Group Emulating Workshop Advances the Outcome in Teaching Evidence-Based Medicine

誠 樸 · 關 懷 · 卓 越 · 創 新
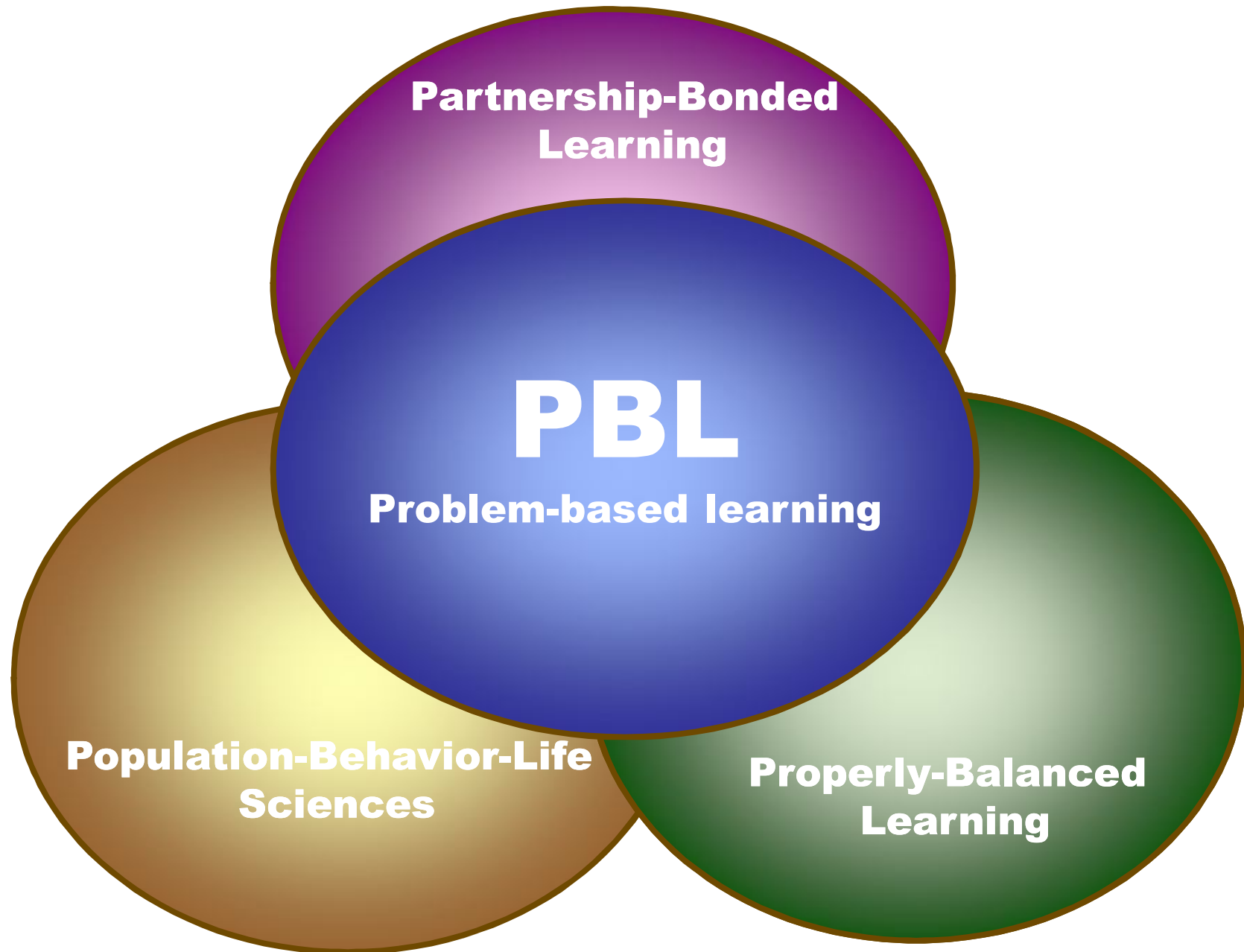
Taipei Medical University-Wan Fang Hospital

Department of Gastroenterology

Ming Shun Wu, M.D., Ph.D.

