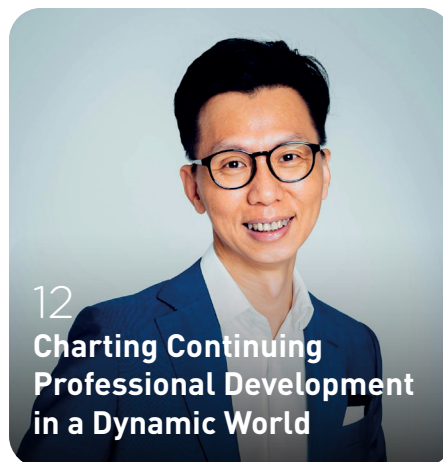
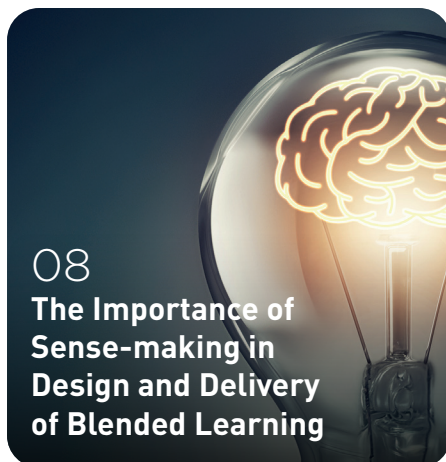


IAL ADVANCE

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What's New: Continuing Professional Development Programmes

With rapid evolution in skills requirements in the industry and learning technologies, Continuing Professional Development (CPD) courses equip TAE professionals with just-in-time micro-learning opportunities to level up their competencies and stay relevant. Following IAL's recent revamp of its CPD programmes, offerings have been enhanced to provide deeper learning and improved delivery to serve the TAE community better.

CPD programmes have always been a significant part of IAL's services to the TAE community, providing just-in-time, relevant training to help TAE practitioners keep pace with the changing landscape. By investing in CPD, practitioners update their knowledge and skills, stay current with changing trends, and sharpen their practice and impact.

Recognising that industry trends and learning technologies are fast-evolving, and that CPD offerings need to address such rapid changes and equip the TAE community with in-depth competencies in a

wide spectrum of subjects, IAL has recently revamped its CPD programmes.

Enhanced features

With this exciting move, IAL's CPD programmes have been enhanced to incorporate improved lesson design and delivery. Across the board, programmes have also been redesigned to be objective-driven to ensure a tighter focus in course delivery and learning outcomes.

Course duration has been extended as well to allow deeper subject coverage. Previously,

CPD programmes typically are designed to be more compact, with each session an average of two to three hours. Now, full-day and even multi-day programmes have been added to ensure more optimal and intensive learning for participants. The extended duration not only allows trainers to deliver more in-depth content, but also allows participants to have more opportunities to clarify and retain new concepts.

Programmes with varying outcomes suited to different needs

The revamp also sees the restructuring of existing offerings that cover key aspects and tools of TAE practice, from e-facilitation tools/ delivery, e-marketing skills, design thinking, utilising social media, e-learning course sites to TAE internationalisation. Whatever one's objective is for taking up a CPD programme; gain awareness and insights on emerging sector trends, to just-in-time broadening and deepening of skill sets, to enhancing employability and employment prospects in niche domains, there is something for everyone!

There are also two stackable programmes — “Adopt the Skills Framework to Design Curriculum and Courseware” and the upcoming “Basics of Workplace Learning Design”— which are designed to stack towards the WSQ Advanced Certificate in Learning and Performance (ACLP), IAL's flagship programme for aspiring and experienced TAE professionals. Participants qualify for credit exemptions for Modules 2 and 4 respectively under the ACLP curriculum when they complete both CPD programmes. The availability of these just-in-time programmes, which stack towards formal certifications, signals the way forward for continuous learning.

Five interest categories to address TAE upskilling needs

To help TAE practitioners narrow down on training opportunities, IAL has developed five interest categories to group CPD programmes: business insights, pedagogical innovation, productivity and performance, workplace learning, and technology-enabled learning.

Programmes under “business insights” are curated to help TAE practitioners gain critical business skills in new and emerging areas

such as digital marketing and social media. “Pedagogical innovation” programmes focus on fundamental principles of adult education and learning with courses on topics such as design thinking and curriculum design.

For those interested in “productivity and performance”, CPD programmes in this interest category equip participants with skills and competencies such as performance improvement and mind-mapping. “Workplace learning” and “technology-enabled learning” provide offerings to level up skills in the respective areas, including designing e-learning and collaborative tools for learning facilitation.

From pedagogical innovations to technological solutions: CPD programme highlights

From artificial intelligence (AI) for business and learning to social media marketing, the new line-up of programmes has much in store for TAE practitioners.

Effectively utilising technology

Tapping on technological solutions is a strong feature of the revamped CPD programmes. For example, “Kickstart Your Digital Marketing Journey” shares ways to help TAE practitioners build a strong personal branding by leveraging powerful social media platforms like Instagram and YouTube effectively. Programmes on learning technologies such as Nearpod, an instructional platform that integrates and enhances online delivery of training and education, equip learners with practical skills to launch their digital practice.

The refreshed CPD programmes also take on intimidating topics and make them accessible. For instance, “Artificial Intelligence (AI) Made Simple for Business and Learning”, conducted by industry practitioners in AI, machine learning and CET industry, introduces participants to AI with an innovative cloud-based DIY toolkit with embedded AI

features. Learners also get a first-hand experience of putting AI in action as they learn to programme a chatbot.

Building a firm foundation in training

Aside from technology, core programmes such as “Connecting the Dots in Learning & Facilitation using Mind-Mapping” and “Design Thinking—Learning within GRASP” provide learners with a firm foundation in various training and delivery theory and techniques. The one-day “Design Thinking” programme brings learners through the process of design thinking, which in turns enables them to develop more engaging and relevant training.

Accessing IAL's wealth of expertise at one go

For TAE practitioners with extensive domain knowledge or those looking to leverage online training, look no further than “IAL SECRET Online Learning Framework”. SECRET, an acronym for Social Collaboration, Emotional & Physical Health, Cognition, Reflection: Re-thinking Online Learning, Economics and Technology, is a hybrid blended learning programme that combines the wealth of IAL's research and pedagogical expertise.

The principles and practices adopted by IAL, including pedagogical theories and tools, and cognitive practices, are shared in detail. The programme also highlights the different business models and technologies that support SECRET practices, and how one may use these various principles and tools to create an online course.



Scan the QR code to access our full list of CPD programmes



S.E.C.R.E.T. Online Learning Framework



Priscillia Yeong
Deputy Director
Learning and Professional
Development Division,
IAL

A significant change wrought by the pandemic is a surge in the use of remote conference technologies to conduct distance learning and training. The phenomenon is supported by stark data: the Ministry of Manpower found the proportion of learners in Singapore who attended job-related online learning double from 25.6% in 2019 to 51.5% in 2020. What's more, the majority of learners embraced the new technological landscape. The same report found that 73.4% of trainees preferred to have a permanent option of online learning (Ministry of Manpower, 2020). Given the greater flexibility online learning offers, especially for adult learners who face a myriad of work and personal commitments, online learning is likely to remain a critical component of adult learning for a long time.

During the circuit breaker, IAL swiftly pivoted to full online learning (FOL) so that learners could continue to complete their programmes with minimal disruptions. Over time, IAL has rolled out varied initiatives to support adult educators (AE) by guiding them on conducting effective online training. A survey conducted in 2020 amongst IAL's AEs revealed that adjustments to learning facilitation, technological-readiness and emotional stability had to be made to protect learners' cognition, emotions and sociality to maintain learning efficacy.

Given the rising role of online learning in the educational landscape, this led IAL to create a Continuing Professional Development (CPD) course to share our expertise, principles and practices when we shifted our programmes from a physical classroom setting to the online environment.

