

What I Carried Back From Vienna

Reflections as a fresh graduate

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Who am I?

Wei-Ming Teng · 鄧惟銘

- 成大醫學系 115 級畢業
- 臺南人，喜歡吃魚肚粥配煎魚腸
- 正在 Gap Year (國考有過)
- 興趣是攝影與醫學



My submission to AMEE



Deepening Medical Topics Learning through Role-Playing and Gamified Playing-Card Instruction for Medical Students and Faculty

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Background & Aim

THE CHALLENGE

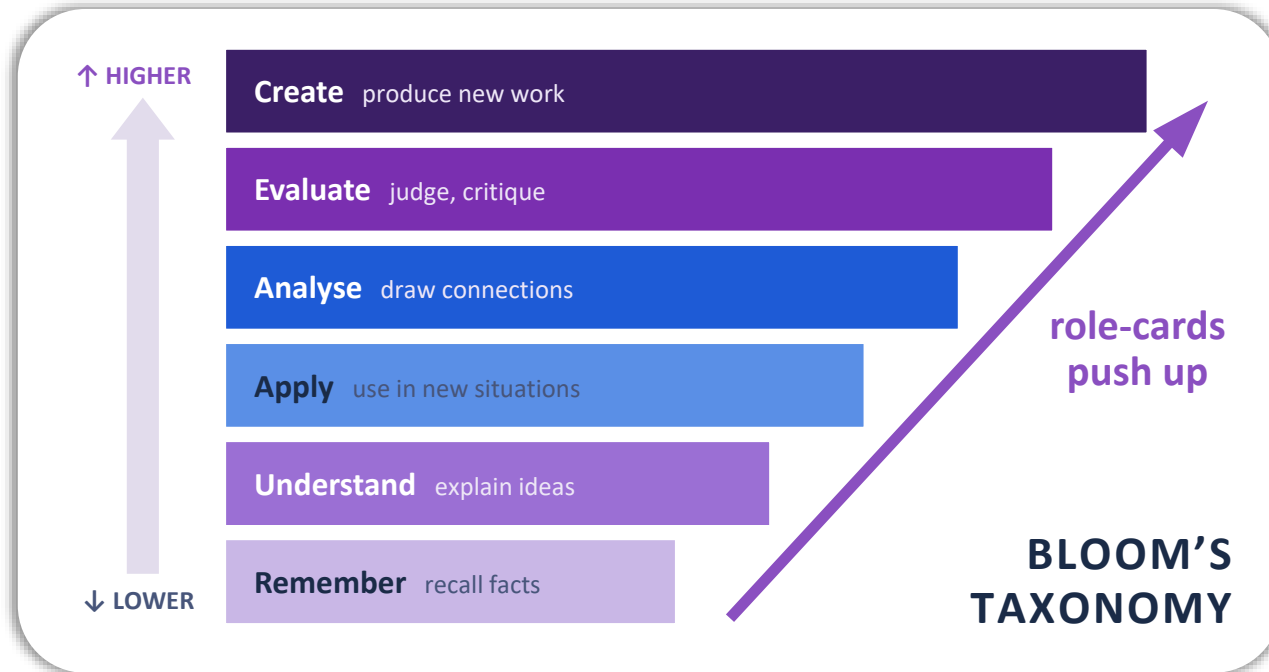
- **Conventional reporting** leaves one speaker active and the audience passive — shallow engagement.
- **Junior learners hesitate to speak up** in hierarchical (often Asian) settings — even when they have something to add.
- **Gamification and role-play** are active-learning methods linked to higher motivation and self-efficacy.

OUR AIM

Use **gamified, analytic role-cards** during topic presentations to **deepen engagement, broaden perspectives, build confidence, and — above all — raise participants' order of thinking**, for medical students and faculty alike.

Our Core Aim: Raise the Order of Thinking

From passively remembering → actively **analysing, evaluating & creating**



Conventional reporting

audience mostly listens — stalls at the lower tiers



Stratified role-cards

each card pushes a learner toward the upper tiers ↑

Anderson & Krathwohl (2001), revised from Bloom (1956).

The Intervention: A Stratified Role-Card Model

Each participant draws a playing card — one defined analytic mission plus a short-spoken turn — within a gamified frame (card draw / Kahoot).