June 29. 2018

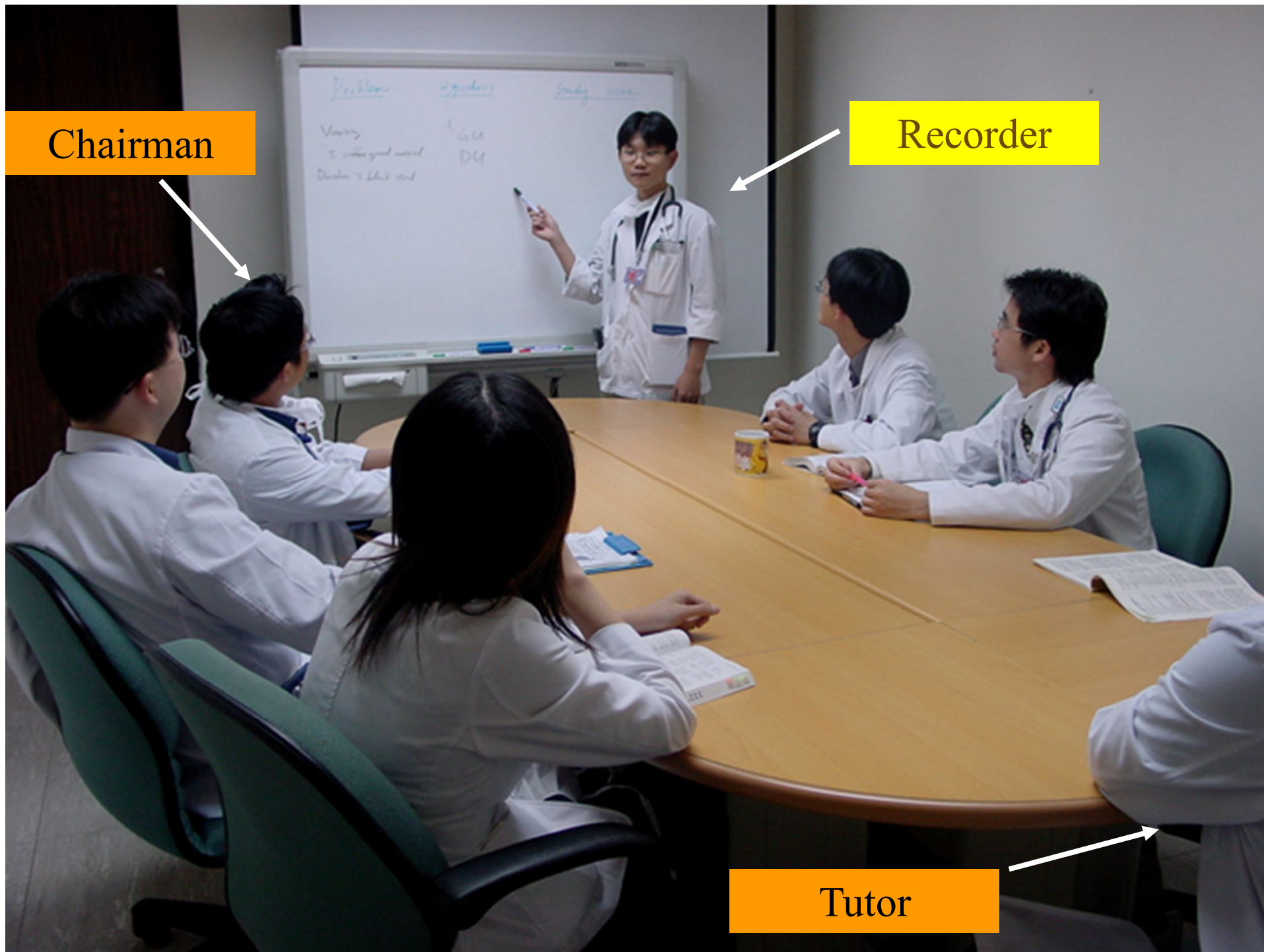# To teach students in accordance with their aptitude by group discussion
(因材施教)