We call this new CPD course S.E.C.R.E.T.

The S.E.C.R.E.T. course

S.E.C.R.E.T. is an acronym for Social-Collaboration, Emotional and physical health, Cognition, Reflection, Economics and Technology. Each principle adds a valuable dimension to the online learning experience that

encourages learner interaction and engagement, while promoting effective pedagogical practices. Various business models are examined that facilitate online training while leveraging key technologies that enhance the overall learning journey.

In the S.E.C.R.E.T. Course, learners will discover:

- Different types of online learning; factors to consider before embarking on online learning; and different **social-collaborative** practices in which knowledge is constructed through interaction with others;
- How to spot **emotional** signals such as the signs of fatigue; triggers of emotional and physical stresses; and methods to overcome them and create a psychologically safe environment for learning;
- Different **cognitive** practices that enhance retention in online settings; the importance of cognitive load; practices that increase retention and scaffolding learning to follow Bloom's digital taxonomy;
- Practices to develop the growth mindset; understanding different **reflective** practice models and incorporating reflective practices into online learning;

- Various **economics** models that sustain online learning; understanding key components and considerations when building a digital learning business; planning to operationalise a digital learning business and designing a business model canvas;
- Different types of **technology** that can support S.E.C.R.E.T. practices; different types of learning platforms, such as mobile-learning, social-learning, micro-learning; bringing the S.E.C.R.E. into the context of the T.;
- Approaches to developing an online course that adopts S.E.C.R.E.T. principles.

As adult educators possess different levels of expertise when it comes to delivering online training, S.E.C.R.E.T. utilises differentiated instruction that is tailored to meet the varying needs of our learners.



Scan the QR code to
register for the IAL
SECRET Online Learning
Framework CPD
programme

The Team Behind S.E.C.R.E.T.



Social-Collaboration

by Khairul Nizharzharudin, Principal Manager,
Learning and Professional Development Division, IAL

// This project has been a real eye opener for me personally. I spent many weeks developing an IAL Online Learning Framework and then led a development team to develop the Framework into a CPD programme. I definitely enjoyed the collaboration, exchange of ideas and feedback to improve delivery and content.

Emotional and Physical Health

by Jason Yew, Senior Manager,
Learning and Professional Development Division, IAL

// Keeping adult learners meaningfully engaged is fundamental for effective learning, however, educators compete for attention with many distractions from the learners' jobs, families and other responsibilities. Technological issues, large class sizes, and time constraints are also significant stressors in online learning. Further competition from the digital world adds to the already difficult task of keeping learners engaged. In this CPD workshop, IAL chose to share its "secret-recipe to deliver impactful and engaging online learning modules.



Cognitive

by Natalie Lim, Manager, Learning and Professional Development Division, IAL

// The Cognitive Load Theory (CLT) by John Sweller (1988), encourages a re-examination of how information is presented to learners, especially in novel situations, to aid knowledge and skills retention in the long-term memory through schema construction. One of the greatest challenges was the application of CLT in the new online learning paradigm driven by the COVID-19 pandemic. Undeterred by numerous rounds of refining the content, the team forged on to eventually piece together the six components of S.E.C.R.E.T., which I am truly honored to have been a part of.



Reflection

by Lim Han Leong, Senior Manager,
Learning and Professional Development Division, IAL

// The birth of S.E.C.R.E.T. during these difficult days required concerted effort in getting everyone from the different teams working and moving together, and I would like to offer my deep respect and gratitude to the people who worked hard to bring the team together in weekly online discussions. These sessions indirectly highlighted the struggles facilitators face while adapting courses online and provided real-time inspiration for us while we developed the new CPD.



Economics / Technology

by Loh Ley Ley and John Phua,
Managing Partners at Skye Digital Pte Ltd

// As Microlearning Content Specialists, we operate in a niche space. When IAL asked us to join their S.E.C.R.E.T. team, we were excited yet apprehensive. As backend developers, we found it daunting to be cast in the limelight of more experienced trainers and practitioners. Our apprehension was misplaced. We enjoyed the camaraderie of the weekly project meetings and witnessed first-hand the commitment from the IAL team. In the end, we are proud and thankful for the opportunity to contribute to the online training community.





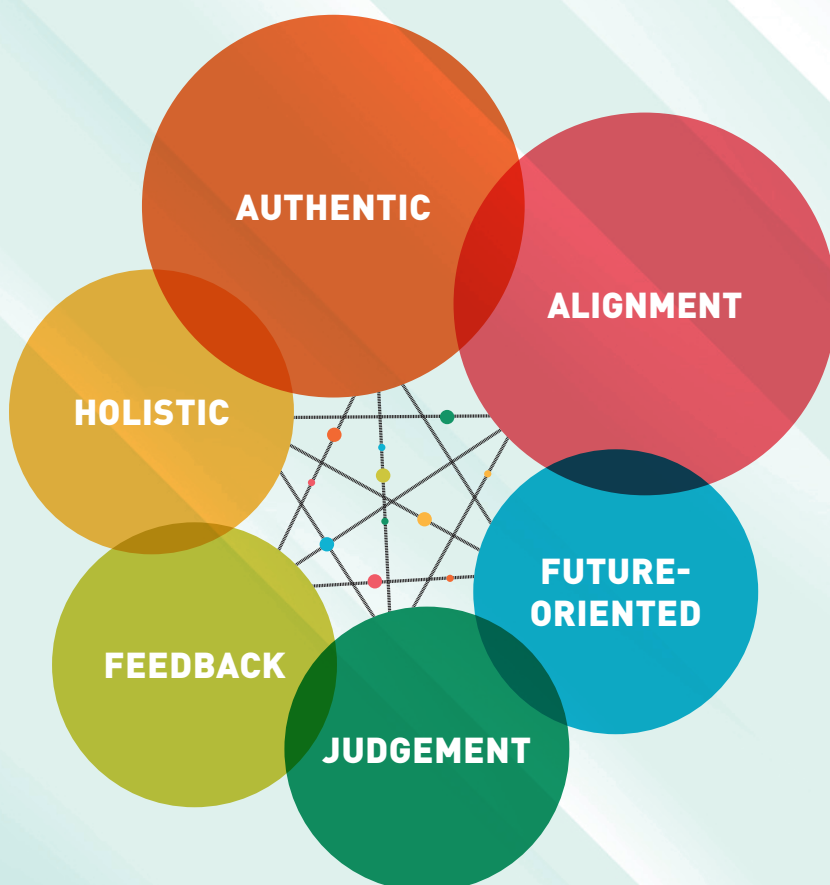
**Associate Professor
Helen Bound**
Deputy Director,
Research Division,
IAL



The Six Principles of Learning Design

Developed by IAL Singapore from empirical data, the Six Principles of Learning Design (6PoLD) offer a guide for developing curriculum and for facilitating learning, different from other instructional models. Today, the 6PoLD has been incorporated into IAL's curriculum development and is shared at IAL's CPD programmes as well.

The Six Principles of Learning Design



Due to the changing nature of work, the 6PoLD is future-facing. It recognises that:

- learning is embedded in the everyday contexts in which we live and work, and that these contexts are changing quite rapidly for many;
- learning and assessment are entwined;
- humans are natural sense makers and problem solvers, and usually learn 'on-the-go';
- humans constantly make judgements and give and receive feedback many times a day;
- learning is a complex social process of engaging with the content, and its contexts of application;
- learning and cognition involves the human senses, movement, and bodily responses; and
- depth of knowledge and learning to learn enables ongoing learning.

