An attempt to be innovative while teaching the subject of innovation

This poster explains the curriculum design principles for a year-3 subject titled "ENT3024 Innovation". Prior to COVID-19 Pandemic, The subject design emphasized on Experiential and Reflective Learning. As COVID-19 forces all teaching & learning to take place only in the virtual world, I had to redesign the subject, especially on the embedded teaching & learning activities, to ensure that the students will still be able to achieve the same learning outcomes albeit learning through the virtual world. This poster hence shows the (innovative) teaching & learning activities I incoporated into the online sessions and the observed learning effectiveness of these activities.

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Prior to joining Sunway iLabs, she was a lecturer with Department of Management, Sunway Unviersity Business School, and the Programme Leader for BA (Hons) Entrepreneurship. Hui Yan is passionate about Innovation & Entrepreneurship. She believes that the Innovative & Entrepreneurial mind can be practiced and applied by anyone and everyone.

Affiliations

Sunway Innovation Labs (iLabs) at Sunway University

1 Introduction to "ENT3024 Innovation"

ENT3024 Innovation is a Year-3 core subject for students enrolled in BA (Hons) Entrepreneurship, and elective subject for other business degree students with the Sunway University Business School.

The subject was first offered in March 2019 semester and has since been offered for more than 7 semesters (across the span of 4 years). I was the subject leader, tasked to design and deliver the subject from March 2019 semester to August 2021 semester.

Some further information of the subject including

Subject Intended Outcomes:

- Discuss innovation theories in a dynamic context
- Apply innovation theories and processes that encourage creative thinking
- Produce an innovative outcome using relevant tools and technique

Class size: between 18 - 35 (depending on the semester)

2 Curriculum Design Principle

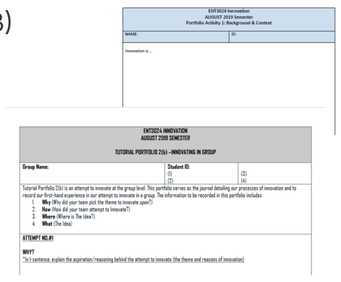
*"Though innovative thinking may be innate to some, **it can also be developed and strengthened through practice**. We cannot emphasize enough the importance of **rehearsing over and over the behaviors described above, to the point that they become automatic".***

Dyer, Gregersen, & Christensen, (2009), HBR

Hence, the design principle for the subject is to create opportunities for the students to practice and rehearse innovative thinking over and over again, to the point that innovative thinking becomes "*automatic*".

Teaching & Learning Methods Embedded into the Subject, prior to COVID-19 Pandemic

- Experiential Learning (Kolb, 1984)
- Constructivism (Bednar et. al (1991), Ertmer & Newby (1993)



*Examples of T&L and formative assessment activities including **Pitching to Industry Experts for real-life experience**, **design thinking mini workshop with peer feedback** to experience the innovation process, and **group worksheet** as part of the reflective practice on "what is innovation" and "how to be innovative".*

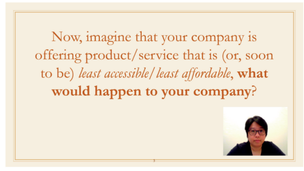
3 Converting to Online Learning

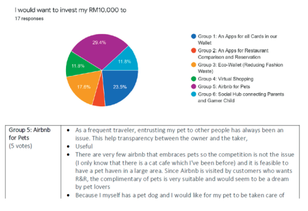
As the COVID-19 Pandemic forces all teaching & learning activities to take place online in the virtual world, the curriculum design of the subject had to be reviewed.

Steps I took to review the curriculum design of the subject

- **Reinvestigate the subject's threshold concepts** (TC) (Cousin, 2006)
  - Identified **three TCs** (creativity; commercialisation; value)
  - Based on the past experiences, one of the three TCs **(creativity / creative intelligent)** was the most troublesome concept for the students.
- **Redesigning the T&L Activities**, focusing on the TCs (especially on creativity / creative intelligent), and categorised
  - activities that can be converted to online learning directly
  - activities that **CANNOT** be converted to online learning directly