- 子貢曰：「貧而無諂，富而無驕，何如？」子曰：「可也；未若貧而樂，富而好禮者也。」
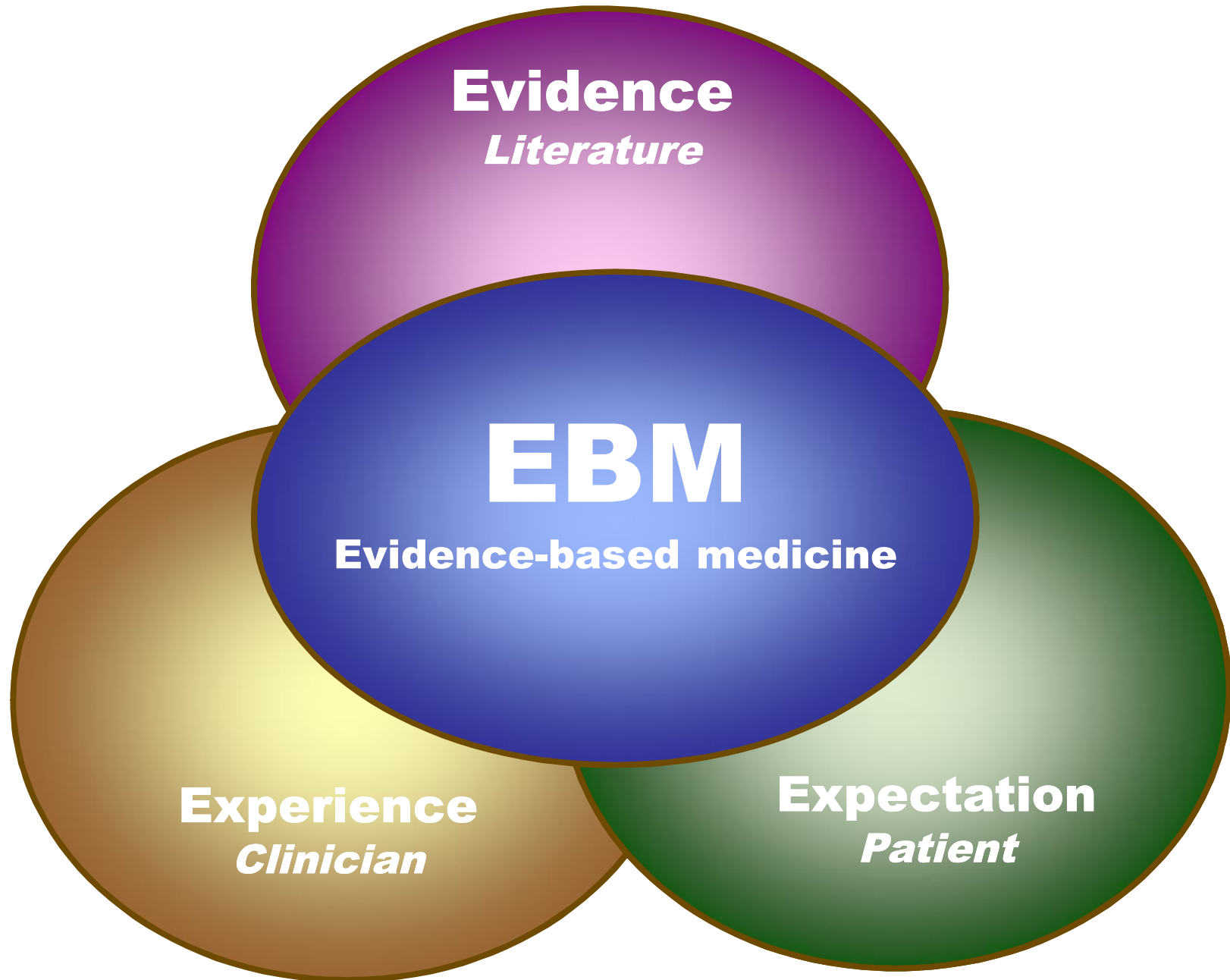- 子貢曰：「詩云：『如切如磋，如琢如磨』，其斯之謂與？」子曰：「賜也，始可與言詩已矣，告諸往而知來者。」

