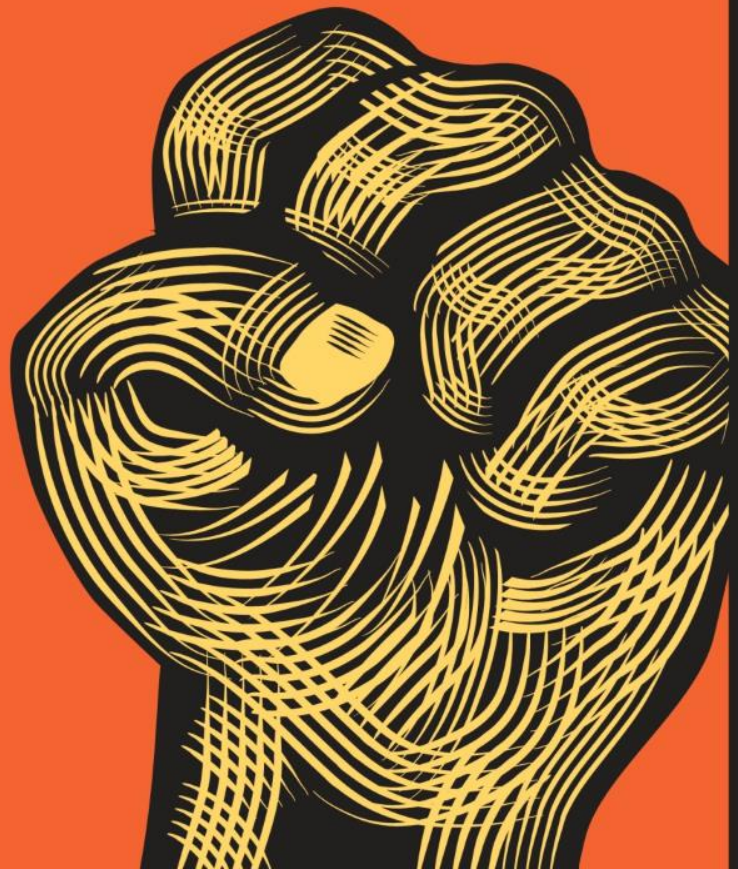

ADULT LEARNING SYMPOSIUM

Using Interactive Video for Skills-based Training – A Case Study

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INSTITUTE FOR ADULT LEARNING SINGAPORE

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Background

- The Department of Educational Development (EDU) was approached by Singapore Polytechnic's Energy & Chemicals Training Centre (ECTC) to assist an Energy and Chemical company to find a solution to help upskill their process technicians.
- This company operates a highly automated terminal on Jurong Island.

Background

- The industrial terminal serves a large and growing number of manufacturers and suppliers located on Jurong Island.
- To match the pace of change with the technology, technicians must continue to have **current and relevant skills** not only to perform efficiently at their work, but to ensure that **all safety aspects are also strictly adhered to.**