The 6PoLD is also a way of thinking about learning based on co-creation or co-production of knowledge, gathering, and weighing up viewpoints from different people and sources. This process contributes to developing deep understanding and future-oriented decision-making, requiring what are variously called 21st century skills or SkillsFuture

Singapore's critical core skills. The intent of the 6PoLD is to empower "people to become active learners who can exercise control and mastery over their work, lives, and futures" (Chia, forthcoming), and to actively contribute to their communities, be it a work or professional community. The foundation of the 6PoLD is that learners are doing the work of learning, not the facilitator/trainer.

For these reasons, each of the six principles do not stand alone. As shown in Figure 1, each is related to and connected with the other principles. Authentic is larger because with its activation, it is easier to ensure the other principles are addressed. This principle is also well-established in the literature as being critically important. Alignment is also larger as this is a well-established fundamental of good curriculum design.

Blended learning and 6PoLD

6PoLD can be applied in and across any learning space. In Singapore's TAE sector, blended learning is considered as including not only classroom and online, but also workplace learning. Indeed, the inclusion of workplace learning obviously links to the principle of authentic, and in so doing acknowledges the other principles as naturally occurring opportunities for learning in a work setting. However, in short courses, it is not always possible to include time for learning in workplaces. This is why authentic learning is also about bringing the work context into the classroom and/or online environment. Curriculum designers and facilitators need a deep knowledge of the work and of their learners' contexts to do this. Working with learners' issues/problems to develop and apply theories not only demonstrates authenticity in curriculum design, but also exemplifies the holistic principle (integrating theory and practice, technical and generic, cognition, emotion and other senses). Such a design would naturally spur sharing between learners, discussions

on how to apply the theories, as well as encourage learners to extend this understanding to their own context. This requires learners to exercise judgement and give feedback on one another's thoughts and ideas. When learners are generating ideas together, they are actually co-creating knowledge, and thus deepening their understanding. Although learning may not always be applied appropriately, the opportunity for open sharing and critique means learners actively engage at higher levels of cognition.

Putting 6PoLD to work

Putting 6PoLD to work in the design of curriculum or facilitation of learning is not a matter of looking at current curriculum design and matching aspects of the design to the principles. The 6PoLD is an opportunity to deepen pedagogical understanding and practice.

It was mentioned earlier that *the foundation of 6PoLD lies with learners doing the work of learning, and not the facilitator/trainer*. Adult learners come with their own experiences and expertise, which can be purposefully used, by asking learners to link their experiences to the theories. This means lectures are not long sessions that send learners to sleep with the facilitator/trainer assuming the learners "acquire" the knowledge. Rather, lectures are short bursts as needed, as learners are doing the active work of learning. For learners who have not previously experienced

being given the responsibility for learning, facilitators/trainers need to scaffold the learning journey to enable learners to take up this responsibility.

Adult Educators (AEs) have commented that the Skills Framework they work with can constrain their intent to take learners deeper (Choy & Bound, 2020). Good design always finds ways around this. For example, if the framework stipulates low cognitive levels of knowledge, recall or reproducing knowledge does not help learners thrive in changing environments. Instead, AEs can teach learners to find such knowledge, make sense of it, compare and contrast, and apply to different situations. This way the framework requirements are met, and learners learn deeply. This also means that assessment task(s) should not focus on asking learners to recall or reproduce knowledge, but to instead *use the knowledge and put it to work*.

About the 6PoLD CPD programme

The core role of Adult Educators is to improve and build learners' capabilities. 6PoLD is a tool that will help AEs achieve and continuously develop this goal. 6PoLD offers a new way forward to develop future-oriented learners. 6PoLD workshops offer an opportunity for AEs and TAE practitioners to deepen their understanding of teaching/training and learning, that will equate to higher quality design and deeper learning for learners.

"As I work with practitioners and we address challenges and questions, I continuously learn more about the value of 6PoLD. It offers a different way of thinking about learners and learning, and also the role of the adult educator that places learning and learning at the centre."

Associate Professor Helen Bound



Scan the QR code to register for the Six Principles of Learning Design CPD programme

¹ A high cognitive level (e.g. synthesis) for one person or group, may be a low cognitive level for different individuals and groups.



The Importance of Sense-making in Design and Delivery of Blended Learning



Dr Bi Xiaofang
Senior Researcher,
Research Division,
IAL

When it comes to adult learning, it is important to note that participants often come with rich industry experience and developed worldviews that shape their learning process. By purposefully incorporating features of sense-making in blended learning, deeper learning can be achieved in participants as they connect and relate training content to their existing knowledge and experience.

Sense-making, the process of giving meaning to experience, occurs when people encounter something that is abstract, confusing, uncertain, or new (Malitis & Christianson, 2014; Weick, Sutcliffe, & Obstfeld, 2005). A recent IAL study, focusing on the learning and sense-making

experiences of participants in six blended learning courses across the following sectors—information and communication technology (ICT), human resource (HR) management, workplace safety and health, and healthcare (Bi, Bound, Mohamed, Cai, & Chuen, 2020)—found that the features of sense-making identified

in organisational studies (e.g. Weick et al, 2005) are more nuanced in the setting of blended learning as shown in Table 1. The findings below have since been shared with the TAE community through our ongoing CPD programme Understanding Sense-making for Quality Blended-Learning Design and Delivery.

Table 1:
Sense-making features reconfigured in the IAL study

Sense-making Features	Explanation
Noticing	A process of observing, identifying, and experiencing similarities and differences across various situations, conditions, and contexts
Recalling	A process of recollecting, reconsidering, and deliberating on past experiences
Labelling	A process of grouping, comparing, naming, and evaluating observed similarities and differences in knowledge learnt, conditions, and contexts
Connecting	A process of making efforts to link the theoretical and practical knowledge, individually or collectively
Conceiving a systemic understanding	Developing ways of thinking to deepen understanding of aspects of professional concepts and practice within a wider context
Communicating	Social and inter-personal processes to further understand what is learnt, e.g., asking questions, posing considerations, predicting, and seeking clarifications
Taking action	Iteratively translating/applying the sense-made, and reflecting

In different instances of blended learning, some sense-making features are more or less interrelated, more or less iterative, and some features may occur more frequently than the rest. As a result of the distribution of these

different features, adult learners in different blended learning courses tend to experience varying opportunities for sense-making. Greater opportunities for putting sense-making into action is what we call quality/deep sense-making.

The following two case studies, one based on an ICT course and the other on a HR course, demonstrate differences in the quality of sense-making and the implications for learners.

Case Study: Limited Sense-making Process

Limited sense-making focuses on just three features of sense-making—*noticing*, *recalling* and *labelling*. *Communicating*, *connecting*, *conceiving*, and *taking action* are not so frequently present when sense-making is limited. In the IAL study, an ICT course observed by the researchers demonstrated limited incorporation of sense-making. The six-module course leading to a professional diploma promised that learners will gain in-depth knowledge of IT systems and become competent to work as consultants.

Fragmented curriculum design

In this course, the learners attended classroom learning (20% of course time) and e-learning sessions (80% of course time) involving both theoretical and practical knowledge. However, what was taught in the course did not incorporate the versatility of the software and the ways in which it can be applied in different settings. Instead, the course design and facilitation were very prescriptive where learners had to strictly follow procedural steps. Consequently, there were limited opportunities to develop

a deep understanding of the possibilities for the deployment of software in the company.

