Transforming teaching practices: A model to conquer Evidence Based Decision Making skills
Workshop plan:
• Introduction
• Current Teaching and Learning Practices Targeting Evidence Based Decision Making
• Overview of institute wide MELT implementation in Evidence Based Decision Making
• Designing, Implementing and Evaluating a MELT
• Wrap up: what next?
Introduction

• Identification of Participant Institution and Discipline Context
• Setting participants
## Evidence Based Decision Making (EBDM)

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Current Teaching and Learning Practices

Current approach to incorporate evidence based decision making in curriculum at your organisation
What is MELT?

The different adaptations of the RSD that comprise the MELT
EBDM and MELT Framework

Clearly define the question or problem.

Find & Generate
What do I need?

Embark & Clarify
What is my purpose?

NCCMT, 2016

MELT, 2017
Why MELT for EBDM

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Student Consensus on MELT and EBDM

Add student centred authenticity: explain why task has value to them

Offer helper phrases that align with the learning outcomes. Here, something a referee may write in a reference letter about the student.

Provide a simplified Frame
Mind Mapping
MELT and EBDM

What instruments do we have available?
What instruments do you think would be suitable?
What instruments do you think would NOT be suitable?

What sounds do babies prefer?
Can we group together instruments that are similar?

How do we determine what a baby prefers?

Which instrument is best suited to elicit a baby’s response?

How accurate were your predictions?
Are you surprised by the outcome?

Based on what you now know, is there an instrument that you wish you had tried?

Play 2 different instruments to the babies
Compare your instrument choice to that of another group. Have they thought of something you haven’t?
EBDM and MELT in Research Projects

**CONTEXT:**
- First Year STEM: 700+ cohort (39 Courses/Degrees)
- Evidence Based Decision Making (EBDM)
- Authentic Research Experience

**APPLICATIONS:**
- **FORMATIVE** – In Class EBDM scenarios
- **SUMMATIVE** – Authentic Research Experience

**EVALUATION** – PRE and POST PERCEPTION SURVEYS
- **STUDENT**
- **STAFF**

When in doubt, go to the centre...

- Find & Generate
  - What do I need?
- Embark & Clarify
  - What is my purpose?
- Communicate & Apply
  - How do we relate?
- Analyse & Synthesise
  - What does it mean?
- Organise & Manage
  - How do I arrange?
- Evaluate & Reflect
  - What should I trust?
EBDM and MELT in Work Integrated Learning

Project knowledge building and developing interconnectivity in a work integrated learning course
EBDM and MELT in Clinical Management

- **Embark and clarify = Observe and ask**
- **Find and generate = Find and Generate**
- **Analyse and synthesize = Analyse and Interpret**
- **Evaluate and reflect = Investigate and Reflect**
- **Organise and manage = Synthesize and apply**
- **Communicate and apply = Organise, Manage and Communicate**

**RSD facets and Clinical Management Skills**

- Observe & Ask
  - Collect information on clinical features and pathophysiology to generate differential diagnosis.
- Organise, Manage & Communicate
  - Organize, manage, and communicate the information collected and knowledge gained to your patient or other health professionals in your case history or assignments/assessments.
- Synthesise & Apply
  - Synthesize and apply the knowledge gained to establish appropriate clinical management plans.
- Investigate & Reflect
  - Identify the investigation tests to confirm the definitive diagnosis by reflecting on the test results to confirm the definitive diagnosis.
- Analyse & Interpret
  - Analyse the pathological mechanism to interpret its impact on the patient's clinical presentation.

'When in doubt, return to the centre'
# Institute wide MELT for EBDM

## RSD facets and Endeavour’s graduate attributes

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<th>In-depth knowledge and skills</th>
<th>Effective communication</th>
<th>Critical judgment</th>
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<td>Define and analyse problems</td>
<td>Appreciation of the philosophical and social contexts</td>
<td>Identify problems</td>
<td>Generate ideas</td>
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<td><strong>Find &amp; Generate</strong></td>
<td>Generate comprehensive and well-founded knowledge in the field/s of study</td>
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<td>Find information from a range of sources</td>
<td>Knowledge of ethics and ethical standards</td>
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<td>Evaluate opinions</td>
<td>Reflect critically on the justifications</td>
<td>Adapt innovatively to changing environments</td>
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<td>Consolidate the knowledge and skills learnt</td>
<td>Organise information</td>
<td>Engage effectively and appropriately with information and communication technologies</td>
<td>Work and learn independently</td>
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<td><strong>Analyse &amp; Synthesise</strong></td>
<td>Extend the knowledge and skills learnt</td>
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<td>Apply critical reasoning to issues</td>
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<td><strong>Communicate &amp; Apply ethically</strong></td>
<td>Apply the knowledge and skills learnt</td>
<td>Convey ideas clearly, fluently, in both written and spoken forms</td>
<td>Make decisions based on justifications and reflections</td>
<td>Application of ethics and ethical standards, demonstrate social and civic responsibility</td>
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**Flower of Knowledge**

**Proposed EBDM MELT for Institute**
Designing, Implementing and Evaluating Your MELT for EBDM

Design discipline/institute specific MELT

Identify approach and barriers to Implementation

Workshop strategies to overcome barriers and evaluate MELT

Transform institute wide teaching practice of EBDM
# Design Your MELT

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<tr>
<th>MELT Facets</th>
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Presenting Few MELT from audience

Place your MELT for exhibition and Take time to visit each table
Place a sticky note to vote, you can place more than 1 sticky note
The 2 most voted MELT will be presented to the whole audience
Approach and Barriers to Implementation

How would you implement in your course/institute?

What are the barriers for implementation?
Strategies to overcome barriers and evaluate MELT

Strategies to overcome barriers

How would you evaluate MELT implementation:
Transform Institute Wide Teaching and Learning Practice for EBDM
## Transform Institute Wide Teaching and Learning Practice for EBDM

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What’s next?
Transformed MELT Team

- Dr Manisha Thakkar
- Dr Jeanne Young Kirby
- Dr David Wilson
- Jason Home
- Roopa Howard
References


 Optimising Problem Solving (OPS) pentagon, 2014, designed by Mechanical Engineering Communications Tutors, University of Adélaide, Australià.


Thank you!