Summary-man

2-min summary;
3–5 clinical pearls



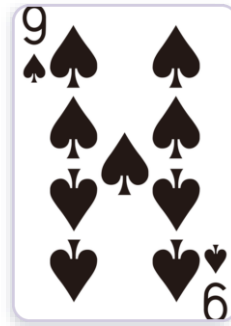
Devil's Advocate

Two weaknesses +
fixes



Sunshine Boy

Two genuine
strengths



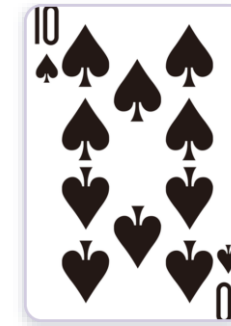
Investor

Future potential /
value



Professor

Hidden details;
research gaps



Art Editor

Layout, clarity,
organisation



Wildcard (Joker)

Names the next
presenter



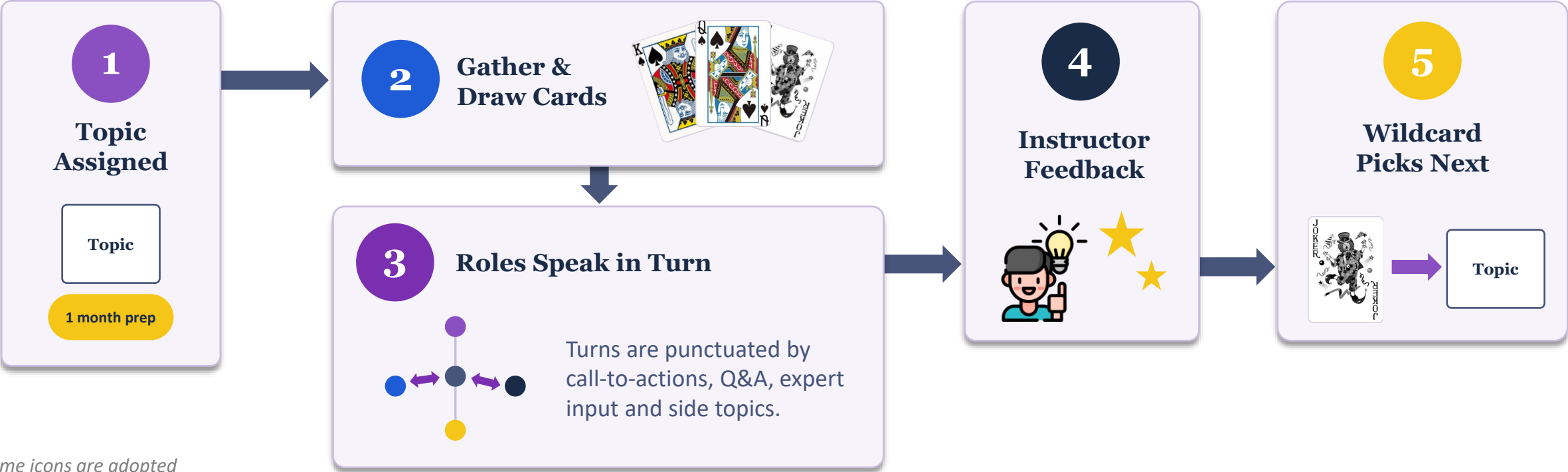
How Each Role Lifts Thinking — Examples

A defined mission moves the learner from lower-order recall to a specific higher-order act.

Summary-man	<i>"Here are the 3 key clinical pearls from the paper."</i>	Understand	→	Analyse
Devil's Advocate	<i>"The sample is too small — here's a stronger design."</i>	Evaluate	→	Create
Professor	<i>"The real unanswered question is... a research gap."</i>	Analyse	→	Evaluate
Investor	<i>"This drug class has the most future potential."</i>	Evaluate	→	Create