Didactic teaching

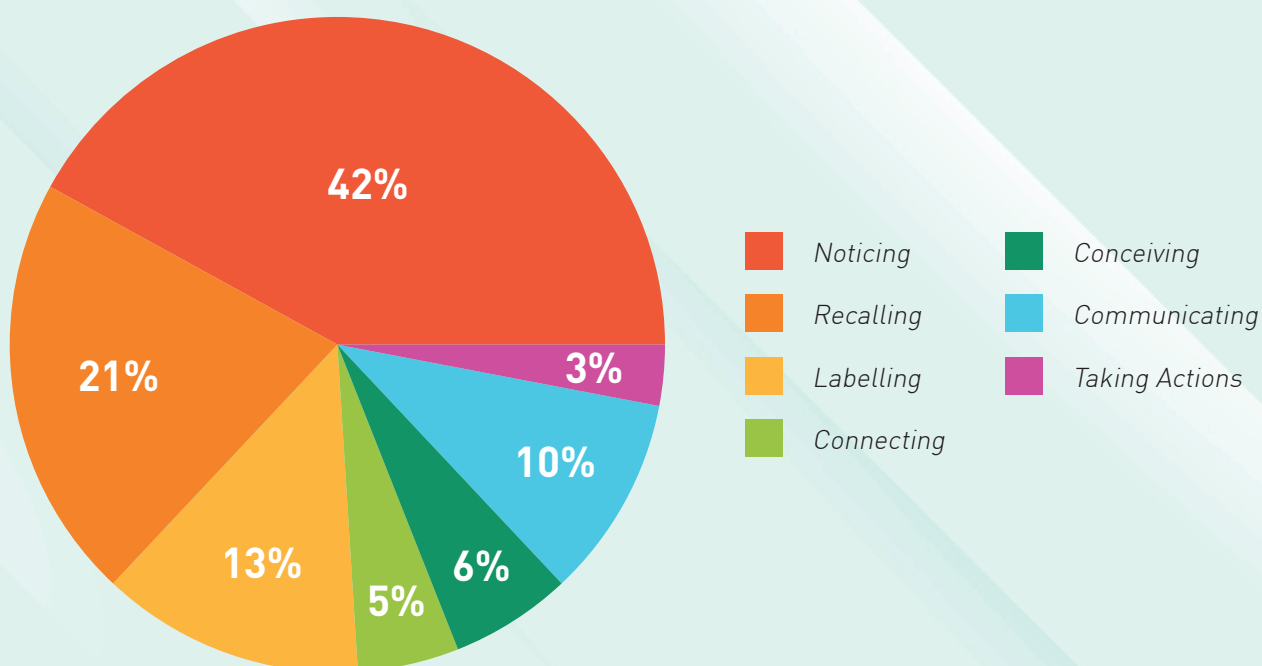
During classroom observation, the researchers noticed that didactic, transmission-heavy teaching dominated the classroom interaction in this course. Such teaching privileges teacher instruction over student learning (Lyle, 2008). Adult educators presented the information, and showcased the steps by clicking the right button in the software. Learners were seldom required

to think purposefully, deeply, and critically, despite the fact that all of the learners in this course possess rich industry experience.

Poor learning outcomes

At the end of the course, learners shared that they still lack the competence and confidence to apply for ICT-related jobs mainly because they were not provided with opportunities to apply what they have learned in an authentic workplace setting. The limited sense-making process in the course has led to the lack of deep learning.

Figure 1:
Features of sense-making present in case study
(ICT course)



Case Study: Deep Sense-making Process

Deep sense-making includes “connecting”, “conceiving” and “taking action” features more frequently than “noticing”, “recalling” and “labelling”. Notably, opportunities to take actions to apply learning to workplaces, and access to constructive guidance were built into the design of the course. A HR course observed by IAL’s researchers showcases how sense-making can be integrated into learning, assessment, and delivery, and demonstrates what contributes to such high-quality sense-making. The course was designed for HR professionals in public service with at least five years of working experience and had three components of blended learning: classroom, tech-enabled learning, and workplace application to solve authentic HR issues at the learners’ own workplaces.

Seamless curriculum design

The seamless curriculum design in the HR course includes the purposeful linking of modules, access to industry experts, and authentic learning and assessment, all of which were important in helping learners make seamless transitions from classroom to workplaces. To purposefully strengthen the links between theory and practice, HR experts from both the public and private sectors were invited to conduct some sessions, providing rich industry

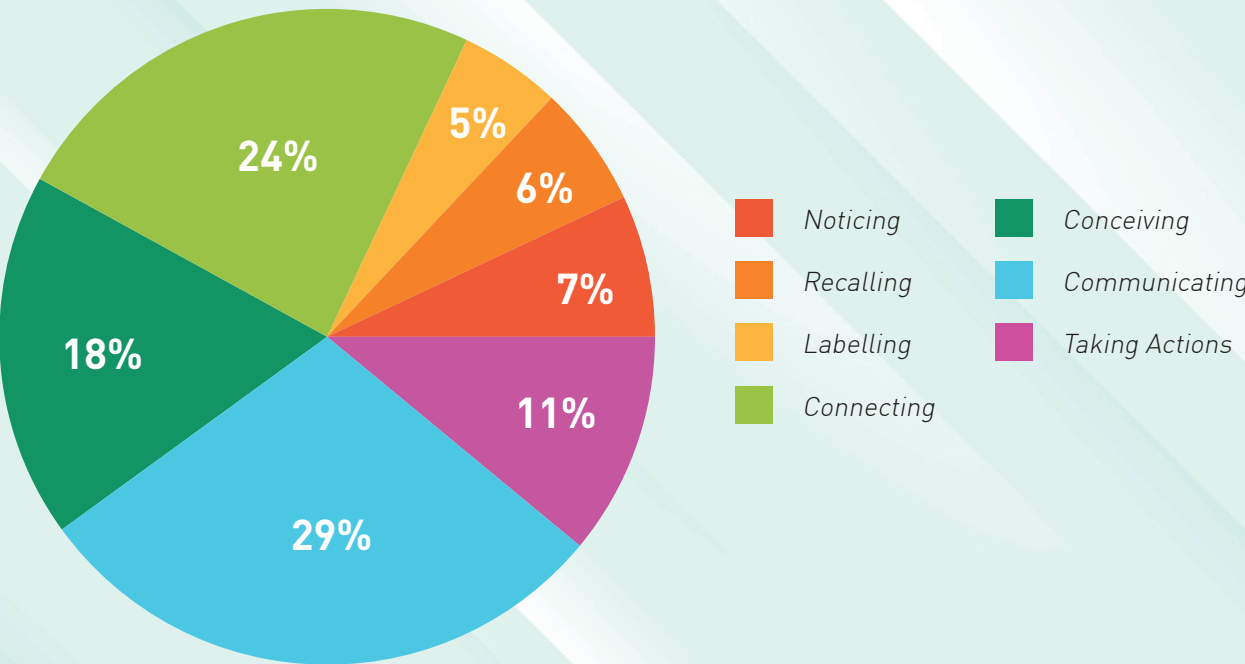
examples. Importantly, learners were required to select an issue in their own workplaces and develop a project to address the issue as part of final assessment. This authentic design of learning and assessment did much to contribute to deepening learners’ sense-making.

Dialogic teaching

Dialogic teaching also plays an important role in eliciting responses and contributing towards learners’ sense-making. During the HR course,

IAL’s researchers found that the learners were engaged deeply in asking each other probing questions, and sharing their own views and experiences. Learners’ questions and discussion points were used by the adult educator for further discussion to build links with theory and involve the whole class in reflecting. Group work, case studies, and role-play were extensively utilised in the course to help learners make links between theory and practice.