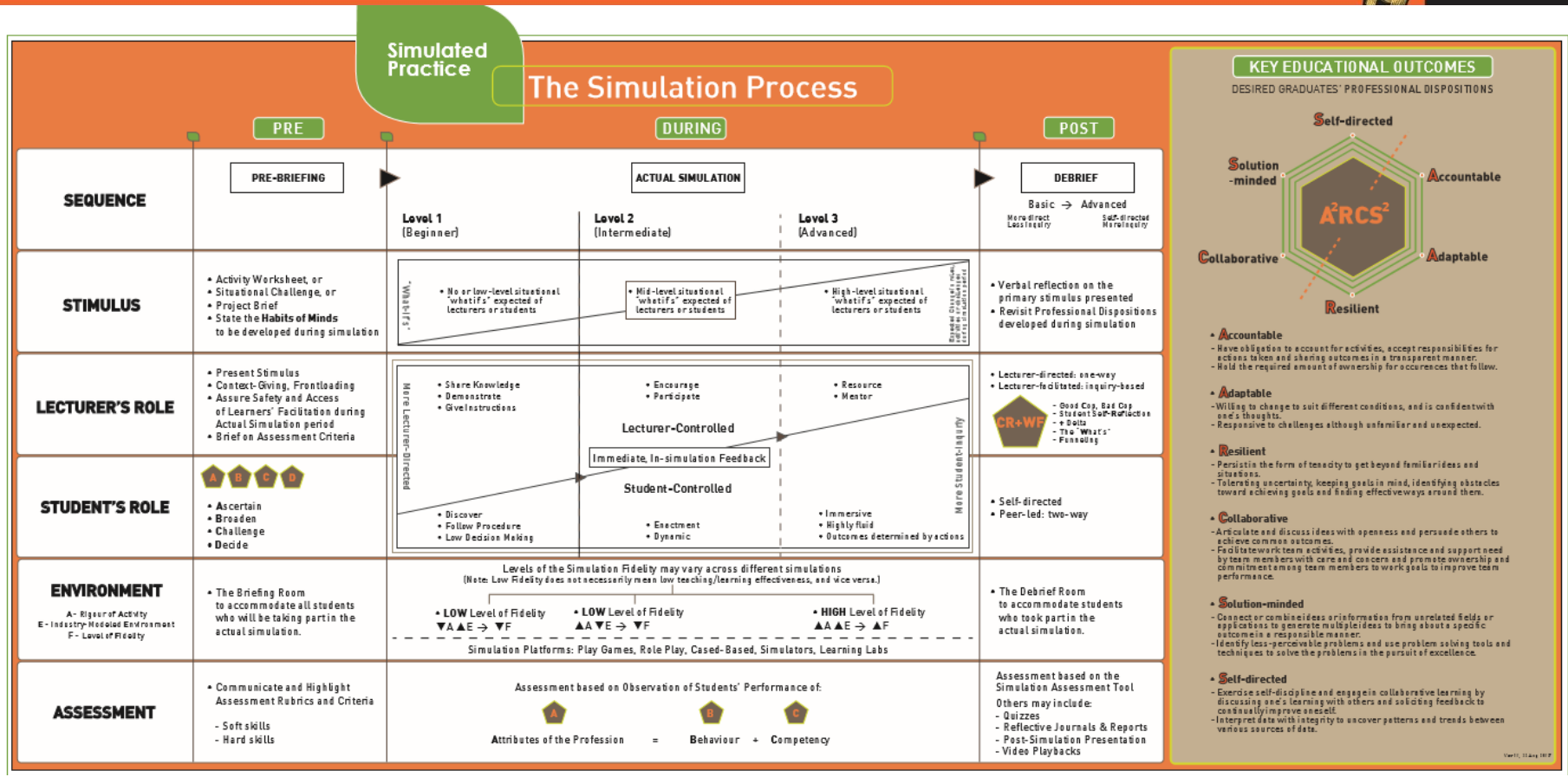
Background

In order to upskill the technicians, certain conditions were requested when designing the learning experience:

1. Be embedded Into the work schedule
2. Focus on skills building rather than knowledge acquisition
3. Bite-sized
4. Build critical thinking skills & help technicians to apply skills in emergency situation

