Element 2: Transformative Learning and Teaching Delivery

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Element 2: Transformative Learning and Teaching Delivery

Promotes 21st century L&T delivery through futuristic learning spaces and use of 4th industrial revolution technology that creates meaningful immersive experiential learning.
21st Century Pedagogy: Heutagogy

• Also known as student-directed learning or self-determined learning
• Focuses on students’ independent learning experience.
• Students use their own experiences and internal processes such as reflection, environmental scanning and interaction with others to engage in meaningful and relevant learning activities driven by their interests (Hase & Kenyon, 2000).
• Learners are highly autonomous
• Emphasis is placed on development of learner capability
• Human learned when they become capable and competent. (Blaschke, 2012)
Heutagogy as Extension to Andragogy

Progression from pedagogy to andragogy then to heutagogy (based on Canning, 2010, p. 63)

Source: Blascke, 2012)
Double-loop learning and Self-reflection in Heutagogy

Double-loop learning (Eberle & Childress, 2005, as shown in Eberle, 2009, p. 183).
Heutagogy Learning Environment
(Blaschke & Hase, 2015)

Learners reflect upon course content, to support metacognitive skills

Reflective practice

Flexible curriculum

Learner-defined learning contracts

Flexible and negotiated assessment

Learner-directed questions

Student design their own learning map

Negotiated learning

Guide learners to define self-directed questions

Student determine individual learning path
(Blaschke & Hase, 2015)
Reflective practice

Academic activities and projects

Industrial visit

Organic Chemistry Laboratory

This was my first industrial visit. We visited a plant that produces oil from palm oil. In this visit, we were exposed how process of chemical processes work in general. We get the experience of seeing large scale chemical industry equipment. Besides that, we were told skills that required from chemical engineers such as critical thinking, problem solving, communication and team working. Really it was interesting and we all enjoyed. Industrial visits are always liked by lecturers to increase up our knowledge that are related to chemical industry.

Heutagogy: The Art of Engaging the Digital Natives

2388 Students
Challenges

• Being in transition
• Teachers losing control vs Students gaining control
• Falling back into square one
Paragogy is also referred as peeragogy.

It involves students’ interaction with their peers in accomplishing their educational goals.

They discover and share the learning contents among themselves through the co-creation of communities of learning.

The digital media is used to connect with each other, to co-construct knowledge and to co-learn.

The challenge of peer-producing a useful and supportive context for self-directed learning (Cornelli & Danoff, 2011)
Peer 2 Peer University Project

P2PU

Peer 2 Peer University online courses and MOOCs - student reviews

The Peer 2 Peer University is a grassroots open education project that organizes learning outside of institutional walls and gives learners recognition for their achievements. P2PU creates a model for lifelong learning alongside traditional formal higher education. Leveraging the internet and educational materials openly available online, P2PU enables high-quality low-cost education opportunities.

https://www.p2pu.org
Peer 2 Peer University Project

High School Equivalency -- Science and Beyond
- Saturday from 9:00am to 11:18am (CST)
- 26 weeks starting February 10th, 2018
- Round Rock, Texas, United States of America
- Facilitated by Kathryn Davis
- Meeting at Round Rock Public Library, every other week

Discover Sign Language
- Tuesday from 1:00pm to 2:30pm (EST)
- 12 weeks starting November 6th, 2018
- Detroit
- Facilitated by Seantelle Williams
- Meeting at Douglass Branch for Specialized Services - Detroit Public Library

Act on Climate: Steps to Individual, Community, and Political Action
- Wednesday from 7:00pm to 8:30pm (+06)
- 6 weeks starting December 26th, 2018
- Dhaka
- Facilitated by Shahid Kamal
- Meeting at Dhaka University

Learn To Write Fiction
- Tuesday from 5:30pm to 7:30pm (CST)

American Sign Language
Peer 2 Peer University Project

Nurbihah's Facilitator Dashboard

- Account settings

For help with your learning circle, check out:
- Facilitator resources
- Courses page
- P2PU community

Active learning circles

Adobe Illustrator

At Perpustakaan Sultanah Zanariah UTM, Library foyer every Monday, 4 PM to 5:30 PM +08 starting Mon 03 Dec 2018

Facilitator: Nurbihah A Shukor

- edit
- delete
- close signup
- view webpage
- view final report

Meetings (6)
Paragogy Implementation in MOOC

Source: https://www.coursera.org/learn/research-methods?#syllabus
Paragogy Implementation in MOOC

Source: Lee & Rofe (2016)
21st Century Pedagogy: Cybergogy

Strategies for creating engaged learning online (Wang & Kang, 2006)

Engaged learning = cognitive, emotive and social intersect

-  Prior knowledge/Experience
-  Achievement goals
-  Learning activity
-  Cognitive/learning style

-  Feeling of self
-  Feeling of community
-  Feeling of learning atmosphere
-  Feeling of learning process

-  Personal attributes
-  Context
-  Community
-  Communication

Global Entrepreneurship Course

Share and Inspire!

Dear Comrades,

When we started the journey of Global Entrepreneurship, many of us took some leaps of faith. Everyone had limited time and we had to take a leap of faith in ourselves and in our commitment. As the course requires that we work in teams to achieve common goals, we had to take a leap of faith in our teammates, often people we met for the first time on this course! After two months of working with all of you, I am pleased to report that you guys are an amazing bunch! With your commitment and faith, this course became a real community.