Methods: Running the Card Game

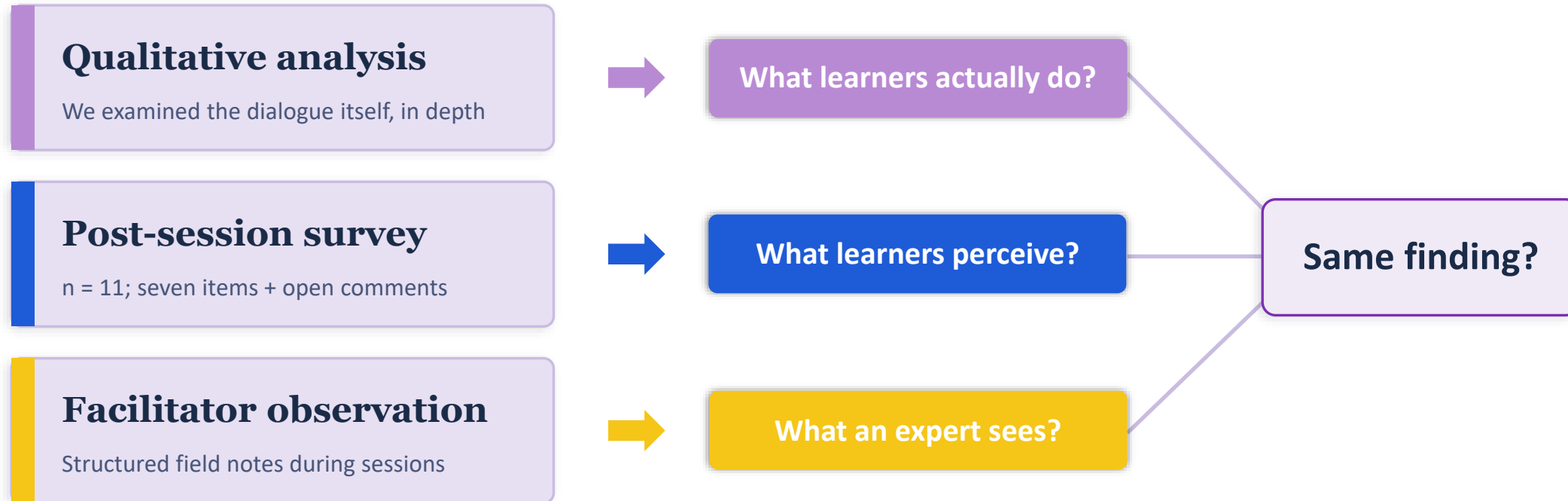
One round of the role-card game, from topic assignment through to the next presenter.



Some icons are adopted from flaticon.com

Methods: The Real Learner from Several Angles

No single lens captures authentic learning. We combined three methods so what learners actually **do**, **feel**, and **report** could be observed as close to real practice as possible.



Participants: medical students, clinical clerks, PGY trainees, attending physicians, and a teacher.

Results — Participant Survey (n = 11)

WHAT MATTERED MOST

“Role-based perspectives”

were the top reason to attend.

5 / 11
attendees

“Multi-perspective learning”

was the highest-rated outcome.

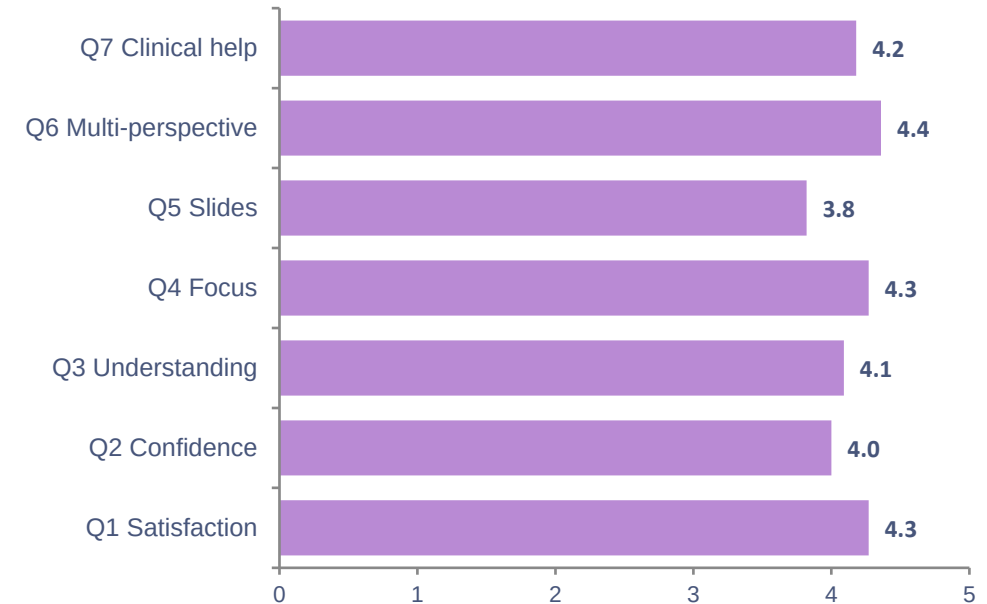
4.4
/ 5

“Sharpened focus & clinical value”

were widely affirmed.

4.3
/ 5

ITEM MEANS (DEMONSTRATION)



All seven items rated positively; the model's strength is in broadening perspective, not slide-making.



Results — Three Themes That Fit Together

Source: *thematic analysis* of two recorded sessions, the post-session survey, and facilitator notes — consolidated into three overarching themes.

1

Safe to speak

Roles turn reticence into a duty to contribute.

2

Deeper thinking, together

The group climbs to Analyse, Evaluate, Create.

3

A wider lens

Roles surface angles experts overlook.

Catalyst expert facilitation scaffolds all three ... **Boundaries** cognitive load & prior-knowledge needs



Discussion

Our discussion, in two parts

PART 1

Why It Works

The mechanisms behind the gains — participation, higher-order thinking, and a wider lens.

