

PRACTITIONER NOTE

MOVING FROM FRAGMENTED TO SEAMLESS LEARNING EXPERIENCE IN BLENDED LEARNING ENVIRONMENTS

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This practitioner note offers a look at the different types of blended learning and their impact on learners' sense-making. It is meant to aid instructional and curriculum designers of blended learning in better understanding how learners make sense of their learning to help inform decisions on curriculum design, including how and when to use the different learning environments in blended learning.

Facilitating Sense-making in Blended Learning includes:

- Linking each module or the different parts of the course so as to contribute to deep learning and application of learning;
- Bringing in opportunities for immediate application of theory in the learning design;
- Creating learning bridges to address gaps in learning;
- Providing scaffolding support for the activities and practices within the curriculum design to facilitate learners' sense-making.

Learning can be understood as a process contributing to an increased capability to act differently in different environments (Owen, 2017). This understanding of learning is far more than equipping learners to reproduce knowledge and carry out pre-planned, known steps. Such an approach to learning provides little challenge in learning and no opportunity to bring in authentic problems, for learners to apply what they are learning or have learnt.

Adult learners' experience of learning involves the process by which people make sense of their learning in and across different environments including the traditional classroom, technology-enabled, work-based and workplace learning (IAL, 2016). Sense-making and movement in and across these different environments could best increase learner's capabilities to "act differently" when it is seamless, as illustrated in Figure 1.

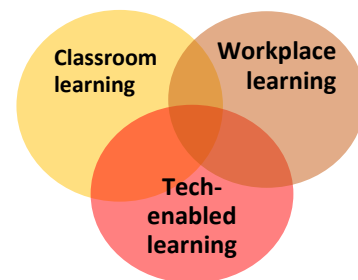


Figure 1. Blended Learning Environments

In Singapore's context, blended learning is no longer just about the integration of tech-enabled learning experiences with traditional classroom learning (Garrison & Kanuka, 2004). It is also about the inclusion of authentic learning experiences (El-Muwafy, Kuhn & Snow, 2013) from or in work settings. Learners make sense of their learning in blended learning environments, by involving both themselves and the artefacts (e.g. physical tools involved in undertaking the work, ways of thinking, social relations between people and between people and the environment) that form part of their learning (Fenwick et al., 2012; Zukas & Malcolm, 2016). Inevitably, adult learners' sense-making will be greatly influenced by the factors involved in the design of blended learning, e.g. different teaching approaches, curriculum design, and workplace affordance. Among these factors, it is crucial to understand how individuals make sense of their learning in these various learning environments while situated within the structure of their curriculum.

Sense-making is commonly understood as the process through which people interpret and give meaning to their experiences. It refers to the activity that enables us to turn the ongoing complexity of the world into a "situation that is comprehended explicitly in words and serves as a springboard to action" (Weick, Sutcliffe, & Obstfeld, 2005, p. 409).

This process includes the following features in an ongoing and dynamic way:

- Noticing
- Recalling and reflecting
- Labelling
- Connecting abstract with concrete
- Systemic understanding
- Communicating
- Taking actions

FRAGMENTED VS SEAMLESS LEARNING EXPERIENCES

Deep understanding and applying learning in and across different environments need to be part of the purpose and aim(s) of the learning, which are built into the learning outcomes and which need to be aligned with the different learning environments, learning activities and assessment. **Blended learning offers opportunities to ensure deep understanding and position learners to apply their learning in and across different learning environments.**

Deep understanding is developed through opportunities to experience different theories and practices in integrated ways (Bound, Tan, Chow, Wang & Chuen, 2019). By structuring in opportunities for the different aspects of sense-making - noticing, recalling and reflecting, labelling, connecting abstract with concrete, systemic understanding, and communicating – learning can be effectively scaffolded. Experiencing different theories and practices requires robust dialogue (the communication aspect of sense-making (ibid)). The intertwining effort between applying theory to practice and practice to theory is an iterative process involving all the various aspects of sense-making, sometimes consecutively, sometimes as a simultaneous process. When learners recognize how the theory can be integrated with the practice, they are more confident in their translation of learning in and across different learning environments (Bhatti & Kaur, 2010). Blended learning offers access to this process that classroom learning alone cannot.