PBL process

- **Step 1**
  Identify facts & problems

- **Step 2**
  Hypothesis generation

- **Step 3**
  List need to know

- **Step 4**
  Formulate learning objectives

- **Step 5**
  Self-directed learning

- **Step 6**
  Group discussion and communication

- **Step 7**
  Feedback

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Part 1 問題形成

Part 2 文獻搜尋

資訊分享
過程稽核

Part 4 臨床應用

Part 3 文獻評讀
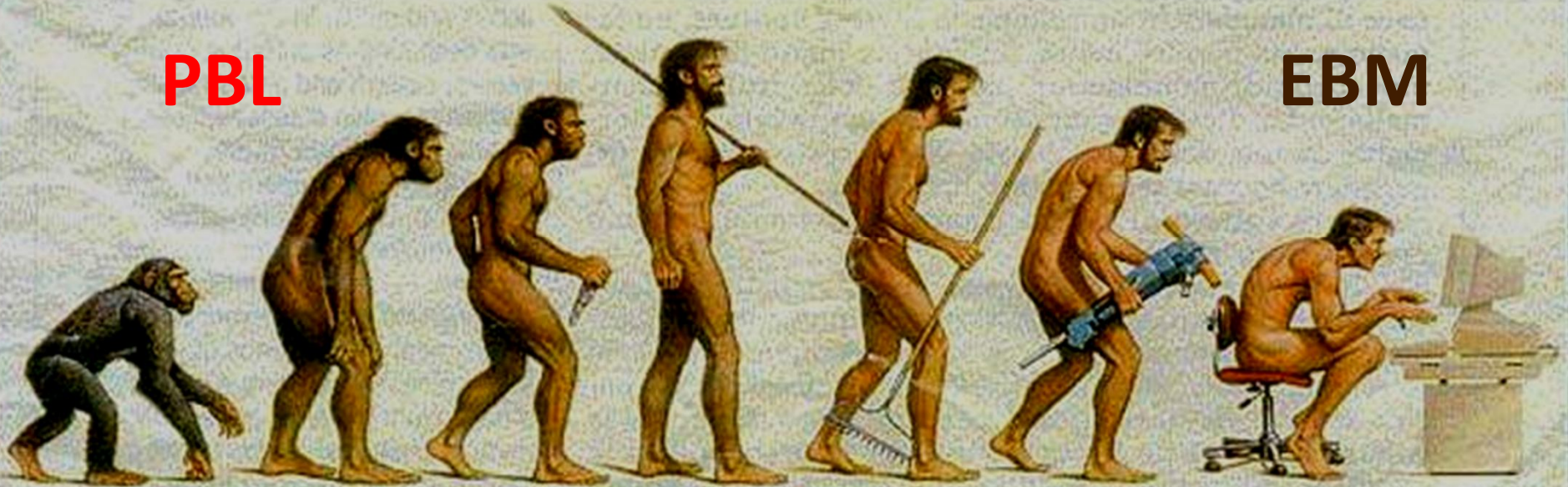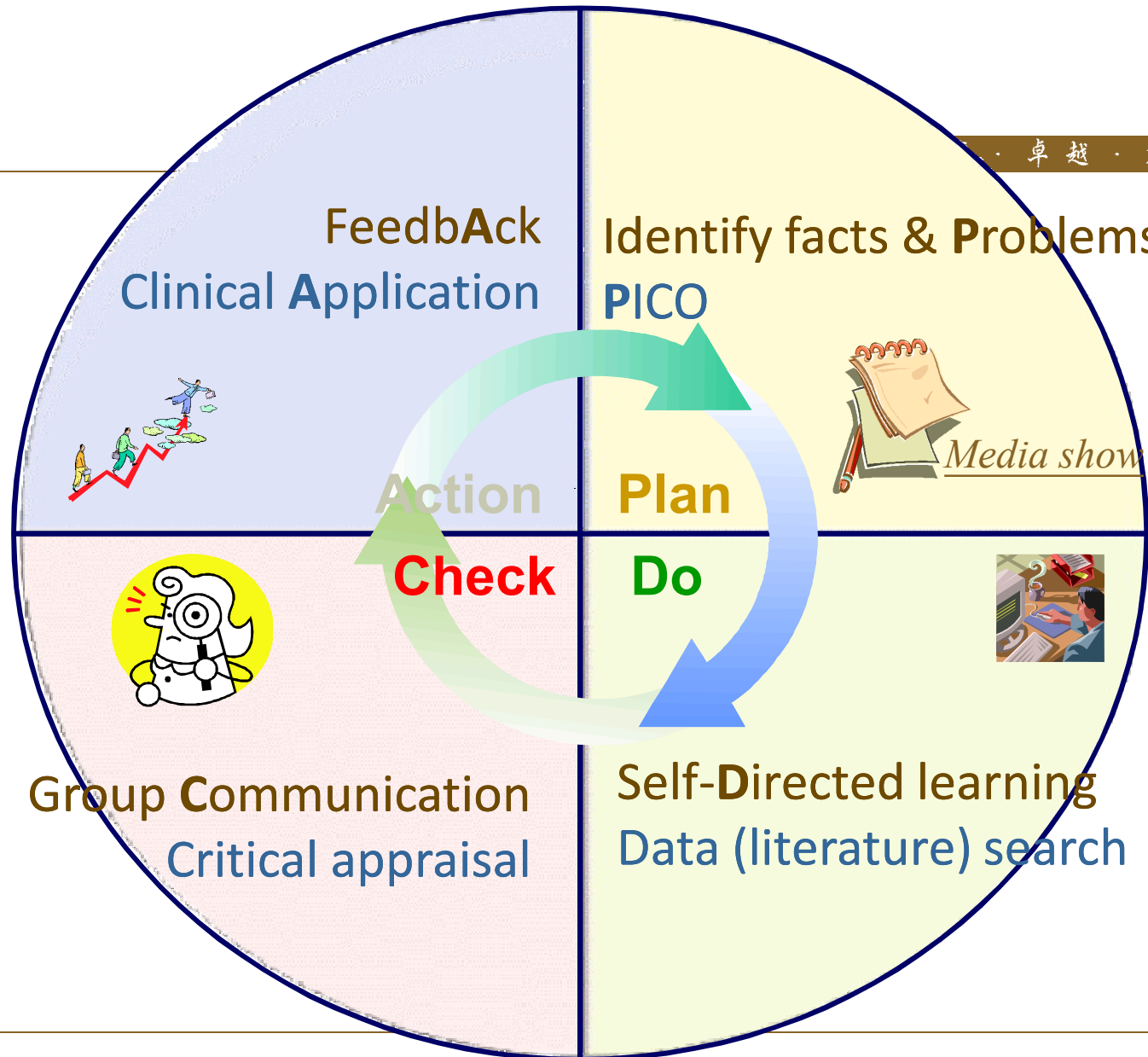
PDCA for PBL and EBM

4th Asia-Pacific Conference on Problem-based learning in the Health science

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INTEGRATION OF EVIDENCE-BASED MEDICINE AND PROBLEM-BASED LEARNING IN THE CLINICAL CURRICULUM OF CLERKSHIP

Wu, M.S., Lien, G.S., Chiu, W.T., Chen, C.F.

