Problem Based Learning Workshop
for University of Technology Malaysia

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Participant Workbook
The Problem and issues
Individually write down your understanding of the ‘problem’ and observations of the issues it raises:

After discussion with your group, what is the final ‘problem’?

What are your issues to be further researched, where might you gather this information and what knowledge do you already have on these issues?
Action Plan

How could you use PBL? – series of tutorials/sessions; around a bigger project; in a unit course/subject?

What skills, resources and knowledge will YOU need to deliver PBL?

What are you going to investigate further? (What are your learning objectives?)

Who will you collaborate with?
Learning outcomes

- Within your own unit/course/subject – can you articulate your learning outcomes?
- Will your students have a full understanding?
- In your own words – outline what you want your students to know at the end of your unit/course/subject.
**Phrasing your learning outcomes**

Using the table below, if necessary rewrite your learning objectives.

Are they appropriate to the level, is there a range?

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<tr>
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<th>Definition</th>
<th>Typical Action Verbs</th>
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<tbody>
<tr>
<td>1. Knowledge</td>
<td>memorisation of facts, definitions, recall of methods and procedures</td>
<td>identify, define, show, state, obtain</td>
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<td>2. Comprehension</td>
<td>ability to convey knowledge in alternative ways, interpretation of knowledge</td>
<td>compare, describe, explain, discuss, classify</td>
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<td>3. Application</td>
<td>apply and transfer knowledge to different contexts, use abstract ideas in real situations</td>
<td>apply, calculate, determine, estimate, show, find, solve</td>
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<td>4. Analysis</td>
<td>ability to break down a complex problem into parts, solve each part, determine connections between parts</td>
<td>analyse, contrast, examine, justify, predict, test, deduce</td>
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<td>5. Synthesis</td>
<td>assembling parts to create a new whole, integration of application knowledge with other skills, solves open ended problems</td>
<td>construct, design, create develop, produce, devise, integrate</td>
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<td>6. Evaluation</td>
<td>ability to evaluate or judge design, solution to problem, presentation</td>
<td>argue, assess, evaluate, judge, validate, review</td>
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Writing PBL problems

Sources of problems

Resources and scaffolding required
Sketching the Scenario

Identify the course

You can think of the subject, level of students, size of class, how you would use it.

Identify a problem and sketch out the scenario

List the learning objectives that would be met by this problem and how they link to the overall course/subject objectives

Other resources required?
Assessment
Brainstorm some ideas for alternative assessment – content and process

What are some problems associated with group assessment and how might you mitigate these?
**Evaluation**

What is the purpose of your evaluation? – publication, SOTL, promotion, general interest?

What do you want to know – what is your investigation/research question?

Where might you start your literature review? Who are the key authors to look for?

What methods can you use to collect data?

What is your ‘argument’?

Who can you work with?
Feedback to presenters on problem

Problem as you heard it (briefly):

What did you like most about the problem?

Does it challenge students to think and do research?

Is the problem appropriate for the proposed course?