In order to create different contexts for sense-making (Barnett & Ceci, 2002) and facilitate the translation of learning, curriculum design of blended learning requires a holistic

approach. That is, theory and practice need to be integrated. By helping learners to ‘notice’, providing them with the appropriate language to ‘label’, to reflect and take appropriate action to deepen their understanding, learners are enabled to construct their own knowledge in and across the different learning environments and can apply what they have learnt (Kirschner & van Merriënboer, 2013).

For blended learning to occur successfully, it has to be anchored by a learning design for seamless learning within and across different learning environments (Tan, Bound & Wang, 2018). A seamless learning experience would include learning activities that present learners with authentic tasks, a degree of choice in their learning opportunities for dialogues and most importantly, consistency and alignment between aims, outcomes, learning activities and assessment are all important in developing deep understanding and transformative learning experiences (Bound, et al., 2016). It would be well-structured with a coherent and clear narrative to facilitate an effective sense-making experience.

On the other hand, a fragmented learning experience is brought about by a curriculum that is rather administrative in nature and one that is usually shaped by business decisions rather than a focus on enhancing learning and meeting learners’ needs. Therefore, it is important to understand how to coherently blend the different environments and aspects of curriculum together to create a seamless learning experience that facilitate sense-making to deepen learning and understanding for their application.

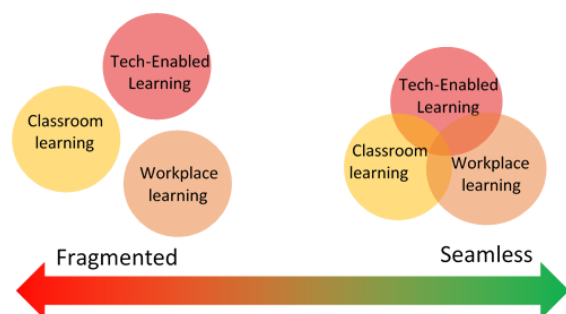


Figure 2 Spectrum of learning experience

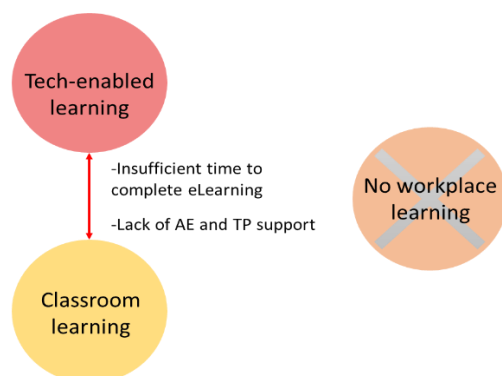
FRAGMENTED DESIGN

Curriculum does not have a coherent narrative across the different learning environments. There may be a focus on content as reproduction of knowledge. Timeliness of authentic experience is disrupted, because the workplace experience is attached at the end of a period of classroom learning, indicating limited consideration of scaffolding of learning. This also indicates a non-holistic approach as 'theory' and 'practice' are separated.

Case Study 1

In one of the courses, the learners attended classroom (20%) and e-learning (80%) sessions involving both theoretical and practical knowledge. However, at the end of the course, the learners shared that they still lacked the competence to apply for relevant jobs.

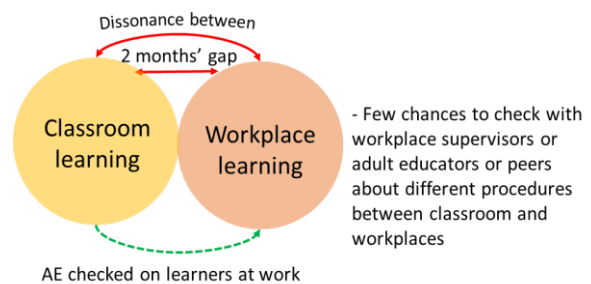
The course did not expose learners to the reality that different companies use SAP differently. The SAP is a very versatile system which can be customised to meet different company's needs. However, the SAP taught in the course did not incorporate its versatility. Instead, it was very prescriptive where learners had to follow the procedural steps strictly. Therefore, the learners explained that the curriculum content was not adequate to meet most employer's needs and requirements in the industry. They recommended strongly that some embedded workplace hands-on learning in between classroom and e-learning is necessary to help them to achieve a holistic understanding of the software and be more competent and confident in applying for related jobs.