Physical Teaching & Learning Activities Converted to Online Learning Immediately





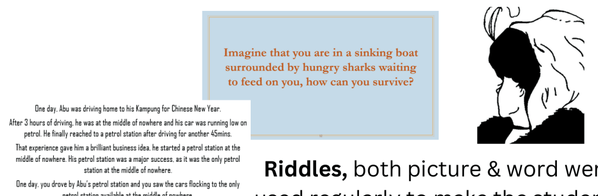
Examples of T&L and formative assessment activities converted to online learning immediately

- ***Top Left:** Online Lecture (Synchronous & Asynchronous)*
- ***Top Right**: Pitching & Getting to know Industry Experts converted as virtual session*
- ***Bottom Left**: Anonymous peer feedback done using google form*
- ***Bottom Right:** Padlet wall replacing paper worksheet for reflective practice.*

4 What about Activities that CANNOT be Converted to Online Learning Directly?

some of the experiential activities, i.e. design thinking mini workshop that aims to encourage innovative thinking and creative intelligent through design thinking process just cannot be fully replicated for online learning.

Hence, I had to be **innovative** in designing teaching & learning activities that can be used to replace some of the physical activities in encouraging innovative thinking and creative intelligent.



Riddles, both picture & word were used regularly to make the students think creatively

Creative Drawing using Microsoft Teams Whiteboard feature that allows students to share their imagination freely

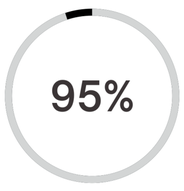
Additional (Innovative) Teaching & Learning Method Embedded into the Subject,

- Experiential Learning (Kolb, 1984)
- Constructivism (Bednar et. al (1991), Ertmer & Newby (1993)
- Brain-based Learning (Jensen, 2008)

Brain teasers are short and simple (yet, fun) brain-based learning activities that involve the entire class. these activities are continuous brain stimulating practices on creative intelligent for the purpose of creating a neuro pathway in the students' brain, to the point that creative thinking becomes an automatic process for the students.

5 Observed Learning Effectiveness

end of semester anonymous survey conducted on the learning effectiveness for the subject for August 2021 Semester



18/19 students are confident that they can become an innovative and creative person in the future

students rating the learning effectiveness of "Brain Teasers & other Workshop Activities" as **4.6/5**

Overall score for teaching evaluation for August 2021 Semester

anonymous evaluation administered by the university

Samples of students' reflection, extracted from the subject's Padlet Wall

week 2 - Love the chance to be able to draw and relayout innovation in full sketch so people can see clearly

Most memorable moments in the subject

1. The process of Innovation
2. The high level of interaction between the students and lecturer
3. There is no wrong question, you should ask a lot of questions as long as it leads to better understanding

2. The activity we did (Fun and informative)

Learn how to break the boundaries that is set upon, which is what i think I'm lacking.

External judges' comment on Students' innovative idea presented at the end of the semester

"There is real potential to develop the business plan and idea. The team should consider doing follow-ups on way forward".

"Very bold idea "

6 Conclusion

Some of the **key takeaways** from my attempt to be innovative while teaching the subject of Innovation for Online Learning are

- The same learning effectiveness for experiential learning can be achieved even when it is being delivered fully Online.
- **The key:** Design the subject T&L activities according to the intended outcome.
  - sometimes, we just need to be innovative and it can be easier than we have imagined.

The **implications** on designing my teaching & learning activities,

- simple and short, yet relevant (and fun) brain teaser activities are constantly used as I deliver my sessions both online and physically.
- debriefing exercise post brain teaser activity is crucial to guide the students to relate the activity to the relevant subject content.

References

Bednar, A. K., Cunningham, D., Duffy, T. M., & Perry, J. D. (2013). Theory into practice: How do we link?. In *Constructivism and the technology of instruction* (pp. 17-34). Routledge.

Cousin, G. (2006). An introduction to threshold concepts. *Planet*, 17(1), 4-5.

Dyer, J., Gregersen, H., & Christensen, C. (2019, March 18). The innovator's DNA. *Harvard Business Review.*

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance improvement quarterly*, 6(4), 50-72.

Jensen, E. (2008). *Brain-based learning: The new paradigm of teaching.* Thousand Oaks: Corwin Press.

Kolb, D. A. (1984) *Experiential learning: Experience as the source of learning and development,* Prentice Hall: New Jersey.