to monitor the wider learning innovation landscape in Singapore and identify enterprises at the turning point of transformation.



## Employees Speak: How to Get Them to Innovate

*Within the context of enterprises, incremental, continuous innovations are abundant amongst the rank-and-file employees. Equipped with an exclusive and extensive set of knowledge of their workplace, these employees can utilise this knowledge to improve existing work processes and products for their enterprise. Often, this results in increased efficiency or better quality products. However, not all enterprises have leveraged the experiences and knowledge of employees to innovate. This article examines the practices an enterprise engages in to encourage employees to innovate and achieve better efficiency and performance.*

Being innovative and responding effectively to new requirements for goods and services are essential for small and large enterprises' continuity and advancement. In response, enterprises have adopted various approaches to meet new requirements, including tapping on employees' knowledge and experiences to improve products and processes.

Employees are valuable to enterprises, as they have extensive knowledge of their workplace practices and issues. Hence, they are best positioned to suggest improvements to work processes. The development and implementation of these ideas, products, and processes by employees, drawing on their expertise and experiences, is known as Employee-Driven Innovation (EDI). At its core, EDI espouses the idea that all employees can innovate, irrespective of position or level of education and it comprises ideation, implementation, and evaluation. For some enterprises, EDI has become the mainstay of the enterprise. These enterprises have certain characteristics that facilitate EDI. This article examines one such enterprise, Comfort Food Manufacturing, and how it facilitates the initiation and sustenance of EDI.

### Supportive Culture

In Comfort Food Manufacturing, employees are addressed as "Aunties" or "Uncles" as a show of respect. In addition, supervisors often bond with employees over food and they often have conversations about their personal lives and topics such as the lottery. These create a collegial, family-like culture where employees feel respected and comfortable to suggest ideas and provide feedback to their supervisors. In Asian cultures where employees often have respect for hierarchy, they may have reservations about speaking to their supervisors and this may discourage them from putting forward their innovative ideas. Hence, a supportive culture where employees feel safe to submit their ideas is important for EDI to flourish.



### Employees and Management

Comfort Food Manufacturing's employees are open to ideas and will not hesitate to experiment with them if deemed practical. This openness to ideas stems from employees' recognition that Comfort Food Manufacturing has to continuously learn and innovate to remain competitive. Failing to do so may result in losing out to its competitors. To avoid this, management actively seeks out ideas and feedback from employees through WhatsApp messages, emails, and phone calls. The CEO also walks the ground regularly and seeks feedback from staff. Management also involves employees in the exploration of new ideas to implement. For example, when employees provided feedback that upgrading their machinery increases production, management proceeded to source for these machines. For employees, they proactively learn about these machines by searching online for information and experimenting with them to understand the machine's mechanics. Management is also supportive of their learning by engaging trainers to train them. This has resulted in new products and greater production efficiency which positively influence their competitiveness.

In essence, through the forging of a family-like culture and management initiatives to involve employees in innovation, Comfort Food Manufacturing has successfully tapped on their employees to innovate. The case of Comfort Food Manufacturing further illustrates that innovation is not an exercise that only multi-national companies (MNCs) can indulge in – it is also within the grasp of small and medium enterprises (SMEs).



## Dialogical Inquiry: A Future-Oriented Innovative Teaching Approach



**Dr Helen Bound**  
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SUSS-IAL

*Dialogical inquiry is an approach to facilitation and learning that builds learners' future-oriented capabilities, including learning to learn capabilities. As such it is an important approach for practitioners in the TAE sector to move towards, as our learners experience the winds of change in all spheres of life. Beyond describing what dialogical inquiry is, this introduction covers how dialogical inquiry is different from other approaches that may on first glance seem similar (e.g. constructivist approaches), what adult educators actually DO when using this approach, and what it means for adult educators as professionals.*

### What is Dialogical Inquiry (DI)

Dialogical inquiry (DI) makes the most of the powers of speech for promoting learning and cognitive development. DI positions learners' voices to matter, through shared problem-solving and dialogue. Alexander (2008) explains why this is the case:

Speech is powerful in learning because “language not only manifests thinking but also structures it, and speech shapes the higher mental processes necessary for so much learning that takes place...” (p.92).