Taipei Medical University-Wan Fang Hospital, Taiwan

2003

Large class
Mini-lecture for EBM

Small groups tutorials

- Give a scenario →Ask clinical questions→ group discussion for PICO→ Define learning objectives

- Literature search→ group discussion for literature search→ Define learning objectives

- Critical appraisal→ group discussion for literature search→Define learning objectives

Small groups feedback and large class presentation

Back to the scenario → clinical application

Group Emulation Advances the Outcome in Teaching Evidence-Based Medicine

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以團體觀摩競賽提昇實證醫學的教學成效

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2007

Group emulating workshop

- Workshop is a practical way to clinicians, nurses and other medical staffs to learn evidence-based medicine (EBM).

- According to learning pyramid, practice and teaching each others increase knowledge retention rate.

- Group emulating workshop is an interesting way of practice and teaching.

Learning Pyramid （NTL, 1960's）

average student retention rates

5%	Lecture
10%	Reading
20%	Audiovisual
30%	Demonstration
50%	Discussion
75%	Practice doing
90%	Teach others
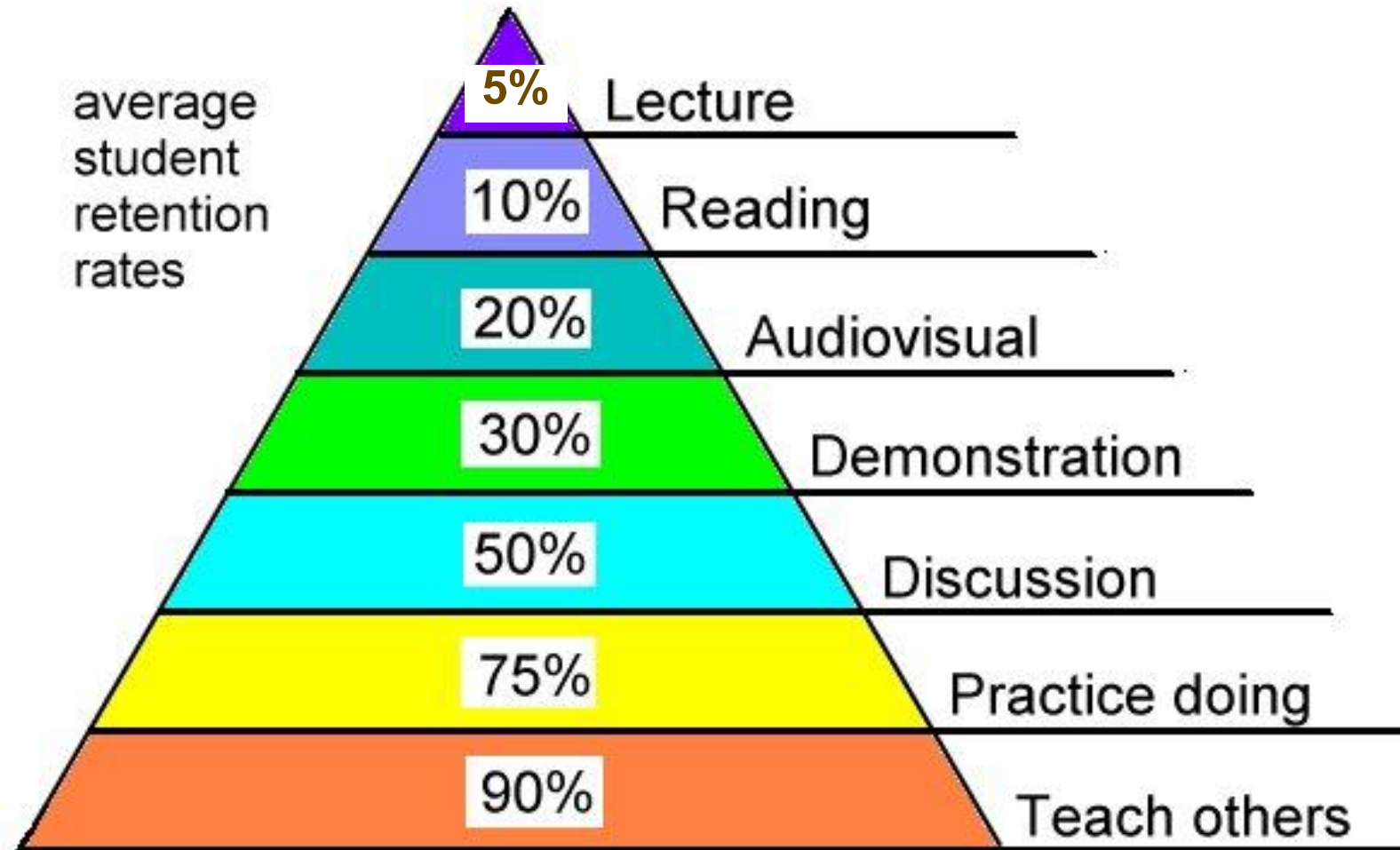
Source: National Training Laboratories, Bethel, Maine