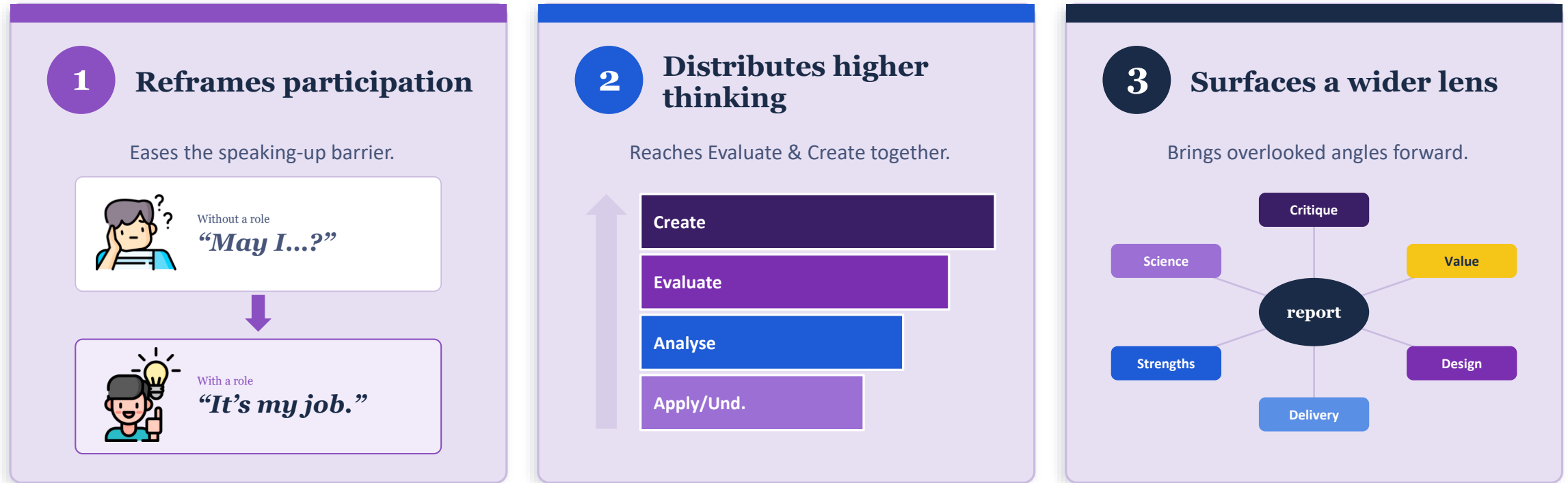
PART 2

Where to Tune

The tensions to manage — cognitive load and prerequisite knowledge — and how to address them.

Discussion, Part 1 — Why It Works

Three mechanisms explain the gains — each illustrated by the theme it draws on.



Limitations: *Single programme, n = 11, self-report, no control group — learning is perceived rather than yet demonstrated.*

Discussion, Part 2 — Where to Tune

TWO DOUBLE-EDGES

Every strength carries a cost. Two tensions deserve deliberate management in practice — each with a concrete way to tune it.

Emergent opportunity

Reasoning roles naturally invited supervised AI use — differential generation and Bayesian updating of pre-/post-test probability.

⚠ Cognitive load of the role

The tension A role can distract from listening, or force artificial critique when there is little to fault.

How to tune Give brief per-role feedback; offer a contingency (e.g. stress-test the strongest assumption); sequence note-taking.

⚠ Prerequisite knowledge

The tension Reasoning roles presuppose a knowledge base novices may not yet have.

How to tune Match role complexity to learner stage; pair juniors with scaffolds; let faculty model first.



Take-Home Message

THE BOTTOM LINE

Gamified, pre-assigned roles

turn passive reporting into an active, psychologically safer community of inquiry — raising participants' **order of thinking** and consolidating professional identity.

Anderson & Krathwohl (2001) · Edmondson (1999) · Ericsson (2004)

ADVANTAGES

1

Raises thinking

Each role lifts learners toward Analyse, Evaluate, and Create.

2

Calibrates to the learner

Match role complexity to prior knowledge and training stage.

3

Low-tech, ready to use

Deployable in any journal club or topic presentation today.

