

Design of Blended Learning in Advancing Practical Skills Development in Higher Education Courses: Access, Equity, Ethics and Quality Matters

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Educating Online in South East Asia
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Agenda

- **Malaysia :**
 - **One of the largest concentration of digital natives;**
 - **Government shift in focus of Higher education:**
 - > post graduates/research degrees
 - > one of the largest number of Diploma level adult learners- upgrade;
 - > skills development especially soft skills-employability
- **PART A:**
 - **Challenges in Blended Learning/Online for meeting the challenges**
 - **Case study of skills learning in remote sites**
- **PART B: Overview of Key Challenges in online education in SEA**

Challenges

- **Cater to Gen X Adult learners** Professionals – upgrade their training- prefer to be engaged in learning -not just listening but doing!
- **Cater to the Next Gen (Y) Learners-** online, visual, 3D, Social, multitasking and constantly changing
- **Engage remote adult learners in collaborative and team learning**
- **Monitor/assess such learning remotely**
 - **Reinforce knowledge, skills and attitude domains (Bloom's taxonomy) learning remotely**

• **e-Learning =**

• **enhanced learning**

• **Designing for learning**

Conversational framework

Higher education - "ways of seeing the world".

different media forms - different affordances of learning encounter:

To support deep/complex learning – engage in all phases of learning encounter- need combination of media forms

Laurillard, D. 2002. *Rethinking University Teaching: A Conversational Framework for the Effective Use of Learning Technologies*, 2nd edition. London: RoutledgeFalmer

CASE STUDY

Tele Teaching of Anatomy Practical

- **Medical (MBBS) course**
- **Anatomy practical – synchronous active learning pedagogies**
- **Group of students are in rotation to rural posting**
- **Participants : year 2 MBBS (n= 120 F2F; n= 12 Remote, rural – 300km from Central**
- **Expert Teacher at Local classroom**

AIM

To enhance practical clinical anatomy competencies

- Through student-centred multimodal learning
- Through effective communication & collaboration in learning
- Create equivalent local and remote learning experience
- Engaging in Active learning as inter-professional healthcare teams
 - > as expected in today's professional practice

AMC (2009), GMC UK (2014)

Pedagogical Strategies:

Innovative Mix in medical education:

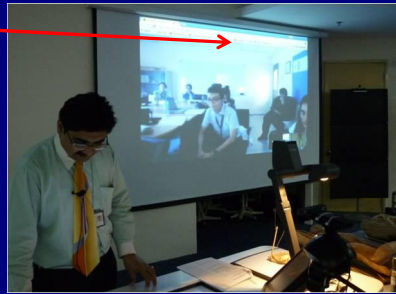
- **Moodle platform**
 - > **Vodcast, Micro learning, Flipped Classroom**
- Active Learning : MAPEL Lab-Ecosystem of Smart Tables, Physical Anatomy Resources
 - > Lecturer Skills Demonstration/Multicast streaming
 - > Simultaneous Local and Remote Collaborative Learning
- Immediate Feedback :
 - > Chat/Monitoring of Remote learning
 - > Simultaneous Local and Remote Peer Teaching
 - > Discussion fora in Moodle
 - > Clickers : both local and remote

Methods 1: Teacher's Multistreaming

Integrating Physical resources and technology:

- **Team Teaching** -Accommodating varied Teaching styles ; **Multiple Perspectives**
- **Multiple resources, Media forms**
- **Large cohort , few teachers : F2F as well as remote**
- **Multicasting, Streaming-Real time output**

REMOTE
CLASS



Methods 2: **Guided Collaborative Learning**

Guided Collaborative Learning – Local Remote Collaborative Learning

- **How do we know the learners have learnt ?**
- **How do we ensure on deep learning?**
- – **assessing competencies gained**
- **feedback**

Methods 3: Peer Teaching

- **By demonstration – gain a higher level of competencies**

Local Peer teaching :

• Remote Peer teaching

- Instantaneous feedback by peers and local lecturer
- **Monitoring** by local lecturer: Real time through remote camera

Results : Student evaluation

- Student evaluation at semester end - highly positive feedback for the new practical strategy (>80-90%).

Discussion

- Tele Teaching -active learning method engages students in solving tasks, whilst giving timely feedback.
- Acquiring knowledge through social interaction is central to teaching/learning in higher education.
- Seamless access to digital resources - Allow to compare with online notes or snapshot of Lecturer's demo
- Reinforces knowledge and practical skills and aims to attain a higher level of competency (graduate attributes).
- Multiple media forms – multiple perspectives, flexibility for learner's styles

Discussion 2

- **Synchronous interaction, use of shared applications –learners learn through highly complex collaborative problem solving tasks¹**
- **Crucial factor: quality of audio/video transmission²**
- **MYREN interconnectivity – Google peering**
- **Training for Video Conf etiquette**
 - Preparation
 - Speaking and Listening
 - Visual Considerations
- **Maintaining timing/logistics -utmost important**

¹Kirkwood & Joyner, 2002

²Finn et al., 1997; OConaill et al., 1993

Wider Applicability as a Model of Skills Learning

- Participative hands on Active Learning in a Large cohort :
- -extrapolated to any model of STEM practical education
- SE asia : large pool of Para Health care trainees
- Streamed Remotely- a way forward in Next Generation education.

