

Project Report:

Project aims:

This project aims to set up an active learning platform for students to have early integration of knowledge learnt in school into practice in a simulated acute ward setting.

Project phases:

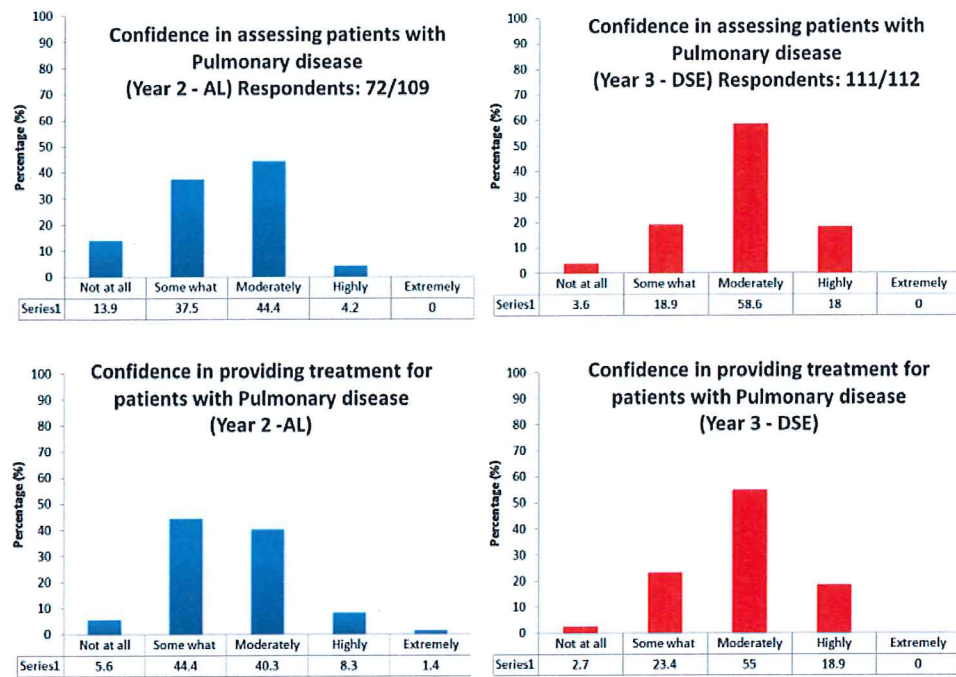
There are 4 phases in this project, including preparatory phase, developmental phase, implementation phase and evaluation phase. Details of timeline and status were summarized in Table 1.

Table 1. Details of project timeline and status

Task	Proposed Timeline	Current status
Preparatory Phase	Jun-Jul 2013	Completed
1) Set up simulation ward with model (purchase Megacode Kelly & accessories)		
2) Develop a survey to evaluate the level of confidence, self -competency and readiness to practice in ward		
Development Phase 1	Jul-Sept 2013	Completed
1) Develop Case Scenario 1 Pneumonia		
2) Set up Blackboard page		
Pilot Test	Sept-Dec 2013	Completed
1) Easiness to use BB system		
2) Logistic flow of going through the case		
Developmental Phase II	Dec 2013 -Jun 2014	Completed
1) Design Case Scenarios 2-4		
Implementation Phase	Jun 2014 - May 2015	Completed
1) Implementation of 4 cases		
Evaluation Phase	May – Jun 2015	Completed
Students survey		
Final report to EDC	Oct 2015	Completed