Case Study 2

This course put the workplace attachment after two months' classroom teaching. The learners found that some techniques and procedures they learnt during the workplace attachment were sometimes different from what

was covered during their course. They also found that each of the workplaces they were attached to had different procedures and this created further confusion and inhibited their sense-making experiences. There was little they could do to address this dissonance in their learning experiences with the adult educators at the course as the adult educators only visited them once during their four weeks' clinical attachment and the learners were not required to return to the classroom after the attachment. In addition, they found that during the workplace attachment, there was little opportunity for them to check with their workplace supervisors about the different techniques and procedures due to busy working schedules. The following figure captures learners' experience in this course:



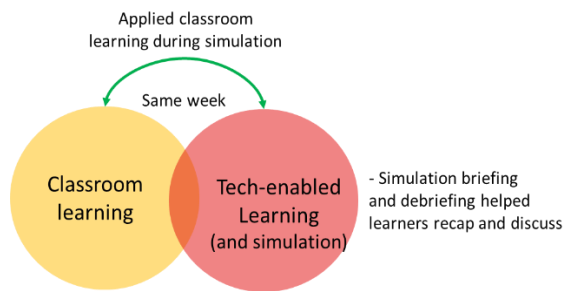
SEAMLESS DESIGN

In contrast, curriculum has an integrated and coherent narrative with provision of scaffolding and authentic workplace scenarios and tasks. There are a lot of opportunities for dialogue and co-construction of knowledge. Appropriate technology is used to support learning in and across classroom and workplace and back again. There is iterative movement between classroom, authentic environments and activities. Design is holistic, integrating theory and practice, technical and generic capabilities.

Case Study 3

During training in navigating vessels, learners were given opportunities to apply what they learnt on vessel navigation during the practical simulator session. This simulator session was conducted within the same week as the classroom lesson ensuring that learners benefitted from immediate application. In addition, learners were given a briefing before this session to recap what they learnt earlier in the week in the classroom. After completing the simulator practical session, the learners identified and addressed gaps in their knowledge as well as identifying areas of improvement in a debrief session through a group discussion with their

instructor as set out in the curriculum. The learners' experience is illustrated in the following figure:



Case Study 4

The curriculum in this course was designed using a main theme forming the backbone and the bridge to connect different modules of the course. For each of the individual modules, the adult educator would link the module he or she was conducting to the previous module as well as the module that came after the current one. Learners from different agencies sat together to share experiences, deepening learner's exposure to different HR practices. In addition, industry experts from both the public and private sectors were invited to conduct some of the modules in the course. Importantly learners were required to select an issue in their own workplace and develop a project to address the issue. The linking of modules, access to industry experts, dialogue and interaction, authentic learning and assessment were important in helping learners make sense of HR practices from different perspectives. As such, the design contributed to deep learning. As a result, the learners were able to link what they have learned in the course to their daily practice more seamlessly.



Summary

Blended learning provides opportunities to facilitate adult sense-making and enhance learning outcomes. Particularly, the quality of sense-making is dependent on key factors in curriculum design such as the following:

Linking each module or the different parts of the course to facilitate deep learning and application of learning. This can be facilitated by,

- creating more communication opportunities among AEs of different modules to enable them to understand how different modules can be linked in their teaching;
- embedding the linking between different modules explicitly in the delivery of teaching, for example, sharing of same case studies among different modules to show how different modules are linked in the same case studies.

Bringing in opportunities for immediate application of theory in the learning design, this can be achieved by

- Making timely application of learning from classroom to workplace when the learning is still fresh with the learners, e.g., within one to two weeks or even the same day;
- Taking the complexity of work into classrooms, e.g., simulation sessions and practical;

Creating learning bridges to address gaps in learning across different learning environments, this can be achieved through the following specific tips,

- authentic case studies, sharing sessions by industry experts, briefing and debrief before and after practical sessions;
- ongoing communication between learners and AEs and workplace supervisors in different learning environments;

Providing scaffolding support for the activities and practices within the curriculum design by

- introducing a work-related assignment that could be applied at the workplace with authentic assessment.

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