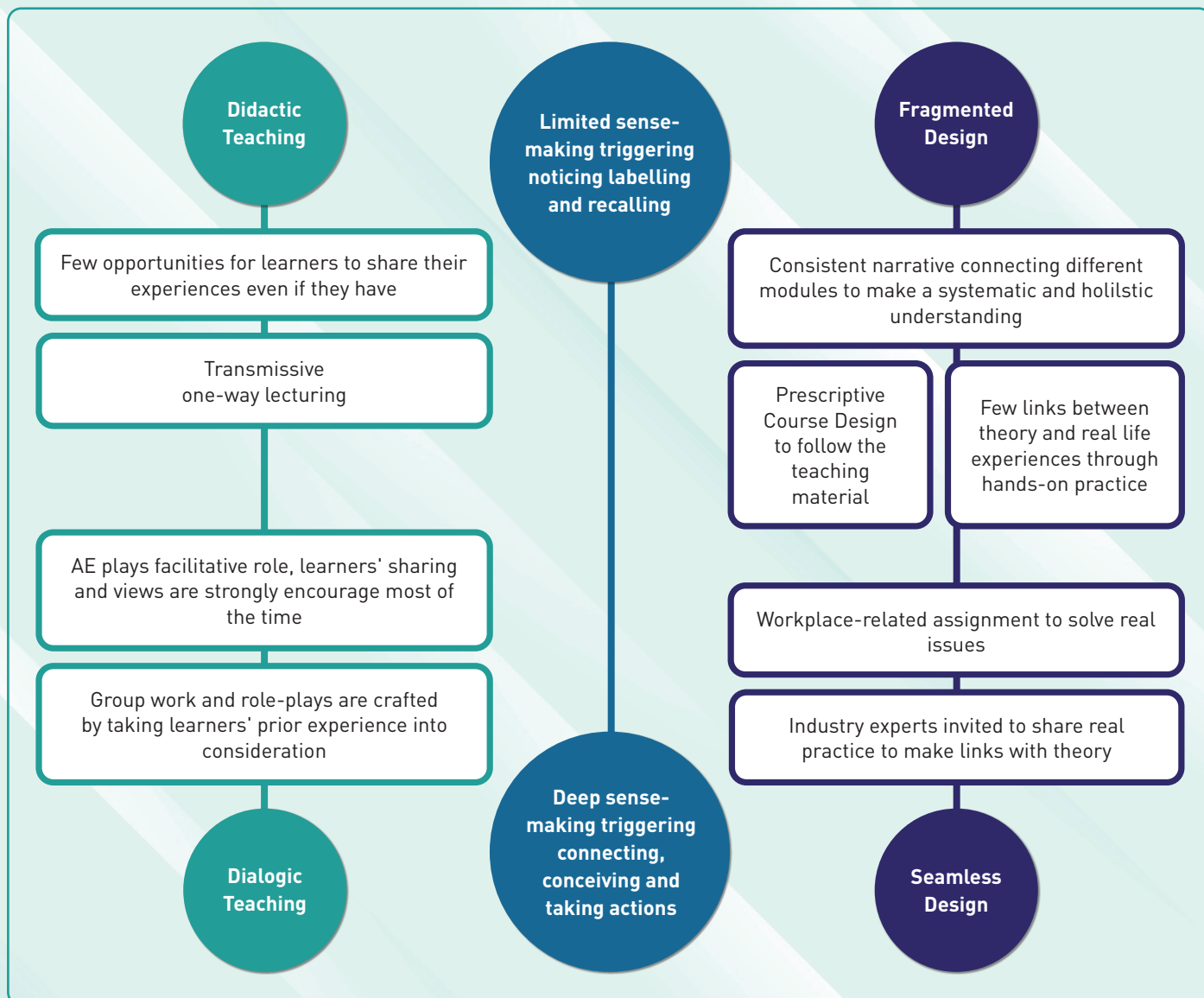
Figure 2:
Features of sense-making present in case study
(HR course)



Implications for Training and Adult Education (TAE) practitioners

From the above comparisons, some practical tips in the design and delivery of blended learning have been developed, as shown in Figure 3 below.

Figure 3:
Tips to adopt to achieve quality sense-making in blended learning



Sharing of findings with TAE practitioners

These findings have been shared in an ongoing CPD programme “Understanding Sense-making for Quality Blended-Learning Design and Delivery”. The programme provides a refreshed perspective to relook the design and delivery of blended learning and draw on learners’ sense-making experience.

In past sessions of the CPD programme, it was noticed that these findings inspired participating practitioners to think from the

perspectives of learners. Learners’ experience in sense-making may become a starting point for these practitioners to reflect on their curriculum design and delivery of blended learning. Participating practitioners were able to identify and apply different sense-making features in their own settings, after being introduced to the various elements or activities in the design and delivery of blended learning. To achieve quality sense-making in blended learning, practitioners

crafted different elements in blended learning design and delivery more carefully and skilfully.



Scan the QR code to register for the
Understanding Sense-making for
Quality Blended-Learning Design and
Delivery CPD programme



Mr Lee Wee Chee
Director,
Learning and
Professional Development,
IAL



Charting Continuing Professional Development in a Dynamic World

The pandemic has fundamentally disrupted long-held assumptions and operating models across diverse sectors, training and adult education included. In the aftermath of COVID-19, IAL has refreshed its CPD programmes to ensure their relevance in helping TAE professionals navigate a challenging and uncertain future. We speak with Mr Lee Wee Chee, Director for Learning & Professional Development, IAL, to learn more about the latest developments in IAL's CPD programmes.

1 IAL has progressively rolled out more proprietary CPD programmes, as well as CPD programmes held in collaboration with other institutions over the past year. Could you share more about these new collaborations/programmes?

Wee Chee:

One's professional development trajectory throughout a career is not a consistently even one. It is likely to be made up of a mix of long bursts of formal learning and short bursts of deep informal and non-formal learning, undergirded by work experience. These short bursts of learning, or continuing professional development, are entirely needs-specific, ranging from new emerging trends such as AI in learning and evergreen skills such as coaching and facilitation, to broad-based bread and butter topics like digital marketing and entrepreneurship. What IAL seeks to do is to find best-in-class workshops to offer to our Training and Adult Education (TAE) community. When we do so, we look at a few things.

First, being a forerunner in adult learning practice and research, what emergent experiences and findings from IAL's own work can we offer to

further level up the effectiveness of their craft? For example, based on our experience pivoting to full online learning during the pandemic, and the several research studies we did, we created a CPD series called SECRET, which covers not only aspects like virtual collaboration, but also touches on the business modelling of online learning.

Next, if there are existing sector needs, who can IAL partner quickly to benefit the community? The local context, relevance of content and applicability of these skills are key for the TAE practitioner here. For example, in an ageing society, how older learners learn is increasingly pertinent. Hence, we collaborated with Council for the Third Age (C3A) to deliver short workshops on geragogy guidelines which C3A developed with Singapore University of Social Sciences.

2 IAL recently revamped its CPD programme structure to offer programmes with extended durations, improved lesson design and deeper subject coverage. Could you walk us through your rationale for implementing these changes and how you and your team achieved this?

Wee Chee:

CPD is a dynamic space, and rightly so. The time-starved TAE practitioner has a finite training budget and time to invest in himself. What we know is that he will only attend the CPD if he sees immediate and just-in-time relevance to his practice, and can envision how it will help him further improve for different reasons such as better learner feedback or more assignments. Most importantly, we must be able to do this efficiently and effectively.

With that in mind, we revamped our CPDs into two main categories—three-hour primers to give participants a short but long enough hands-on taster of the topic at hand, and longer one-day sessions designed to let participants pick up skills and knowledge for immediate application to their work. With topics that demand both breadth and depth, such using the Google suite of tools to augment online learning, courses can go for more than a day. Consistent through all these is the focus on application with the TAE practitioner in mind.

This meant we had to be up-to-date with what our participants want for their skills journey. Through

our networks, we drew up a list of topics and potential facilitators whom we think can fill that need. We tapped on the expertise of many IAL colleagues, like Dr Helen Bound and Dr Bi Xiaofang from our Research Division, and Mr Khairul Nizharzharudin and Mr Lim Han Leong from the Learning and Professional Development Division, who have been actively involved in developing and rolling out online learning for IAL.

I'm glad to say we have seen the uptake of these revamped CPDs increase over the year and many participants have given positive feedback.

3 As we navigate through constant disruption and rapidly-changing times, what are some characteristics/traits you believe TAE professionals should possess to futureproof themselves and remain relevant?