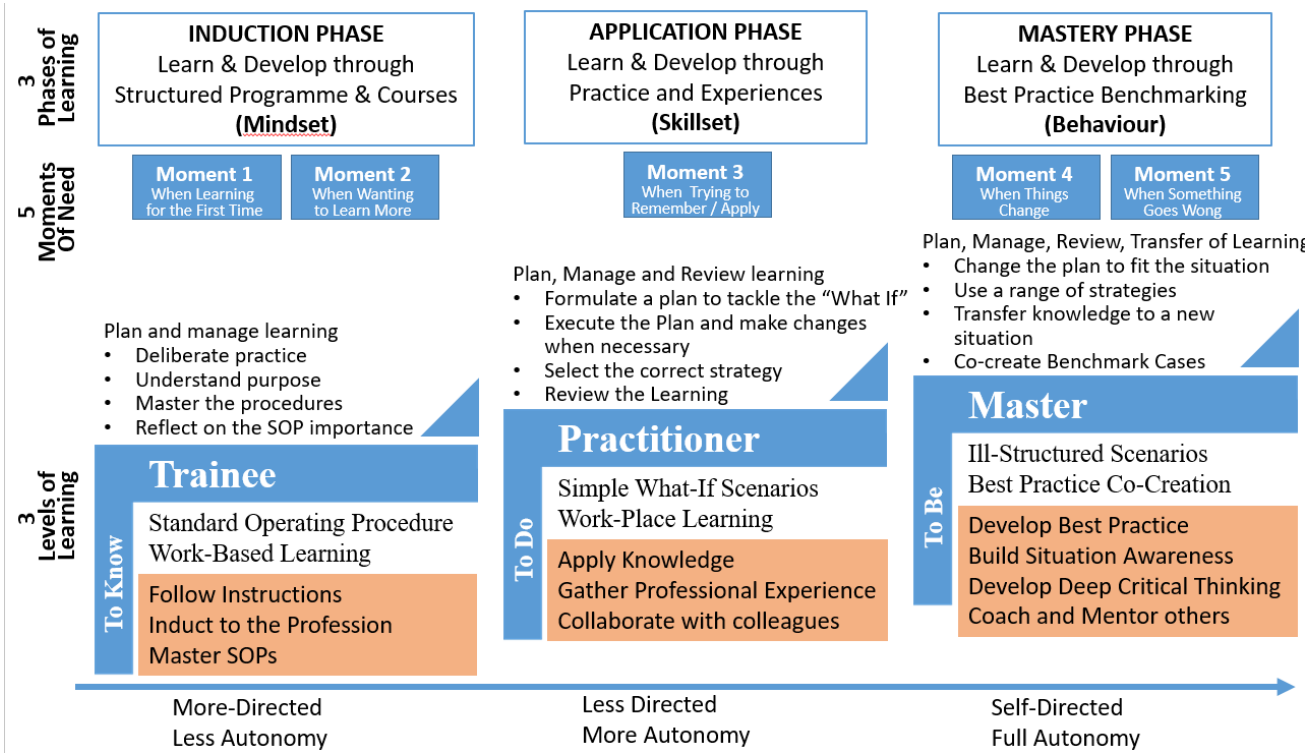
Singapore Polytechnic's Simulated Practice Framework

- "…a simulation is a technique that helps to replace and amplify real experiences with guided ones, often "immersive" in nature, that **mimic substantial aspects of the real world** in a fully interactive manner." (Lateef, 2010)
- Simulation-based training can be a good way to develop learners' competencies (knowledge, skills, and attitudes), whilst protecting them from unnecessary risks.
- The realistic scenarios allow for **deliberate** and **repetitive practice** till one can master the skill.