Key features of DI (see Figure 1) include learners working collaboratively to co-construct meaning and knowledge through dialogue and interaction with multiple artefacts (different experiences/cases, different perspectives; whatever is relevant to different fields of knowledge e.g. for landscaping, different plants, including those from learners, to collectively note differences and categorise to a taxonomy). Learners actively participate through having control over topics for inquiry and the learning processes, drawing on their rich experiences as resources for learning. Another important feature of DI is learners' use of authentic problems. Learners choose the problems/tasks/issues they work with, thus giving them some control.

Talk is core to DI; it vitally influences the cognitive and cultural, physical and virtual spaces between learners, between teacher and learners; between society and individual, between what learners know and what s/he has yet to know and understand.

Figure 1: Key Features of Dialogical Inquiry



### How is dialogical inquiry innovative?

This question is best answered by comparing DI with traditional, monological teaching practices that are commonly used in Institutes of Higher Learning, and in the TAE sector. In listing the differences as shown in Table 1, it becomes clearer how DI requires different, newer practices, that have the potential to serve our learners as future-oriented practitioners.

Table 1:  
Comparison between Traditional Monological Teaching and Dialogic Inquiry

Traditional monological teaching	Dialogic inquiry
<p><b>Trainer /teacher /lecturer /instructor does a lot of the talking.</b></p> <p><b>As a result learners are largely passive</b></p>	<p>Learners voices dominate the learning session, with shorter input bursts as required by the teacher.</p> <p>Learners are actively engaged</p>
<p><b>Trainer /teacher /lecturer /instructor makes decisions on what the focus of learning is (e.g. what problems/tasks etc.)</b></p>	<p>Learners exercise choice, e.g. in selecting an authentic task, or problem, or issue to work on.</p>
<p><b>Learning is about reproducing knowledge – regurgitating what is said in the lectures, notes, readings etc.</b></p> <p><b>Consequently, learning tends to be of a lower cognitive level</b></p>	<p>Learners collectively co-produce knowledge. They interact with and make meaning of different perspectives, experiences, etc., constantly improving on ideas collectively.</p> <p>Consequently, learning is at a high cognitive level</p>
<p><b>Teachers do the work of learning to learn</b></p>	<p>Learners' active engagement with content, different perspectives, opportunities to practise narrating, explaining, justifying (using the language) builds in learning to learn, (metacognitive) capabilities</p>
<p><b>Learning may be focused on desired behaviours /skills</b></p> <p><b>Consequently, learning is not holistic.</b></p>	<p>Learning is holistic; theory and practice, technical and generic capabilities are integrated for holistic performance</p>

### As a Teacher/Trainer/Facilitator/Lecturer- What does it mean I DO?

From here on in, I will use teacher to cover any and all the possibilities of trainer/facilitator/lecturer.

#### Teachers

Build on what learners know; use authentic tasks, issues, problems to expose learners to different contradictory views; model & scaffold exploratory questioning; 'build' safe spaces; encourage speculation; encourage thinking aloud; build on evolving ideas; challenge... and much more.

#### Learners

Narrate, explain, instruct, build on answers, ask different kinds of questions, analyse & solve authentic problems, speculate & imagine, explore & evaluate ideas, argue, reason, justify based on evidence, negotiate, and in the process learn to think in new ways, and solve unexpected & wicked problems.

#### Teachers & Learners:

Listen to each other, share ideas, consider alternative viewpoints without fear of embarrassment, help each other to common understandings.