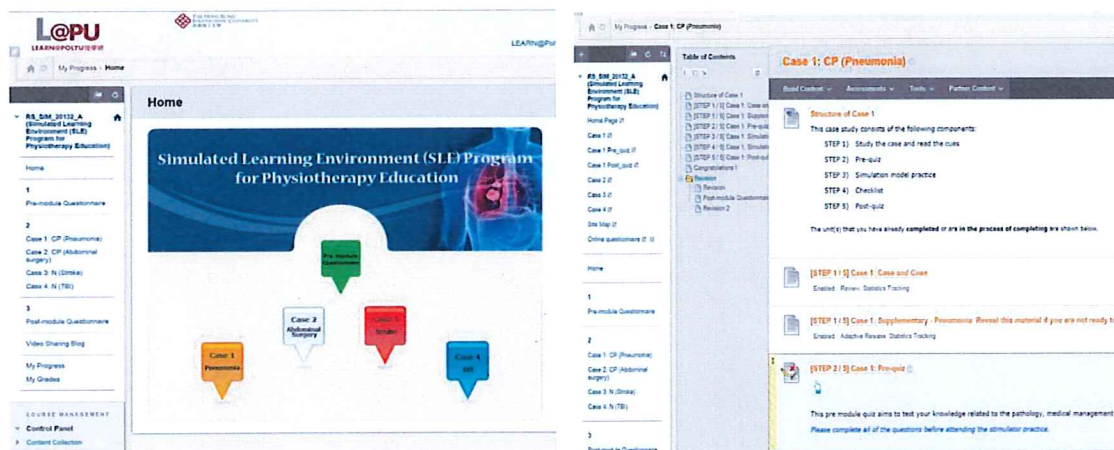
In the preparatory phase, we set up the simulated ward environment, prepared the equipment needed (i.e. simulate model) and developed a survey to evaluate the level of self confidence, self competency and readiness to practice in ward so that we could have some baseline data to understand the need of the students for addressing these issues in the subsequent case scenario design.

Cohort	Subject	Class size	No. of survey returned	Tried SLE
Preparatory phase – establishment and testing of survey				
BSc AL (2013-2014)	RS377 Cardiopulmonary Physiotherapy	109	72	No
Implementation phase				
MPT (2013-2014)	RS5316 Cardiopulmonary Physiotherapy	30	28	Yes
BSc DSE (2014-2015)	RS3771 Cardiopulmonary Physiotherapy II	112	111	Yes



The figures above showed the differences in distribution of the level of self-confidence perceived by the students in performing assessment and treatment.

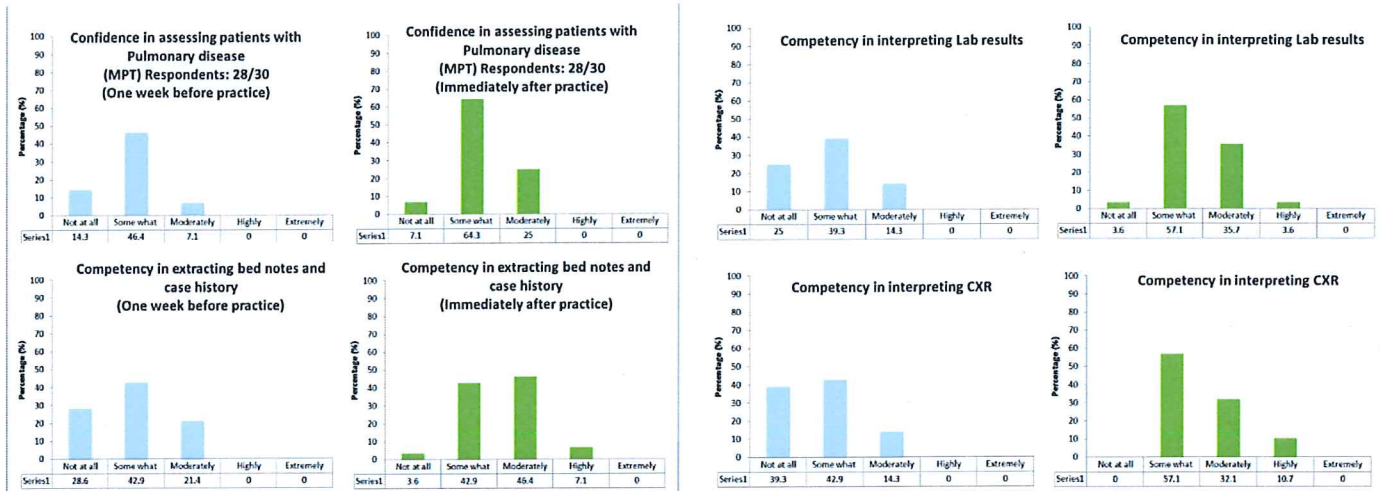
In the developmental phase 1, we developed a blackboard subject entitled “Simulated learning environment (SLE) program for physiotherapy education”. The figures below were captured from blackboard showing the home page and adaptive release function of the site to facilitate students’ learning.