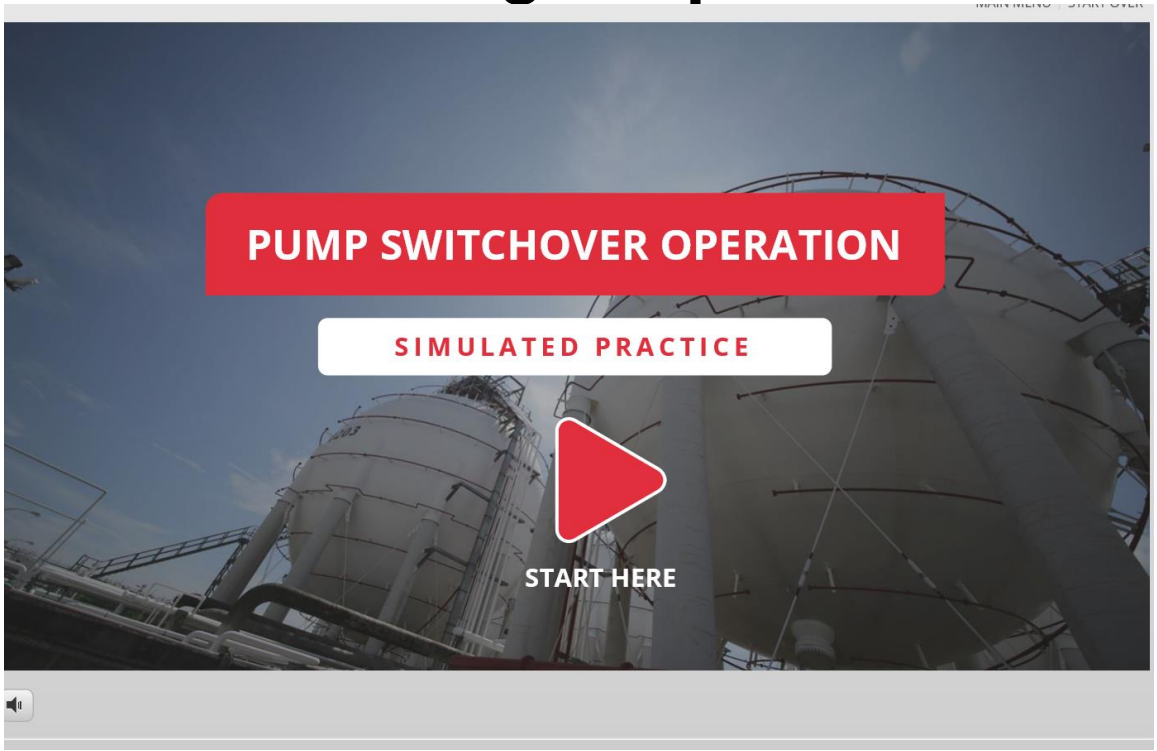


Singapore Polytechnic's Simulated Practice Framework (2017)

Integrating Singapore Polytechnic's Simulated Practice Framework with Gottfredson and Mosher's 5 Moments of Need



Intervention: Using Interactive Videos to meet the Learning Requirements



Why Interactive Videos?

Creates a participative experience for the learners

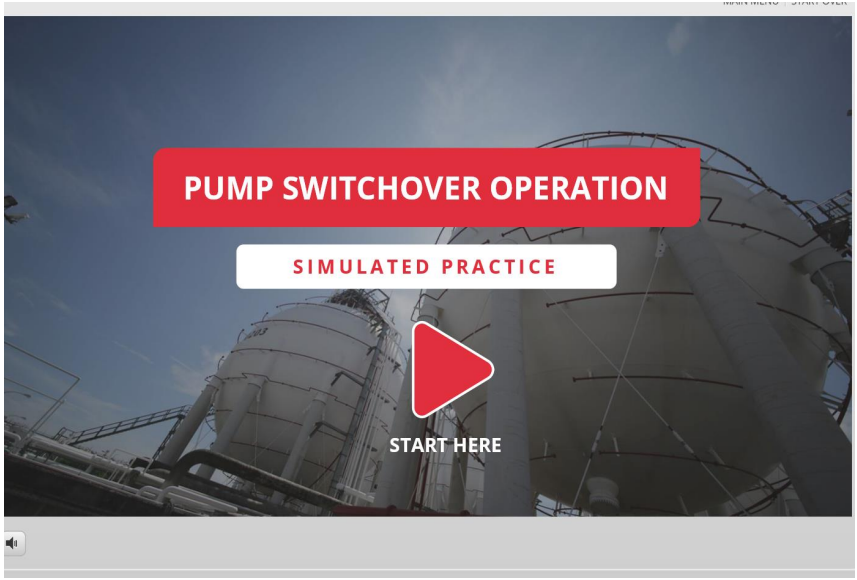
Helps to keep the learners' attention and keep them engaged with the learning materials longer

Cost-effectiveness vs fully-immersive experience

How interactive videos have been used to meet the learning requirements

1

Be embedded Into the work schedule



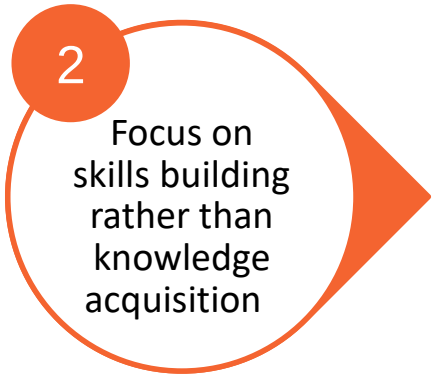
How interactive videos have been used to meet the learning requirements

1

Be embedded Into the work schedule

- Broke down key aspects of the job into micro-learning lessons.
- Leveraging on continuous workflow learning.