Wee Chee:

If you ask me this question before the pandemic, I would probably have pointed to the TAE Skills Framework for areas such as workplace learning and tech-enabled learning. Now having witnessed how the training space has moved into another paradigm altogether, I would say core traits like humility, adaptability, and resilience are key to TAE professionals remaining relevant and employable. This is not easy when we have a model that has worked well in the past and in which we have invested much, and are familiar or well-adapted to. But the reality is that things have changed. The only suitable response is to remain assured in our experience and expertise, while at the same time thinking and acting like a novice to learn and adapt all over again. Remaining open, humble, and nimble is the only way to navigate what will be an uncertain future. We mustn't let hubris get the better of us—that much the pandemic has taught us.

4 In your capacity as the leader helming and spearheading the development of all programmes in IAL, what are three areas you think TAE professionals should familiarise themselves with?

Wee Chee:

The first one is obvious—online learning. Our research colleagues did a study on online learning and stated that we have “crossed the rubicon”, that is the point of no return. Like it or not, online learning is here to stay, for we have seen around the world that there are many benefits to it. Some critics will say that it is not as effective as face-to-face learning, and I will agree to an extent. However, I see this not so much as a reason not to go there, but as a challenge for the TAE sector to think about how we can have our cake and eat it, using the online medium. This will require us to examine different ways and means to protect and facilitate the social and emotional aspects of online learning.

When done well, online learning then becomes an integral component of blended learning. How do we blend different modalities together in such a seamless way that the learner does not notice it at all, much like how the best filmmaker is all about telling the story and not bringing attention to himself? So, this is the second area—user experience (UX) design: taking a UX perspective, and facilitating a journey that can take on all shapes and forms of formal, informal, and non-formal learning, across different mediums and connecting with different people who can help enrich learning. It is needs-based and opportunistic, yet with a sound design behind it all.

The last area is about thinking across boundaries. We now live in a world where lines are increasingly blurred. Adult educators need to think about change management to drive learning, HR professionals are getting into technology and AI, and solutions increasingly draw on diverse disciplines with which we

might not have close knowledge of. Crossing boundaries at work will be pervasive, and therein lies the new challenges of the AE. It is not about knowledge per se, but facilitating that cross-boundary learning and leadership to find new ways of navigating an information-saturated world. This requires a whole new way of thinking about the role of the adult educator that is different from what we know now. You'll be interested to know IAL is looking to roll out a new Master programme in 2022 called Master in Boundary-Crossing Learning and Leadership!

5 What are some exciting developments/plans you have for CPD programmes in the future?

Wee Chee:

This year, we have introduced supplementary micro-learning courses in our Advanced Certificate in Learning and Performance, and Diploma in Design and Development of Learning for Performance programmes. These are asynchronous bite-sized learning that can be consumed at one's own pace and time. Going forward, we will be looking to stack these micro-learning courses as prerequisites, leading to our full-fledged CPD courses.

We will not stop there. Once this is done, we will then work towards CPD courses stacking towards proper credentials in our core programmes. This way, it better aligns with and reflects the mantra that IAL seeks to imbue in its programmes — “Just in time, just enough, just for me”, which as I mentioned earlier, mirrors the way of adult learning in the future.

Finally, we will also be introducing new CPD programmes addressing current needs in the wider CET landscape: training facilitation for different adult age groups, technology-enabled learning for online facilitation, as well new approaches to learning design. So, watch this space!



Mrs Sally Loan

Assistant Director,
Digital Learning,
Lee Kong Chian School of Medicine,
Nanyang Technological University



An Open Mind and Open Heart for Learning

Constant upskilling and reskilling are crucial in the TAE line of work. IAL's various offerings, from the Adult Education Network (AEN) to CPD programmes, aim to provide opportunities for professionals in the sector to continually learn and refresh their knowledge. In this interview, our long-time AEN member, Mrs Sally Loan, Assistant Director, Digital Learning, Lee Kong Chian School of Medicine (LKCmedicine), shares insights from her EdTech career and personal learning journey, as well as her approach to continual upgrading.

1 Could you introduce yourself and tell us more about your work in Training and Adult Education?

Sally:

As the Assistant Director, I work closely with the Head of Digital Learning to oversee learning solutions at LKCmedicine, ensuring that the adopted system is up to date and relevant for our students. We collaborate with faculty, curriculum, education, and examination teams to ensure lessons are conducted smoothly, whether online or face-to-face. LKCmedicine adopts the team-based learning (TBL) approach which is widely used by other medical schools in the world. Hence, our Learning Activity Management System (LAMS) is critical in managing and leading the learning solutions team to support the day-to-day operations for TBL. The digital learning team also works closely with industrial partners, polytechnics, and other external partners to develop our own learning solutions and medical applications.

2 You are an education professional, and at the same time an avid learner. Could you share with us your lifelong learning journey and beliefs?

Sally:

Continuing training and education has always been a big part of my journey since I started work. Unlike many who were fortunate to further their studies with support from family, I had to join the workforce after my 'O' Levels and support my family with income from part-time work as I attended night classes to complete my five-year part-time diploma.

I started out at the National Institute of Education (NIE) as a laboratory technician before I was given the chance to move to education technology within the institute. While with NIE, I pursued my Bachelor's in Information Technology and Business.

Since embarking on EdTech as a career, I have also made sure to upgrade my skills and competencies continually. For example, I've attained a number of

Google certifications as the Google ecosystem supports social and collaborative learning. I love Apple products and am curious about what they can offer, so I enrolled in the Apple Teaching Learning Center as well, and became an Apple Certified Trainer.

I also recognised the need to better understand how adults learn, the different instructional designs, and various classroom delivery methods. Taking the WSQ Advanced Certificate in Training and Assessment (ACTA) programme gave me greater confidence in my area of work.

3 You have been an Adult Education Network (AEN) member since 2016, and have attended our CPD programmes from time to time. How have our programmes helped you in your line of work?

Sally:

The great thing about being an AEN member is the opportunity to learn more about the institute's programmes and how the institute advocates and offers professional

development for all working adults. I personally gained many useful tips and learnt new knowledge by attending CPD programmes. For example, some courses I attended provided insights on emerging topics such as virtual/augmented reality in work. I've also participated in courses relevant to my line of work, e.g. facilitating virtual learning, and online facilitation skills. Most importantly, these short courses show that learning does not just take place through teaching. There are many ideas and methods that can be adopted and improvised to deliver learning.

Besides attending CPD programmes, I've also learnt a lot through other IAL initiatives such as innovBite, which provides very practical and

relevant content and opportunities for industry partners to collaborate, bond, and share ideas. I also follow learning experts on Twitter, and subscribe to Google forums and EdTech newsletters.

4

Could you share with us what is next on your learning agenda?

Sally:

Using AI, analytics, automation, proctoring, and e-assessment, to name a few! Right now, I am picking up some AI tips from 'Experiments with Google' and will explore virtual reality next. Data visualisation is another area that I am interested in. There is so much to learn!

5

As a parting note, what do you feel are important for TAE professionals to embrace as we look ahead to 2022?

Sally:

My two favorite quotes on learning are "The most beautiful thing about learning is that no one can take it away from you", from blues legend B. B. King, and "Unless you try to do something beyond what you have already mastered, you will never grow". This sets my philosophy in life on how and what I want to do in my professional life.

To me, it is all about the mindset. I would encourage everyone to "keep an open mind and open heart", and be open to accepting the unknown.





Embedding a Culture of Continuous Learning in Enterprises

Successful enterprise transformation leading to agile, adaptable businesses requires a mindset that embraces continuous learning for the workforce. IAL's Learning Enterprise Alliance (LEA) initiative was set up for the very purpose. On 19 November, in an event graced by the Minister for Education, IAL established partnerships with eight leading organisations and welcomed 19 new enterprises to the LEA.