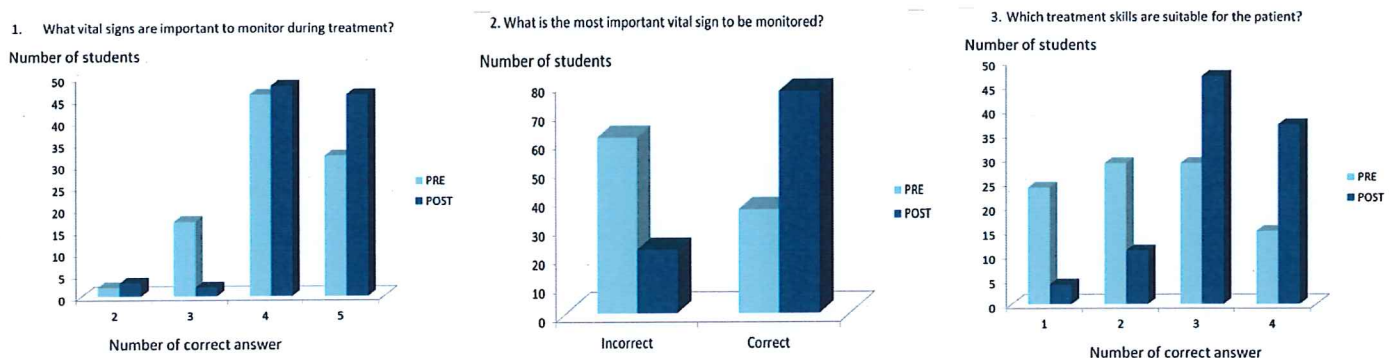
To facilitate students’ active learning, we set up pre and post practice quiz for each case to stimulate students to “think” before actual practice and “self-evaluate” their own performance and learn from their own mistakes. We invited students to try the pilot case and modified the settings in blackboard site and the practice site accordingly. Upon modification, our team developed the 4 completed cases and incorporated the use of the simulated learning (SLE) into our subject teaching and self-practice of the students.

As aforementioned, we had incorporated SLE in subject teaching.

For example in RS5316 Cardiopulmonary Physiotherapy (Master of Physical Therapy Program) and RS3771 Cardiopulmonary Physiotherapy II (BSc(Hons) Physiotherapy Program), we incorporated SLE in practical session. The figures below showed the changes in self perceived confidence in students before and after SLE training.



In RS3730 Neurological Physiotherapy I (BSc(Hons) Physiotherapy Program), students were evaluated about their knowledge before after 1 session of simulated-based learning for managing neurological patients in acute phase. We found that their number of correct answer increased significantly after simulated-based learning. One hundred and ten questionnaires were distributed (100 were returned). The figures below showed the changes in pre and post test score



Favorable response and written comments were received from both bachelor and master students. Some written comments and comments obtained in focused group interview were listed below:

- "Good experience to learn how to deal with a real cardio patient. Should pay more attention to bed note conditions next time"
- "Can have better cooperation and job allocation. Can assign a leading role and assistant role before carrying out treatments."
- "Should give more thorough instruction and explanation to patient."
- "The simulated patient has helped us to get more familiar with the clinical situations"

- *“Every case scenario is a chance for us to learn ... Because in the simulation, the simulator gave some real responses and we could learn how to take care about the simulator “i.e. patient” and handle their changes in response”*
- *“I think ... in the ... in doing the paper scenario ... the impression is less. I will easily forgot. But I’m doing the simulation that I have a bigger impression.”*

Project dissemination:

All of the above data and information has been presented in our departmental learning and teaching seminar on 4th Feb 2015.

Project extension:

In view of these favorable written comments, our team decided to add a focused group interview to know more, from the students’ perspective, about this teaching project. Thus, we applied for a 3-month project extension and invited 7 students to express their feeling and perception about learning and teaching in class and SLE and how SLE could be improved to facilitate their learning. At this moment, our team is still analyzing the data and we hope to use the data obtained in this project to write up manuscript for publication.

Team’s feedback:

Our team treasure the support from our department, departmental learning and teaching committee, support from colleagues in EDC during the proposal planning and execution phase and most importantly, the University for granting the learning and teaching fund. If there is other funding opportunity, our team wishes to continue developing this project by building up more case scenarios.