Problem-Based Learning Blending
Formative Assessments & Technology

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Saudi Aramco IPO: the ultimate marriage between carbon and capitalism

A firm with the biggest carbon footprint seeks cash to grow just as the fight against climate change needs it to shrink

Saudi Aramco gets go-ahead for $1.5tn listing

Roll up! Roll up! The world’s biggest climate polluter, Saudi Aramco is poised to announce the world’s biggest stock flotation in an ultimate marriage of carbon and capital. Any institution with tens of millions of dollars and few qualms about the environment is invited.

Scientists warn that fossil fuels and money will soon need to divorce because carbon emissions must be slashed by half over the next decade if the world is to have any chance of keeping global heating to a relatively safe level of 1.5°C. Despite this, Aramco expects to receive the greatest infusion of cash in history.
Millennials are entering the workforce. Everyone is plugged in 24/7. Our way of life is drastically changing. How can we educationists be better prepared?
Session Objectives

After completing this session, participants are expected to:

- Have an enhanced understanding on the functional application of technology tools in the class
- Effectively apply formative assessments to support PBL best-practices in vocational education.
<table>
<thead>
<tr>
<th>Facts (problems in situations)</th>
<th>Ideas (issues of problems)</th>
<th>Learning Outcomes (Ways to overcome problems)</th>
<th>Actions (steps taken to solve the problems)</th>
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</thead>
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<tr>
<td>ICT is important part of teaching today</td>
<td>Teachers have not updated their skills</td>
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ICT is important part of teaching today

Teachers have not updated their skills

How to update the teacher’s skills in ICT?

□ Workshops, staff sharing sessions and training programs.

Lack of focus and boredom among students

Class sessions focus on passive lecture method which is more apt for teaching theoretical concepts.

How to keep students engaged?

□ Program Review: Radical change in the design of programs and assessments being used. More focus on industry integrated requirements.

Students require practical knowledge & skills to solve real-life organisational problems

How to transfer problem-solving practical skills to students?

□ More focus on continuous/formative-assessments and practical activities that develop problem solving skills.

Grades of students does not reflect their ability to succeed in the industry

Current assessments focus on testing student’s ability to memorize concepts and lower order skills

How to ensure that students are assessed on their ability to solve organisational challenges?
Methodology

• Qualitative study conducted within Bahrain Training Institute using the research method - **hermeneutic phenomenology**.

• Data collected within an ethnographic framework to investigate trainer ability to transfer knowledge and skills to support students’ learning through:
  - Interviews = 7 staff + 7 students
  - Observations = 4 staff + 39 students
Conceptual Framework model

- **Learner bulls-eye**
  - Snags and solutions approach
  - Techno class

- **Lesson architecture**
  - Real-life reflection
  - Practice perfection

- **Trainer-Traineepartnership**
  - Trainee engagement

- **Upshot**
  - Trainer transfers specialised knowledge and skills
  - Trainee professional development to match industry requirements

- **Effective Learning and Development**
Sub-theme: Real-life Reflection

- Units are NOT designed based on available text-books and online material.
- Industry experts form PACs and play a major role in developing and reviewing the Program structure, PILOs, CILOs and syllabus.
- DLP and Assessments are designed to assess trainee ability to face real-life business challenges faced by the industry.
Sub-theme: Techno class

• The study showed that teachers who were inclined to use mobile apps and online tools were able to successfully achieve their lesson outcomes much more efficiently than in regular cases.

• Some of the more effective apps for formative activities were seen to be Kahoot, Plickers and Socrative, which allowed students to learn within a team-oriented, fun and competitive environment.
Sub-theme: **Snags & Solutions Approach**

- Trainers’ focus is NOT on communication of theoretical concepts.
- Class sessions are designed to SOLVE business issues and create VALUE for stakeholders.
- Trainees make strategic DECISIONS that are evaluated for their effectiveness and efficiency.
- Focus is on higher-order thinking.
**Sub-theme: Practice Perfection**

**Trainee-centred approach:**
Training sessions can effectively apply the following 4 types of Formative Assessments:

a) Ice breaker activities  
b) Formative activities that support learning  
c) Formative activities to measure learning  
d) Plenary or exit ticket

‘Tell me and I will forget; show me and I will remember; do and I will understand’ ~ Chinese proverb
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Thank you.

Too often we give children answers to remember rather than problems to solve.

Roger Lewin