Fresh Graduate: Between students and educators

The Consensus

of current problems



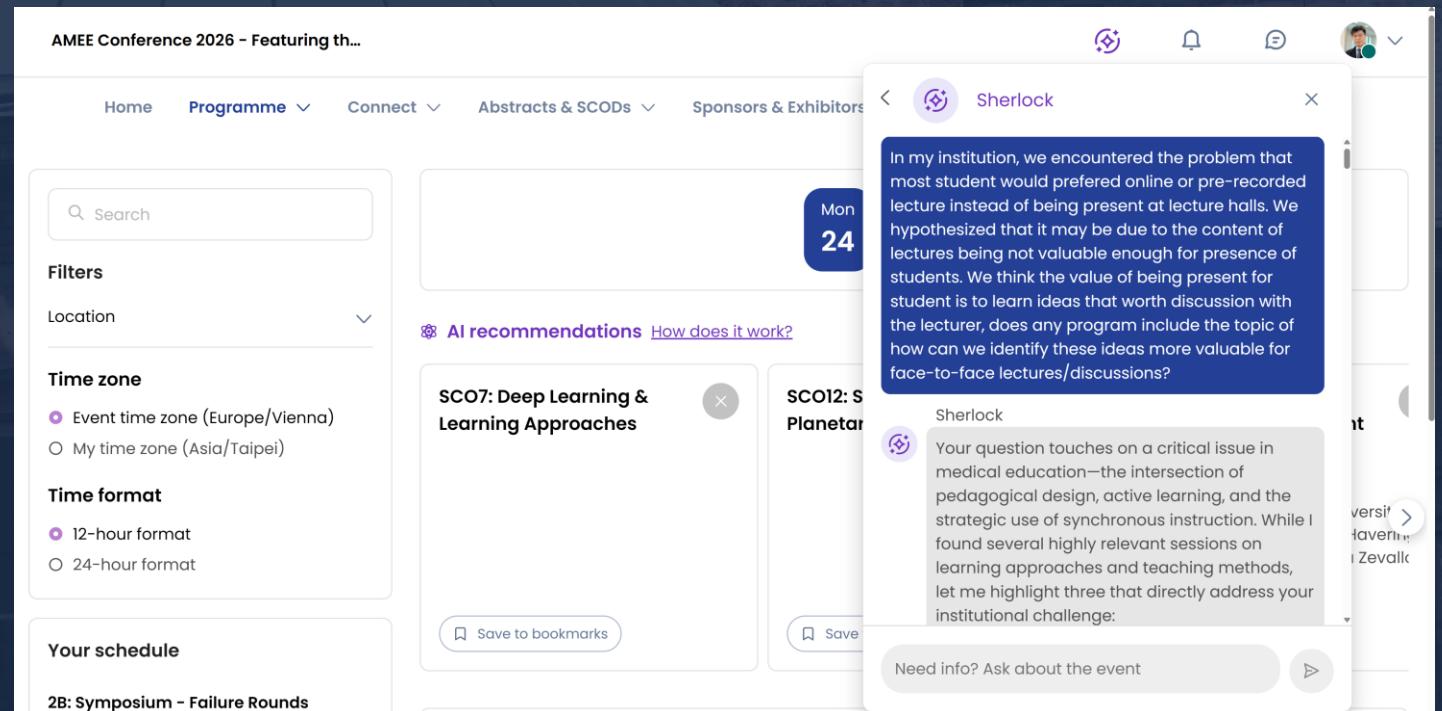
Problems I see as a fresh graduate

NCKUMED-only Edition (<3)

Seeking solutions at AMEE

AI chatbot Sherlock

- Organize sessions and participants in conversations
- Search target sessions with prompts



Problem 1: Basic science

- Isolated from clinical medicine
- Discrete information without integration
- Exam-cramming & Virtual lectures

- Why should we learn it?
 - What do students need?
 - What is our stance?
- (We should hold it!)

Knowledge structure of learning

- Why do we learn it?
(E.g. Lymphomas, HPV)
- Learning techniques matters



Dr. Philip Tisdall
@DrPhilipTisdall • 5.73萬位訂閱者 • 198 部影片

Welcome! I'm Dr. Philip Tisdall, Mayo-trained pathologist, award-winning educator, and author of *First Aid for the USMLE Step 1*.