How interactive videos have been used to meet the learning requirements

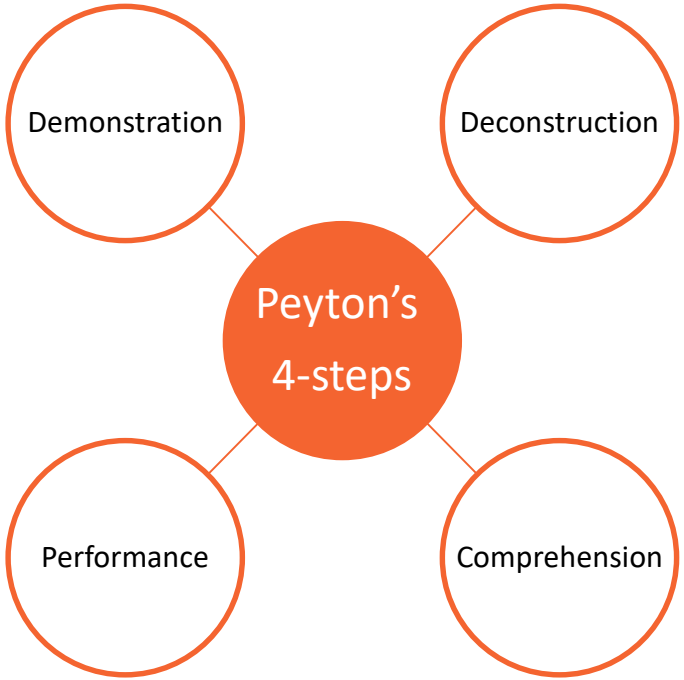


- Teaching practical skills requires using very precise instructions to enable the learner to follow the process and to repeat the skill.
- Most often this involves using both visual clues and text or audio prompts.

How interactive videos have been used to meet the learning requirements

2

Focus on skills building rather than knowledge acquisition



How interactive videos have been used to meet the learning requirements

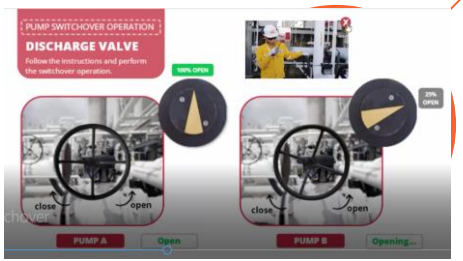
2

Focus on skills building rather than knowledge acquisition

Demonstr

uction

Peyton's 4-steps

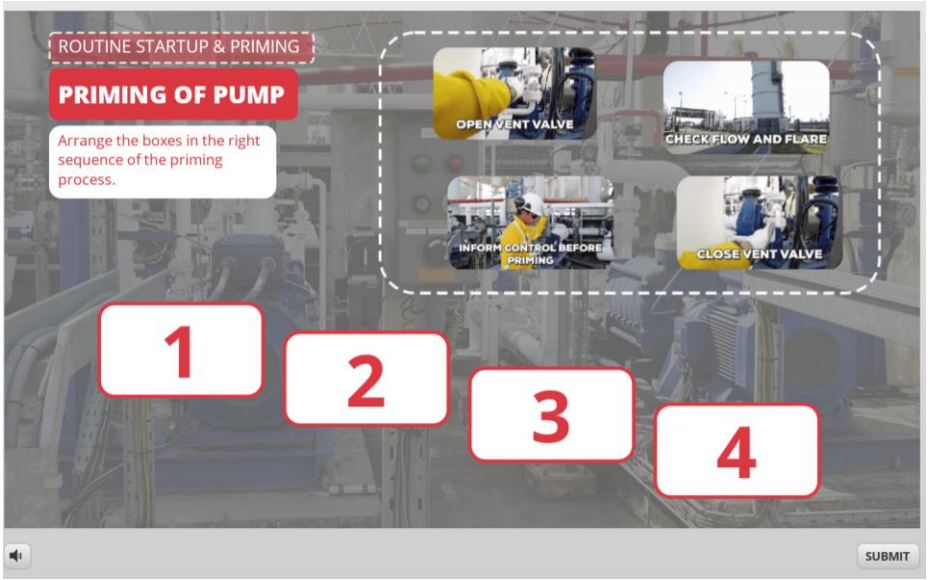



MAIN MENU
START OVER

How interactive videos have been used to meet the learning requirements

3

Bite-sized



How interactive videos have been used to meet the learning requirements

4

Build critical thinking skills & help technicians to apply skills in emergency situation