Aside from the first point below, the following example of what you can do does not follow this order. For example, your questioning techniques will be evident throughout, as will your challenging of learners and learners having responsibility for learning (which requires your trust in them):



Start with learners' experiences and at the same time establish a safe space of respect for each person in the learning space



Introduce artefacts, language specific to the topic/domain, and different points of view/ understanding of the topic/domain



Provide lots of time for learners to dialogue to address an issue (requires that they apply & synthesise basic knowledge that they make sense of)



Help sense-making by getting them to engage meaningfully with key concepts/ideas through scaffolding techniques



Have learners be responsible for selecting their authentic task/ problem/issue to work on



Model and be explicit about the type of questions you are using



Provide input as required (short bursts)

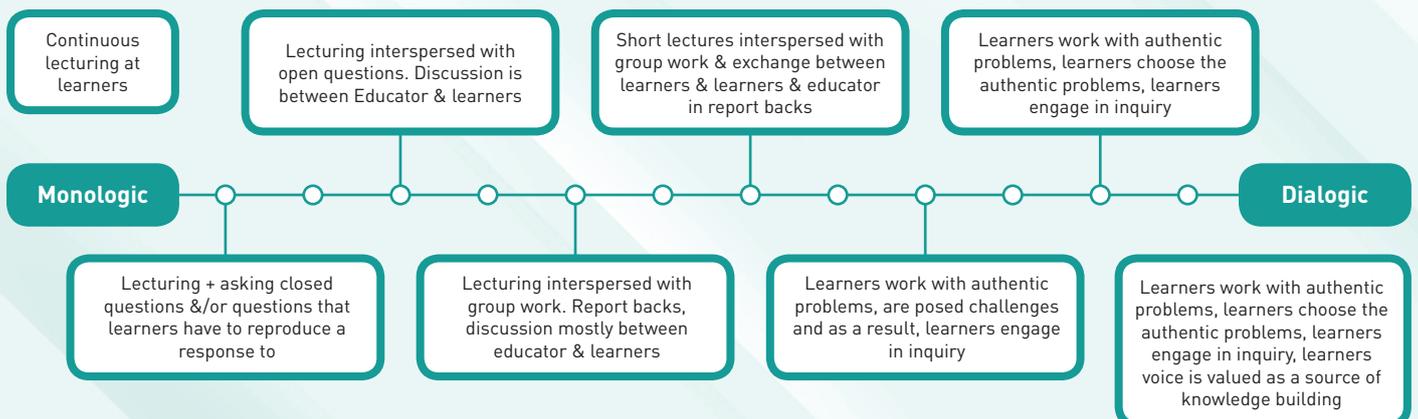
What you are doing is helping learners internalise the language, structure their thinking, come to know what it feels like to talk & think in the language of and about what they are learning. As a result, there is more likelihood of change.

For some specific teaching strategies see: Bound, H. & Tan, S.C. (2020). *Dialogical inquiry; A short guide to teaching using a dialogical inquiry approach*. Singapore: Institute for Adult Learning. <https://www.ial.edu.sg/content/dam/projects/tms/ial/Research-publications/Practitioner-guides/Dialogical%20Inquiry.pdf>

### How is DI Different from Other Forms of Teaching?

A continuum between monologic, traditional forms of teaching and dialogic forms of teaching in Figure 2, illustrates differences between monologic and dialogic teaching. Rather than an either monologic or dialogic approach (which casts this as a dichotomy and dichotomies over-simplify realities) it is important to recognise that we may be using different approaches during teaching episodes.

Figure 2:  
Continuum of Teaching Practices



However, it is also true to say that your own beliefs about teaching and learning will inform where your practices lie along the continuum. Albeit that what we claim our beliefs to be, does not always mean our beliefs match our practices, even when we have a large degree of control over our practices.

Important to remember too, that even though you may have a lot of learner talk in your teaching environment, there is a difference between discussion and dialogue.

Discussion is the exchange of ideas with a view to sharing information and solving problems.