drphilliptisdall.com 和另外 5 個連結

訂閱 社群

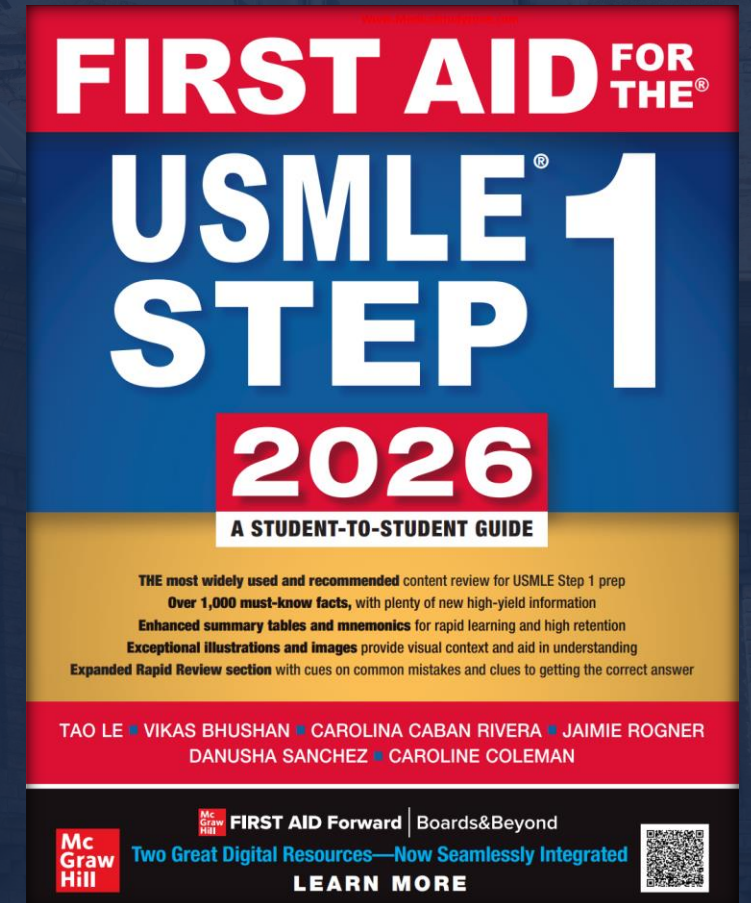
首頁 影片 Shorts Podcast 播放清單

最新 熱門 最早

STOP MEMORIZING EVERYTHING
Stop Memorizing Everything in Medical School
觀看次數：1.1萬次 • 2 天前

STOP STUDYING LIKE AN UNDERGRAD
Why Your Old Study Methods Stop Working in Medical School
觀看次數：1.1萬次 • 9 天前

SHE STUDIES HER OWN DISEASES
How Chronic Illness Changed the Way She Learns Medicine
觀看次數：3190次 • 2 週前



FIRST AID FOR THE USMLE STEP 1 2026
A STUDENT-TO-STUDENT GUIDE

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Over 1,000 must-know facts, with plenty of new high-yield information
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Exceptional illustrations and images provide visual context and aid in understanding
Expanded Rapid Review section with cues on common mistakes and clues to getting the correct answer

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Two Great Digital Resources—Now Seamlessly Integrated
LEARN MORE

Learning techniques

再加上一些適合大腦的學習技巧.....

► Active recall

- 主動回想已經學到的東西：
(問自己問題或主動描述)
 - 已經學的有哪些肌肉、有哪些神經血管？
 - 上下游的關係？支配的關係？
 - 異中求同，同中求異
 - 類似特徵還有哪個構造有？

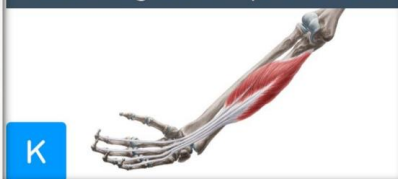
► Repetition

- 平常就開始念，有空就翻點書
- 不用第一次就背熟，剛開始先刷過
- 每次加深記憶

► Example :

由兩條神經支配的肌肉

Flexor digitorum profundus



Flexor Pollicis Brevis



如何從clerkship學習
(除了讀書之外)