A culture of lifelong learning is pivotal to Singapore's economic competitiveness and vibrancy. Not only will it ensure that our workforce will constantly upskill to meet evolving industry needs, it also makes sure that our enterprises remain agile and adaptable, ready to seize emerging opportunities.

This was why IAL launched the Learning Enterprise Alliance (LEA) network in 2018—to build a community of enterprises committed to promoting continuous learning at the workplace. Since then, more than 80 enterprises have joined the

network and completed workplace learning projects.

On 19 November 2021, IAL held a signing ceremony to ink Memoranda of Understanding (MOUs) with eight enterprise partners from diverse sectors to embark on long-term projects that aim to develop workplace learning capabilities and propagate the culture of learning at their workplaces. The signing ceremony was also held in conjunction with the LEA Awards Ceremony 2021 – which recognised 19 new enterprises who are committed to the vision of using workplace learning for continuous

learning and capability development of their workforce.

IAL as a “secret weapon”

In his speech, Minister Chan Chun Sing, emphasised IAL's role as a “secret weapon” in supporting Singapore's workforce transformation and embedding the culture of lifelong learning in enterprises. IAL supports the third pillar of lifelong learning serving adult learners, complementing the other two pillars—preschool education under National Institute of Early Childhood Development (NIEC) and formal school education driven by National Institute of Education (NIE).

He shared, “Success will not belong to those who have the most resources or have the biggest size. In my view, success will belong to those who can evolve the fastest. Speed is certainly more important than size.”

In this respect, a culture of continuous upskilling is critical. The minister elaborates, “In this fast-changing environment, the businesses that continue to thrive are those that are agile enough to adapt their operating models.



Tripartite Memorandum of Understanding between IAL, Singapore University of Social Sciences and Singapore Airlines

To successfully do this, it is not enough to simply re-engineer business processes, or invest in new equipment. Successful enterprise transformation is only possible if we also upgrade the capabilities of our workforce, so that they remain nimble and able to take advantage of the new technological trends.”

Recognising those who invested in workforce development

The 19 new enterprises who have joined the LEA this year have proven themselves to be committed to the skills and the development of their workforce. These companies were selected based on the strength of their project proposals on workplace learning and transformation between November 2020 to January 2021 through a blind judging exercise.

For example, new LEA member DP Dental, a small-sized enterprise, illustrated that company size is no barrier to investment in training. The company will partner IAL to develop a formal workplace learning curriculum, including staff training and train-the-trainer materials, aimed at speeding up the onboarding process for new hires.

Professor Lee Wing On, Executive Director of IAL, said, “We recognise that there is no one-size-fits-all approach when it comes to workplace learning. As the business environment continues to evolve, enterprises can always learn best practices from each other and use those insights to drive workplace transformation in their respective organisations. From employee professionalism, operational efficiency, to job redesign and digitalisation, there is a multitude of benefits for enterprises as they get engaged with continuous learning and improving performance. At IAL, we want to continually provide all enterprises with the right support as they embark on this journey.”

Deep collaboration with enterprise partners

The MOUs signed with the eight enterprise partners has paved the



LEA 2021 Member - DP Dental Pte Ltd

way to bolstering workforce learning capabilities and driving business transformation. Each MOU has been tailored according to the enterprise's needs and development plan and would last an average of three years. This initiative would help in laying foundations for Singapore's post-COVID-19 economic recovery.

These enterprise partners come from multiple industry sectors, from facility management and healthcare to security and engineering. They are Aegis Building & Engineering Pte Ltd, Ashtree International Pte Ltd, Certis, National University Health System, SingHealth Community Hospitals, Singapore Precision Engineering and Technology Association and TS Group Pte Ltd.

IAL, together with SUSS, also inked an MOU with Singapore Airlines (SIA) to enhance the leadership and management capabilities of the airline. Together, the three parties would co-develop aviation-related postgraduate programmes, graduate courses, and executive management programmes for SIA. The parties would also identify opportunities to offer courses or programmes to SIA and SUSS learners and co-develop approaches and practices that enhance organisational and workplace learning.

President of SUSS Professor Cheong Hee Kiat said of the MOU, “We are delighted to be part of this partnership. The pandemic

has amplified the importance of the Continuing Education and Training agenda. The upgrading and deepening of skill sets are essential, if not mandatory, for individuals to maintain a competitive edge in the new normal. When we engage in a culture of collaborative learning, it enables us to broaden our thinking and allows us to innovate solutions by tapping and improving on the ideas of others. This creates an endless cycle of improvement and enables us to be future-proof and ready for challenges that come our way.”

Getting ready for the post-pandemic environment

The initiatives set in place would go a long way in helping Singapore emerge stronger from the pandemic by equipping enterprises with the abilities and resources to transform their people and become more adept in seizing new opportunities.

In his speech, Minister Chan Chun Sing summed up with a keen observation, “We may not know when COVID-19 will end, but if we start today we will be much more ready for the post-pandemic environment ... It is not just about the training and upskilling of our workers, it is also about the training and upskilling of the management teams. It is about instilling the lifelong learning culture across the entire organisation—from management to workers. Then we can be very confident that we will stay ahead of the competition for many more years to come.”

Enterprise Partners at a Glance

Aegis Building & Engineering Pte Ltd

Aegis Building & Engineering is a company in the building and construction industry that specialises in conservation of historical buildings as well as planned maintenance.

As a manpower-heavy company, Aegis plans to expand its business and develop a Singapore core. In the last three years, the company has worked with SkillsFuture Singapore, IAL as well as the Institute of Technical Education to build its training capabilities to improve tradesmen's competencies as well as to attract more Singaporeans to come onboard.

Aegis also partners with the Association of People with Special Needs, training some of their trainees to venture into the building maintenance industry - the first in Singapore. The company has recently attained the status of an Approved Training Provider by SkillsFuture Singapore and intends to strengthen its capabilities to train more Singaporeans to come onboard this evergreen industry while simultaneously uplifting industry standards.

Through the MOU agreement with IAL, Aegis aims to deliver a sustainable and quality training system that will help build a Singaporean core in an industry that is critically short of manpower. Key focus areas include the trainer's quality, training delivery and content development.

ASHTREE International Pte Ltd

ASHTREE International provides clients with both upstream consultancy services in Aerodrome Safety and Aviation Security and Maritime Security, as well as downstream solutions from domain specific managers, security supervisors and security officers.

In tandem with Singapore's aviation and maritime masterplan for the next 10 years, ASHTREE continues to grow and diversify the Changi East Development for Changi Airport's Terminal 5 construction, Tuas Mega port, and Tuas Water Reclamation Plant. ASHTREE aims to lead the Aerodrome Safety and Aviation Security and Maritime Security domain, offering 3M – Man, Machine, Method to clients to achieve mission success.

Operating within strictly regulated industries such as aviation and maritime, the partnership with IAL is a trusted avenue to train and upskill officers who wish to grow their careers and specialise in these fields. The partnership will also help professionalise industry-specific training and bridge the divide for adulting learning pedagogy in these industry sectors.

Certis

Certis is an established outsourced services partner that designs, builds and operates multi-disciplinary smart security and integrated services. Certis multi-service offerings leverage on their strong heritage in security, augmented by applied AI solutions. Certis is headquartered in Singapore, with an international presence that extends to Australia, Hong Kong, Macau, China and Qatar.

Recognising the importance of new skill requirements to power and accelerate Certis' workplace transformation, Certis has invested over S\$10 million in Certis Corporate University (CCU), which is the first of its kind for the security industry in Asia. CCU underscores Certis' commitment to upskill, reskill and develop its diverse and more than 27,000 global workforce across Asia and the Middle East.

With IAL's being a national centre of excellence in learning, practice, and research for Continuing Education and Training, IAL is an intuitive partner for Certis and the key thrusts of CCU. Partnering with IAL will enable Certis to leverage their networks, expertise and resources to drive workforce upskilling and workplace learning within the organisation.