### What Using DI inquiry Means for You as a Professional

Exploring the use of dialogical inquiry inevitably means examining your teaching and learning beliefs and practices. However, the more you use this approach the more you will find that:

Learner motivation is not an issue because learners are working on that which matters to them, and they know their thoughts, ideas and explorations matter.

The disconnection between theory and practice is no longer the case (Guzmán & Larrain, 2021; Bound et al, 2019)

Your learners amaze you as they gain confidence, deep learning and learning to learn capabilities.

Some of the differences you will observe are captured by Trede and McEwen (2015).

“Students tend to accept and take for granted the professional practice cultures and traditions they are exposed to in the classrooms and on placements. ... they were eager to fit in, but ... there was limited pedagogical space to collectively imagine what else might be possible, beyond ‘What am I asked to do?’ and ‘What is most probably going to happen?’. It seemed, at times, difficult for students to develop their own thinking and enact their emerging professional identity, let alone think about the social role of their future profession and its members.” (p.5)

Because this is a new approach and something many of our learners are not familiar with, there will initially be confusion and you will need to scaffold dialogue carefully (Bound, et al., 2019).

Just as for your learners, the best way to learn is through practice – by doing it. It helps to build a community of

Dialogue is achieving common understanding through cumulative questioning and discussion that develops deep understanding and improves ideas.

Dialogue goes beyond exchanging and sharing to take what is said and discussed further - to improving on ideas through use of evidence to justify and explore alternatives. This develops deep understanding and a growing ability to solve unexpected and wicked problems. Core is the idea of knowledge co-construction (Bereiter & Scardamalia, 2014).

support around you to support what is not an easy ride – change never is. Collaborative sharing also helps to infuse what is possible within the systems you work within which often limits possibilities for dialogic teaching, especially in relation to assessment requirements.



## Design Thinking in Adult Education

*In a fast-changing, unpredictable world, adult learning is the key to cope with changing skill demands. Effective adult education is pivotal to the development and delivery of quality content that is learner-centric and innovative. Learning and Professional Development Division (LPDD) at Institute for Adult Learning (IAL) initiated a thematic event known as 'Design Thinking Wednesdays'. It was a virtual five-part series, which was held every Wednesday during the month of July 2020. Adult Educators were invited to share their insights on the increasingly popular concept of Design Thinking (DT), which is an approach that can help to problem solve, innovate and overcome barriers to effective adult learning in Continuing Education and Training (CET).*

As an innovative approach, Design Thinking enables one to understand learners' needs, develop empathy and challenge his or her assumptions. Using a hands-on, iterative approach in prototyping and testing, Design Thinking is extremely useful in tackling problems that are ill-defined, by re-framing the problem, creating alternative ideas during brainstorming sessions and offering a complementary approach to the rational problem-solving methods that encourage innovation in teaching and learning.

The concept of Design Thinking has been around since the 1950s. It was, however, in the 2000s that it found wider applications—from workplace solutions to education to the service industry and more. Notable multinational corporations such as Procter & Gamble and Apple have been outsourcing their brand development needs to consultancies that have design thinking at their core. Such companies have a built-in disruptor mindset and are able to translate the strategic positioning and competitive needs of their clients' products

### Designing the Future

In July 2020, the Institute for Adult Learning (IAL) initiated a thematic event called Design Thinking Wednesdays. In this virtual five-part series, professionals were invited

to share their insights on the increasingly popular concept of design thinking. The lightning sessions—each of a duration of two to three hours—introduced the DT key concepts using interactive activities. The aim of the sessions was to internalise these DT concepts and appreciate the value of human-centred learning in Adult Education and its application in the modern workplace.



### Session 1: Design Thinking Simplified 1 July 2020

"If Design Thinking" sounds vague and mystifying, this is your perfect introduction. A clear, concise explanation, and how it differs from other tools, like Agile and Lean. All you need to get started."