醫學115 Clerk 鄧惟銘



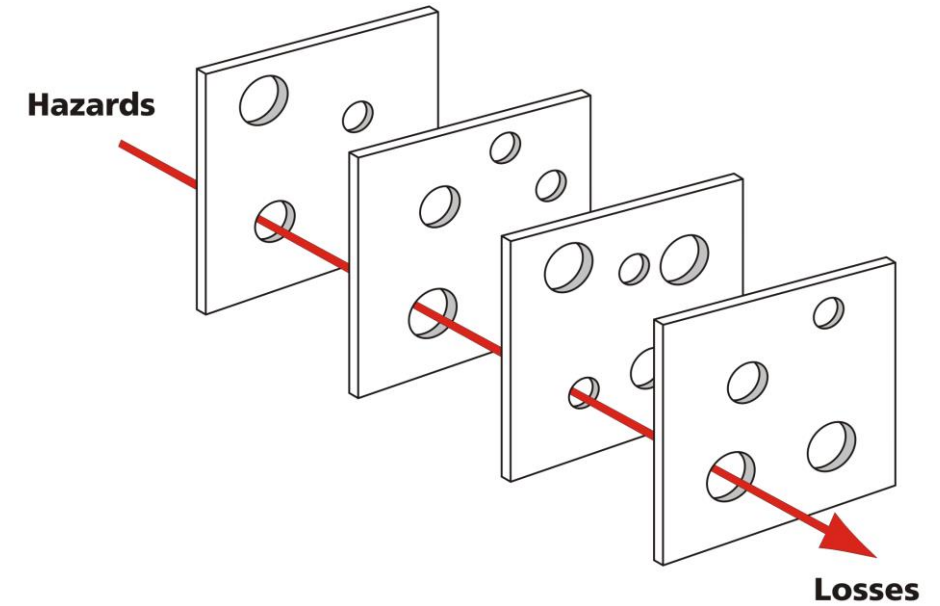
AMEE VIENNA 2026 — Personal debrief

Vienna

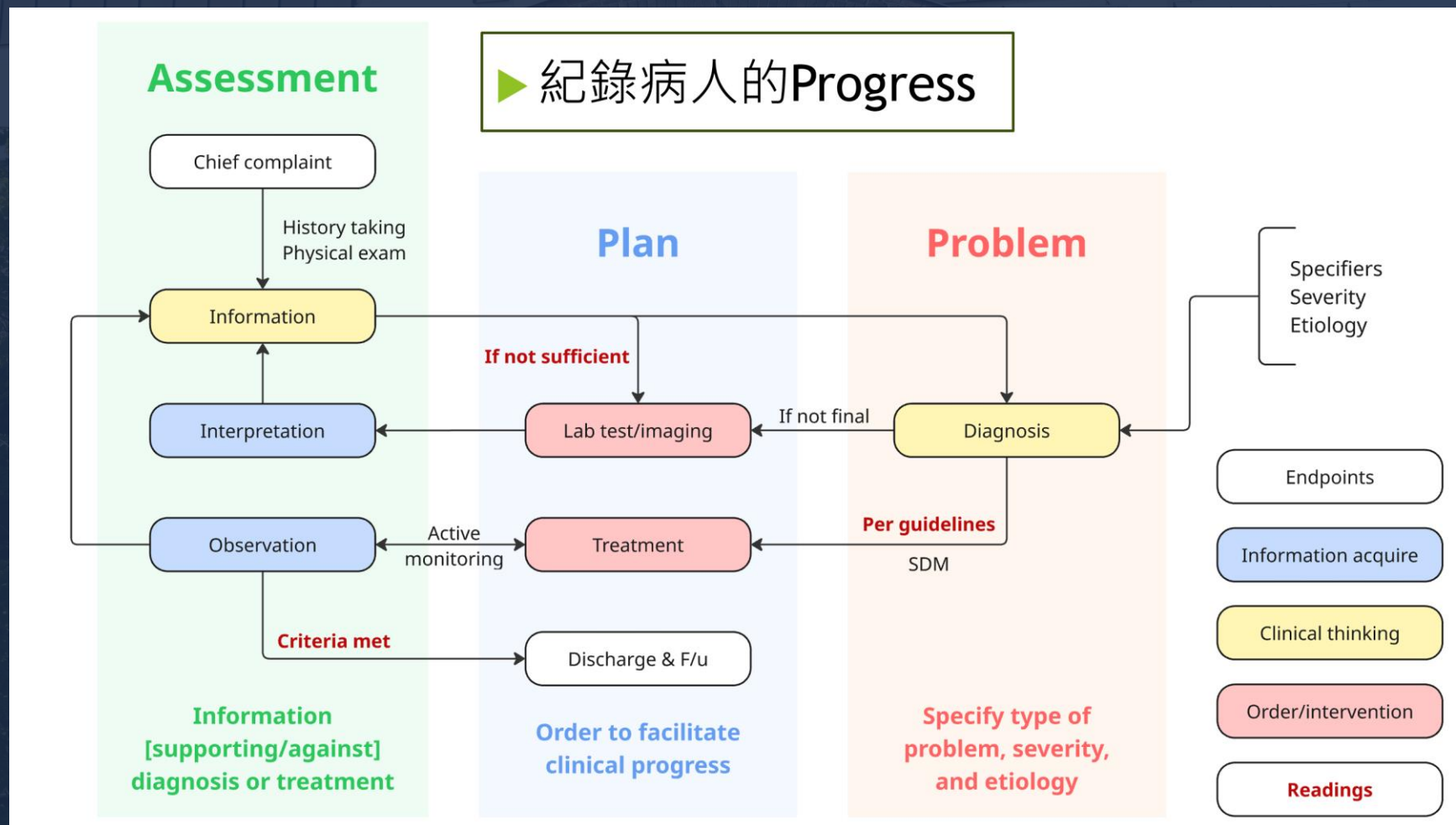


Problem 2: Clerkship

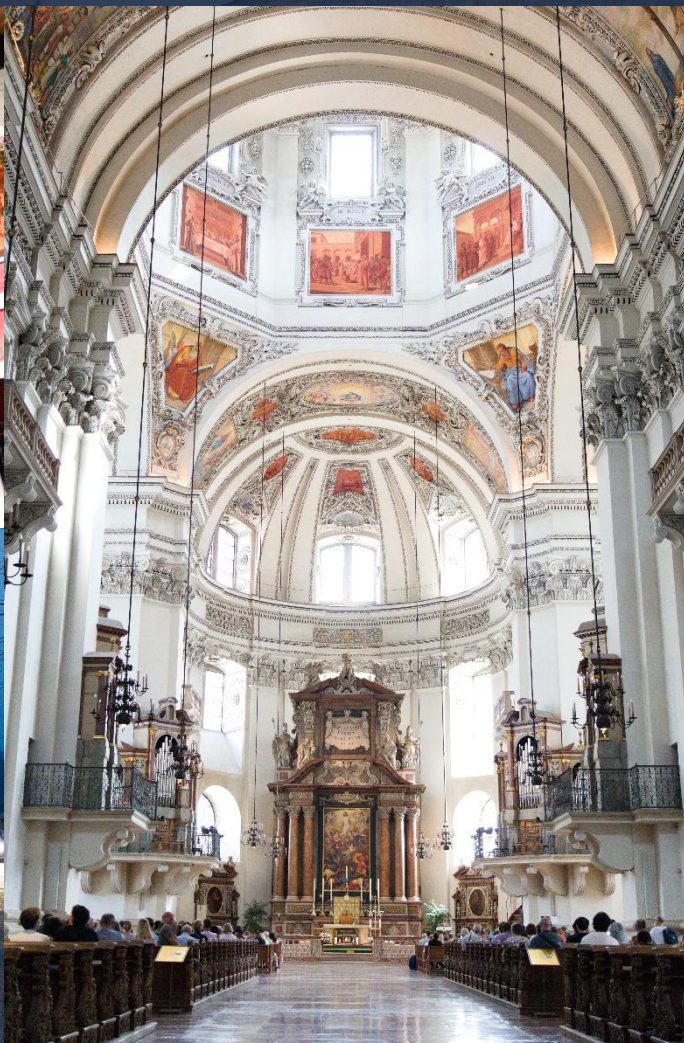
- Curricular lacuna
- Actual workflow skill
- Guidance on learning/studying