MAIN MENU
START OVER
NEXT

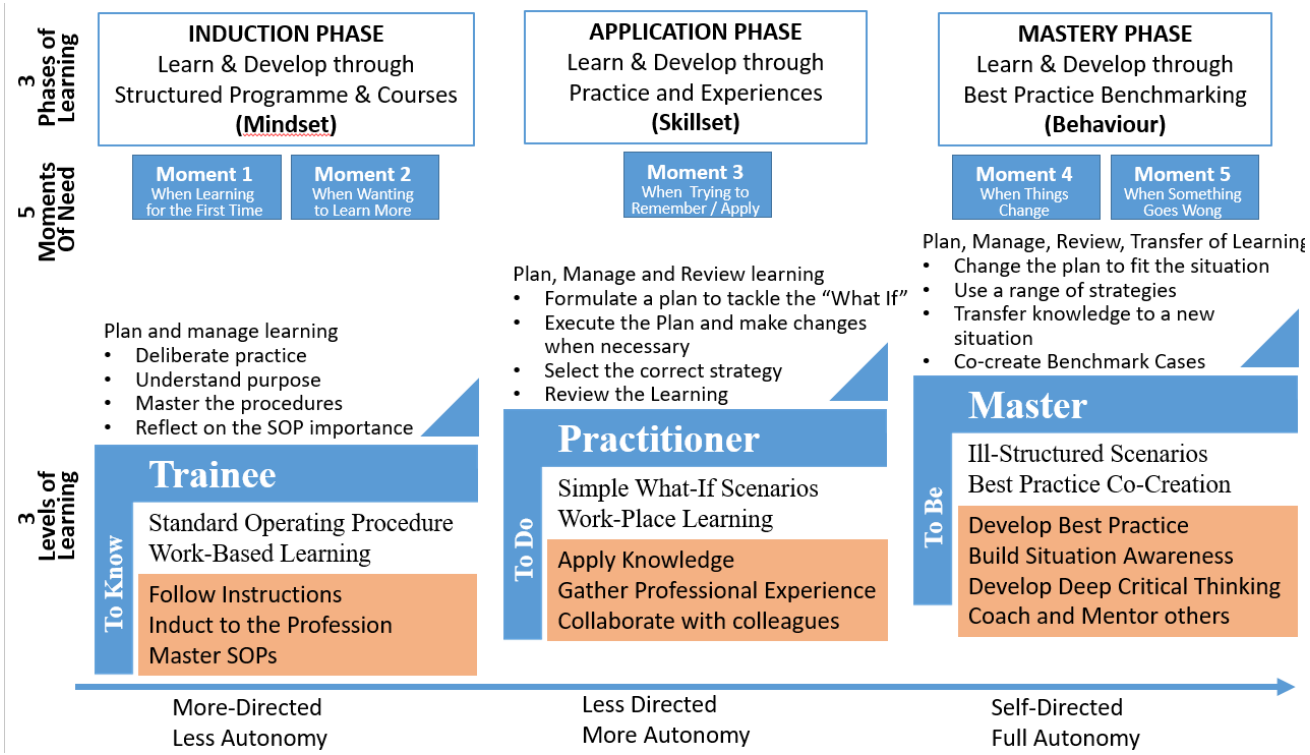
Future Plans

Conducting an evaluation study

Leveraging on other immersive technology such as AR and VR

Designing higher quality and more interactive “What-If” learning using industry use cases.

Integrating Singapore Polytechnic's Simulated Practice Framework with Gottfredson and Mosher's 5 Moments of Need



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Question & Answer