National University Health System

The National University Health System (NUHS) is one of three public healthcare clusters in Singapore, and an integrated Academic Health System and Regional Health System that delivers value-driven, innovative and sustainable healthcare in Singapore.

As a Regional Health System, NUHS works closely with health and social care partners across Singapore to develop and implement programmes that contribute to a healthy and engaged population in the Western part of Singapore.

Through this MOU, NUHS will work closely with IAL to jointly plan and develop the workforce capability within NUHS institutions. This includes carrying out job evaluation, job redesign, work processes review and supporting workplace transformation in NUHS. Job competency framework, skills matrices and developmental roadmaps will also be drawn up to guide the development and growth of the NUHS workforce.

Singapore Airlines

Singapore Airlines is the flag carrier airline of Singapore with its hub at Singapore Changi Airport. Together with its subsidiaries, the SIA Group provides passenger and cargo air transportation services under the Singapore Airlines and Scoot brands. Other principal activities include engineering services, training of pilots, air charters, as well as tour wholesaling and related activities. SIA is committed to the constant enhancement of the three main pillars of its brand promise: Service Excellence, Product Leadership and Network Connectivity.

Together with SUSS and IAL, SIA will strengthen the capabilities of its employees through the co-creation of aviation-related courses and executive management programmes, enhancing the quality of SIA's in-house trainers, and co-developing approaches and practices that enhance organisational and workplace learning.

Singapore Flying College

The MOU partnership is extended to the Singapore Flying College (SFC), a wholly-owned subsidiary of the SIA Group. Established in 1988, SFC provides customers with ab initio flight training for both the Multi-crew Pilot Licence (MPL) and Commercial Pilot Licence (CPL). SFC has over 30 years of experience training cadets to achieve the high standards expected of professional pilots. Operating from its headquarters in Singapore and its flight training base in Perth, Western Australia, SFC has trained over 3,000 cadets to date.

As part of Singapore's aviation ecosystem, SFC is continually striving for new and innovative ways to deliver effective training. It diversified its revenue streams by launching a new training programme, the Unmanned Aircraft Pilots Licence (UAPL), as well as achieving certification for the issuance of the Australian Civil Aviation Safety Authority (CASA) licence. In tandem with the expansion of its training offerings, SFC also invested in upskilling its theory instructors, which is the main area of collaboration with IAL.

Singapore Precision Engineering and Technology Association

The Singapore Precision Engineering & Technology Association (SPETA) represents locally registered companies, engaging in the manufacturing and distribution of Precision Engineering components, products, tools, equipment and machinery. Through the MOU with IAL, SPETA will promote managerial learning for its member companies and create more awareness on their partners' training programmes.

SingHealth Community Hospitals

SingHealth Community Hospitals (SCH) oversees the three community hospitals within SingHealth, Singapore's largest group of healthcare institutions, providing inpatient sub-acute, rehabilitation and palliative care services.

The collaboration with IAL looks to SCH strengthening its teaching faculty in training the next generation of healthcare professionals through a curriculum focusing on innovation, building capacity, capability and competency. SCH and IAL will also provide joint coaching and mentorship opportunities and collaborate on research work that shapes healthcare workplace learning pursuits.

TS Group Pte Ltd

As a community and facility management company, TS Group Pte Ltd co-develops, manages and operates large-scale communities for foreign workers and the elderly. It looks to redefine care and communal living, develop every community as a self-sustaining system and raise standards of care for the underserved communities in Asia. Its community innovations range from providing in-house banking, catering, housekeeping, medical, and transport services, 24/7 assistance to clients and residents, to exploring how mobile apps and big data enhance daily living.

As a member of the Learning Enterprise Alliance (LEA) and MOU partner with IAL, TS Group aims to embark on a workplace learning journey through customising learning approaches to improve employees' skills and job knowledge, and effectively deliver competency standards with workplace transformation approaches. Some of these initiatives include enhancing on-the-job training systems and processes, accelerating manpower skilling for new operations executives, and developing a robust and effective training framework.

New LEA Members for 2021

- | | |
|--|---|
| 1. Acestes Pte Ltd | 11. Poh Wah Scaffolding & Engineering Pte Ltd |
| 2. Ashtree International Pte Ltd | 12. Polar Puffs & Cakes Pte Ltd |
| 3. Anderco Pte Ltd | 13. Singapore Airlines |
| 4. Beyond Social Services | 14. Singapore Flying College |
| 5. Certis | 15. SingHealth Community Hospitals |
| 6. DP Dental Pte Ltd | 16. Samaritans of Singapore |
| 7. David Lim Group | 17. Singapore Sports Council |
| 8. Far East Orchid | 18. WAB Lab Pte Ltd |
| 9. Fei Siong Food Management Pte Ltd | 19. TS Three Pte Ltd |
| 10. Lim Kee Food Manufacturing Pte Ltd | |



Visit to IAL by Minister for Education, Mr Chan Chun Sing

Introduction of EdTech solutions to Minister



Minister interacting with adult learners from diverse backgrounds in an online session

In April 2021, when Prime Minister, Mr Lee Hsien Loong announced the appointment of Mr Chan Chun Sing, then Minister for Trade and Industry, as the new Minister for Education, he said he looked forward to Mr Chan improving Singapore's education system to bring out the best in every child, and to develop young Singaporeans for the future.

The Training and Adult Education (TAE) sector is also a key pillar when it comes to developing a future-ready workforce for Singapore.

Recognising the importance of this field, the newly-minted Minister for Education, together with other key officers from the Ministry, visited the IAL premises in August 2021 to learn about the different aspects of the institute's work and how they contribute to the nation's Continuing Education and Training (CET) efforts.

Providing key insights on IAL's work

The visit started with a sharing session to provide the Minister with an insightful overview of the institute's work. The sharing

focused on the spectrum of IAL's research projects, its impact on CET and practical applications developed; as well as the institute's work with a range of stakeholders, from government bodies and key industry associations to enterprises and training providers, which raise the quality of CET practice.

On top of that, IAL also highlighted how it ensures rigour in its array of courses, programmes, and workplace learning initiatives by incorporating its teaching and learning research with training content and delivery methods.

Witnessing TAE in action

Following a demonstration of EdTech solutions, the delegation was led to witness an in-person classroom training session and an online training session facilitated via Zoom. Minister had the chance to interact with IAL learners and adult educators in-person and via the online medium, hearing from the ground on how the hybrid learning experience has been for them.



Minister engaged in fruitful discussion with key leadership from the Ministry of Education, Singapore University of Social Sciences, SkillsFuture Singapore and IAL

Real-world impact on learning innovation

IAL curated a sharing session by two EdTech companies—Visionary Schoolmen (VSM) and Serious Games Asia (SGA)—to demonstrate their learning innovation solutions conceived and developed through IAL's InnovPlus Challenge, where real-world learning issues were posed to innovators, who then develop solutions in response.

Visionary Schoolmen's solution was an answer to a problem faced by Changi General Hospital in ensuring a consistent and competent level of triage skills in their nurses, as inaccurate triaging of patients (i.e., assessing and prioritising patients according to the urgency and seriousness of their illness) results in inefficiency in treatment. For the hospital's emergency department, this is critical given their workload of an average of 450 patients a day. VSM thus developed an app which leverages artificial intelligence to perform inquiry-based assessments of nurses' triaging skills. The app is also able to provide real-time personalised feedback, allowing nurses to gauge their performance.

For Serious Games Asia, the problem tackled was Singapore General Hospital's challenge in training new nurses to carry out intravenous cannulation. By using game technology, microfluidic sensors, and state-of-the-art 3D printing, SGA created an intravenous cannulation training and assessment kit which can be used to assess the dexterity of learners. Both innovative prototypes have been adopted at the respective hospitals and have the potential to be deployed more widely in the near future.



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