- Epistemic burnout



Workflow example

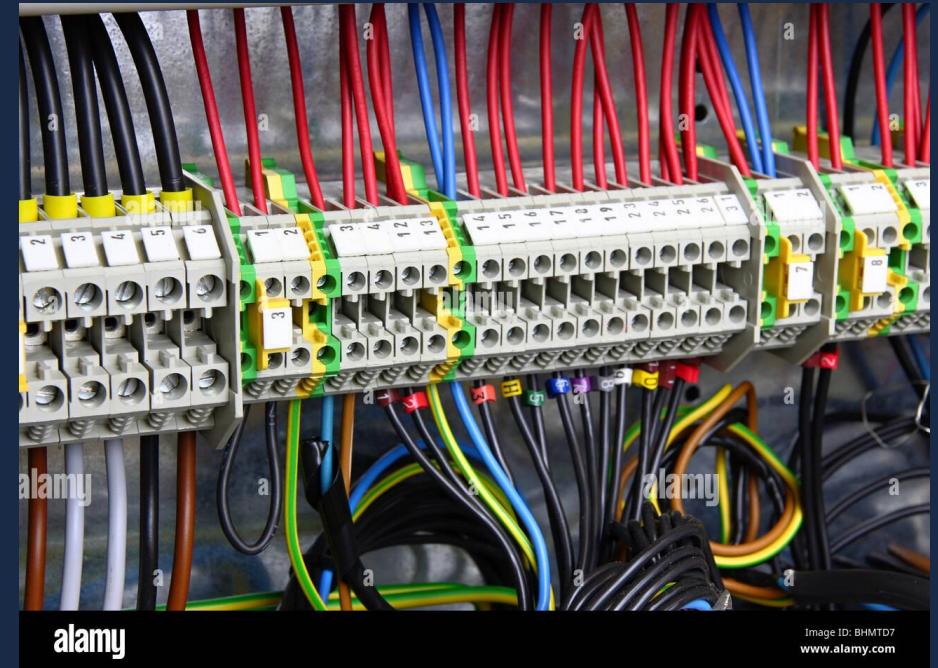


Salzburg



Problem 3: Academic research

- Matching labs & students
- **Consultation & advice (energy)**
- Publication-oriented vs. Learning skills



AMEE





Thank you