CONCLUSION

- Passive students are promoted to active collaborative learners¹ - engages and motivates students
- Allows seamless transition: Demo to hands-on experience to collaboration to individual research.
- Inspires learning -collaborative learning juxtaposed with feedback, multiple perspectives, multiple resources, MULTIPLE DEVICES including mobile
- Collaborative learning in small groups using videoconferencing is a promising approach

¹Ronald Harden and Dent, 2009 A Practical Guide for Medical Teachers, 3ed.Churchill Livingstone
Ertl, Reiserer, & Mandl, 2002;
Rummel, Ertl, Haider, & Spada, 2003).

Distance Education - Progress

- 21st C - postindustrial era - transactional issues (i.e., T & L) predominate over structural constraints (i.e. geographical distance)
 - distance education
 - does the strategy reflects current practice?
 - will it keep pace with innovations in technology and practice
 - Learners (health care/diploma holders/skills upgrade) are now in remote workplace
 - Medicine is an everchanging science
- "let technology show us what can be done and let educational considerations determine what will be done"** Salomon²

¹Garrison, R.(2000).Theoretical Challenges for Distance Education in the 21st Century: A shift from structural to transactional issues. Int. Rev.of Research in Open & Distributed Learning, 1(1)
²Salomon, G. 2000. It's not just the tool, but the educational rationale that counts.
<http://construct.halifa.ac.il/~gsalomom/edMedia200.html>.

Educating Online in SEA Region: The challenges - Summary

- ▶ Undergraduate education: Tech generation regards online as a free flowing space (No rules)
- ▶ Postgraduate education: Poses challenge from research perspective
- ▶ Inadequate understanding of access, ethics, equity and quality
- ▶ Online research versus traditional research approaches
- ▶ Question of moral responsibility of those who design and deliver online practice and those who enroll
- ▶ Building partnerships to ensure quality online learning experience

Access, Equity, Ethics and Quality Matters

- ▶ Access
 - Rural, urban, national and international challenge
 - Digital divide - gap between those with and without access to technology (Shearer & Chakiris, 2006; Hanewald, 2012; Patel, 2012)
 - Online asynchronous timeframes
 - Innovation divide – gap between those who embrace innovation and those who do not (Patel, Sooknanan & Rampersad, 2012)
- ▶ Equity
 - Assessments completed by due date
 - Engage in online discussion boards
 - Personal investment in ensuring there is adequate data for use in accessing downloads
 - Issues of power, voice identity, representation and anonymity and implications for equity (Suri & Patel, 2012)
- ▶ Ethics
 - Undergraduate and postgraduate institutional responsibility (approval by research ethics board and national boards)
 - Protection of vulnerable and marginalized populations – ethical scrutiny required)
 - Exploited and oppressed populations in health research
 - Ethical space – about visions and options for better lives in the digital age (Capurro & Britz, 2010, pp. 34-35 in Jim Peterson et al, 2012)
- ▶ Quality
 - Assuring quality of content development
 - Quality learning experience
 - Face-to-face & online quality of design and delivery
 - National and international quality frameworks and regulations

Our cables have been stolen...cannot access internet!

Out of Office
...Access to email will be limited

Internet broadband in Malaysia as compared to other Asian countries

11. FIXED (WIRED) BROADBAND PER 100 INHABITANTS, ASEAN COUNTRIES

Year	Singapore	Malaysia	Thailand	Brunei Darussalam	Viet Nam
2012	25.4	8.5	6.5	4.8	4.9
2013	26.0	8.2	7.4	5.7	5.6

Year	Philippines	Indonesia	Cambodia	Myanmar	Lao P.D.R.
2012	7.9	1.2	0.2	0.1	0.1
2013	9.1	1.3	0.2	0.2	0.1

12. FIXED (WIRED) BROADBAND PER 100 INHABITANTS COMPARED WITH 10 BIGGEST TRADING PARTNERS, MALAYSIA

Year	South Korea	Hong Kong SAR	Japan	USA	Singapore	Australia
2012	37.3	31.2	28.4	28.4	25.4	24.3
2013	38.0	30.8	28.9	29.3	26.0	25.0

Year	China	Malaysia	Thailand	Indonesia	India
2012	12.7	8.5	6.5	1.2	1.2
2013	13.6	8.2	7.4	1.3	1.2

Source: MCMC, ITU

more > broadband not = to access, equity, ethics & quality

Partnership in technology-enabled learning

(Adapted from Patel, 2014, p.33)

- Stakeholder meetings
- Negotiation of perspectives on design and implementation
- Technical support (ITS, eSolutions...)
- Educating the educators (training and development programs)
- Encouraging supervisors, administrators and HOD to be open minded and proactive



Pedagogical Dimensions for Effective Online Learning

(Based on Siragusa's study - 2005, 2006, 2007, page 99 in Patel, 2014)

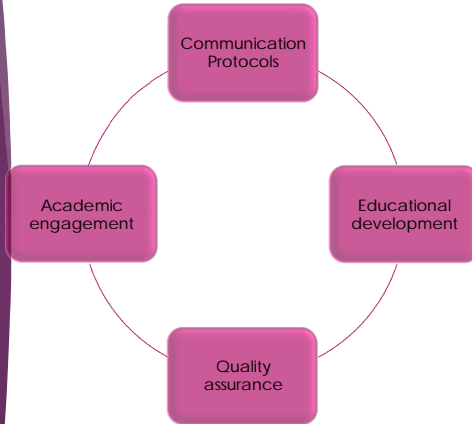
- Partnerships: Support and promote integration of pedagogical dimensions
- A missing dimension is a missing partnership



Effective Management of Online Learning

(Patel, 2014, p.115)

- Engaging all stakeholders
- Closing the loop
- Continuous education development



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