Mr Joel Ng  
Master Trainer  
GRASP Guru



### Session 2: Redesigning the Future and Leadership through a Human-Centred Strategy 8 July 2020

Adopt a more human-centred approach to succeed in an era where technology and machine-learning increasingly augment and affect our lives. In this session, international invited guests will share their experiences and tips.

Mr Daryl Lim & Ms Rosemary Phan  
DesignThinkers Academy, Singapore



### Session 3: Debunking the Myth of Design Thinking 15 July 2020

Blending Workplace Learning with Design Thinking promotes learning, innovation and performance. In this session, participants work in small teams to distil the essence of Design Thinking while debunking some common myths.

Dr Lynda Wee  
Chief Executive  
Bootstrap Pte Ltd



### Session 4: Be Resilient using Design Futures Methods and Tools 22 July 2020

How does one prepare for the inevitable crises after the current one? This session delves into the use of Design Futures (design thinking + strategic foresight) for long-term planning and problem solving.

Mr Darwin Sy Antipolo  
Founder/ Principal Consultant  
pxd lab



### Session 5: Borderless Practices between Design Thinking & Facilitation 29 July 2020

What are the similarities and differences between design thinking and facilitating? This session enables practitioners to engage, share, exchange and build on each other's practices, for the benefit of all.

Mr Peter Soah & Ms Lyn Wong  
IAF Singapore Chapter



## Future-Proofing

IAL Adult Educator (AE) Lyn Wong observes that design thinking as a concept is already a part of adult education as the designing of training modules is an iterative process. The focus is on structuring content and training around the needs of learners, as well as defining skill gaps and the outcomes expected by organisations.

To learn more about Design Thinking, join our interactive one-day Continuing Professional Development programme by Joel Ng at <https://www.ial.edu.sg/learn-at-ial/ial-programmes/other-continuing-and-professional-development/Design-Thinking-Learning-Within-GRASP.html>. This workshop is designed using Joel Ng's proprietary innovation and problem solving model, GRASP, which combines elements of design thinking, behavioural science, and lean processing, to provide a comprehensive introduction to design thinking for adult educators.

"It is not about downloading all we know about the subject matter but customising the content to the needs of the learners, delivering it to them in the way they prefer to absorb knowledge, making it practical for them and exploring with them about how the knowledge can be applied back to their work and life," she adds.

As the four spaces of design thinking are "discovering, diagnosing, creating and prototyping", the concept can be applied to any workplace, agrees AE Dr Lynda Wee, Chief Executive Officer of Bootstrap Pte Ltd.

It can evolve beyond that to be the foundation of the workings of an organisation, observes AE Darwin Antipolo. "Design thinking can be a meta-tool, a common language that teams in an organisation employ in applying to the daily demands of their jobs," he says.

These factors have made it an imperative teaching strategy in the AE realm and an evergreen strategy that IAL has sought to propagate through Design Thinking Wednesdays, which drew 291 attendees.

Wong, Dr Wee and Antipolo were among the AEs who contributed and placed the design thinking framework at the core of their lessons. "Learners in these sessions were presented with real-life scenarios and encouraged to collaborate in groups, discuss and explore perspectives that removed them from their comfort zone and what was common knowledge," says Dr Wee.

Empowering workplace professionals to ask significant questions, challenge assumptions and develop out-of-the-box thinking is one of the most significant objectives of professionals in the Adult Education Network (AEN).

"In that regard, Design Thinking inherently fits the adult education space. Bringing the 'design futures' concept and template to a wider audience and pushing the envelope to assert its application in a team structure would be the way to the future," says Antipolo.

In a gradually reopening post-pandemic world, design thinking training may prove to be a valuable tool for organisations to help their various departments craft a human-centric future of work.



## The Editorial Team



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*IAL Advance* is a bulletin which aims to share IAL's research and innovation efforts with its stakeholders in the Training and Adult Education (TAE) sector.

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