Many of you have written me personal notes of how the have matured and grew while taking the course and as I believe that these amazing stories are meant to be shared to inspire the others, I created a "Share and Inspire" page

Emotive factors
Projects

This page is to provide a platform for the participants to propose and discuss projects. If you have a project idea, please present it here. Make sure that your ideas are written clearly. To help you construct your project ideas, you may follow the following structure:

1. What value does your project aim at developing and delivering?
2. Who are your targeted customers?
3. How much money do you need to raise?
4. What kind of skills are you looking for in your team members?

Cognitive factors
BrainRewiring

Dear Participants

Entrepreneurs have a positive mindsets that enable them convert challenges into opportunities. For those of us who tried to think positively, you will know that this is easier said than done. The brain is wired to respond to negative stimuli more than positive ones. However, the brain is also an amazing customisable tool and we can "rewire" it to respond to positive stimuli as well. This rewiring can take place through a simple daily exercise that I would like every participant to do.

Happy rewiring!

To foster positive thinking and opportunity spotting mindset, I would like our participants to start doing the following:

1. Everyday, preferably at a fixed time, let us after waking up or during lunch time, think of five things that you are grateful for. There is no right or wrong, just capture the first 5 things that you are grateful for and report them on this page. The process will start as a bit awkward and may be even difficult (you will notice how easy it is to report negative things rather than positive ones), however I would like you to keep trying. As time goes by, the process will be more fluid and enjoyable, this is a sign that real rewiring is taking place. You will see amazing results in your work and relationships. Feel free to share this with your loved ones and co-workers as well.

2. Actively replace the word Problem with either Opportunity or Challenge

Happy rewiring

Mushtak
Futuristic Learning Spaces

• Puts learners at the centre of learning, but, at the same time, conceives learning as a social process.

Source: https://adec.um.edu.my/learning-space
Future Classroom: Putra Future Classroom

- Artificial Intelligence
- Data Analytics
- Virtual Realities
- Internet of Things

Smart Campus: SMU Library Heatmap
Smart Campus: SMU Wifi Heatmap
# Immersive Experiential Learning

- **Process of learning** with the usage of a simulated or artificial environment.

- The environment enables the **learners** to completely get immersed in the **learning** and in a way that feels like experiencing an actual **learning** environment.

- Role-play, simulated learning environment, virtual reality learning environment
Experiential Learning

• Experiential learning is any learning that supports students in applying their knowledge and conceptual understanding to real-world problems or authentic situations where the instructor directs and facilitates learning.

• Activities related to experiential learning include reflection, critical analysis and synthesis, taking initiative and making decisions.

• Experiential learning provides opportunities for students to be engaged not only intellectually but also creatively, emotionally, socially, or physically.

• Experiential learning focuses on the individual and can be done through hands-on via technology-enabled learning approaches such as virtual reality for hospitality or augmented reality for medical students.
Experiential Learning Examples

• **Gap Year**
  - Opportunities for students to experience 1 – 2 semesters for working, exploring, or volunteering.

• **2u2i**
  - Students spend two or three years learning the fundamentals at the university and later spend two years or one year in the industry learning through reflection on doing activities
Virtual Microbes

VIRTUAL MICROBES

In collaboration with groups from five other universities, the Department of Microbiology, Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia (UPM) has launched the "Virtual Microbes", a virtual peer teaching study project involving 679 students throughout the country. Other participants include School of Environmental and Natural Resources Sciences, School of Biosciences and Biotechnology, Universiti Kebangsaan Malaysia (UKM), Institute of Biological Sciences (Microbiology Unit) University of Malaya (UM), School of Biology, Universiti Teknologi Mara (UiTM) and School of Food Science and Technology, Universiti Malaysia Terengganu (UMT), and representatives from the Department of Physiology, Anatomy and Microbiology, School of Sciences, La Trobe University, Australia. making it the largest collaborative virtual peer teaching project between universities in Malaysia.
Technology 4.0 for Learning

- Should explore state-of-the-art technologies
- Provide opportunities to engage students in a variety of ways
- Promote fresh areas of practice and innovation in L&T

- Learning analytics
- Virtual reality & Augmented Reality
- Artificial intelligence
- Internet of Things
Learning Analytics

Prediction: Not at risk

Name | Actions
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Prediction details

Time predicted: Wednesday, 10 October 2018, 9:03 PM
Time range: Sunday, 9 September 2018, 12:00 AM to Wednesday, 10 October 2018, 12:30 PM

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Virtual Presentation in Open Wonderland
Learning with Second Life

Can Training in Second Life Teach Doctors to Save Real Lives?

Medical training programs are springing up in virtual reality, and they may bring big changes to the way health-care professionals learn their craft.

By Melissa Lafsky | Thursday, July 16, 2009

A nursing student walks into a hospital room where a woman who has just given birth is lying in bed. When the student asks how the new mother is feeling, she admits that she is dizzy, and might need to be sick. Preparing to examine her, the student pulls back the sheet and finds the mattress soaked with blood. The patient is experiencing a post-partum hemorrhage, and could bleed to death in minutes.

References

THANK YOU

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people.utm.my/nurbiha