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Five sessions of the workshop

- Formulate the possible questions of the topic

- Draw up searching strategies

- Critical appraisal

- Answer the questions in an easy to understand academic way.

- Group feedback.

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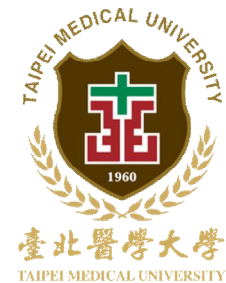
Results-1
Formulate questions

表一：臨床問題調查結果分析表(N=30)

問卷題目	前測(mean)	後測(mean)	顯著性
1.我能以 6W 形成背景問題(background question)?	2.50	4.00	$p=0.000$**
2.我能以 PICO 形成前景問題?	2.07	4.13	$p=0.000$**
3.我能判斷臨床問題的類型?(therapy、etiology/harm、diagnosis、prognosis/prevention、economic)	2.97	3.90	$p=0.000$**
4.在每天的工作中能不斷提出問題與尋求解答?	3.20	3.90	$p=0.001$**
5.提出可回答問題"answerable question"能力是否提升?	2.80	3.93	$p=0.000$**

註：*表 $p<0.05$* ；** $p<0.01$

Results-2
Literature search

表二：資料搜尋調查結果分析表(N=30)

問卷題目	前測(mean)	後測(mean)	顯著性
1.當我遇到臨到臨床問題時，能在 10 分鐘內下適當的關鍵字?	3.00	3.80	$p=0.001$**
2.可解決我臨床問題的最佳實證資料庫在那裡?	2.73	3.97	$p=0.000$**
3.我對於實證醫學主要的資料庫不陌生?如：Cochrane Library、 EBM Online 等等	2.30	3.67	$p=0.000$**
4.我能在 15 分鐘內，藉由搜尋軟/硬體，找出最佳診療證據?	2.27	3.27	$p=0.000$**
5.我能從更寬廣的(widening)資源中，找到有用的外部證據?	2.23	3.37	$p=0.000$**
6.我會使用 PubMed 的 Clinical Queries?	2.33	3.57	$p=0.000$**
7.我會儲存搜尋策略字串?	2.30	2.93	$p=0.017$*

註：*表 $p<0.05$*；** $p<0.01$

Results-3
Critical appraisal

表三：文獻評讀調查結果分析表(N=30)

問卷題目	前測(mean)	後測(mean)	顯著性
1.我了解實證醫學常用的專有名詞?例如：OR、EER、RCT、ITT 等等	1.77	3.30	$p=0.000**$
2.我了解 Oxford level of evidence?	1.73	2.83	$p=0.000**$
3.我能嚴格評讀所搜尋到的文獻證據?	1.93	3.07	$p=0.000**$

註:*表 $p<0.05$* ：** $p<0.01$

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Team-based learning
A potential solution to the problems of large classes
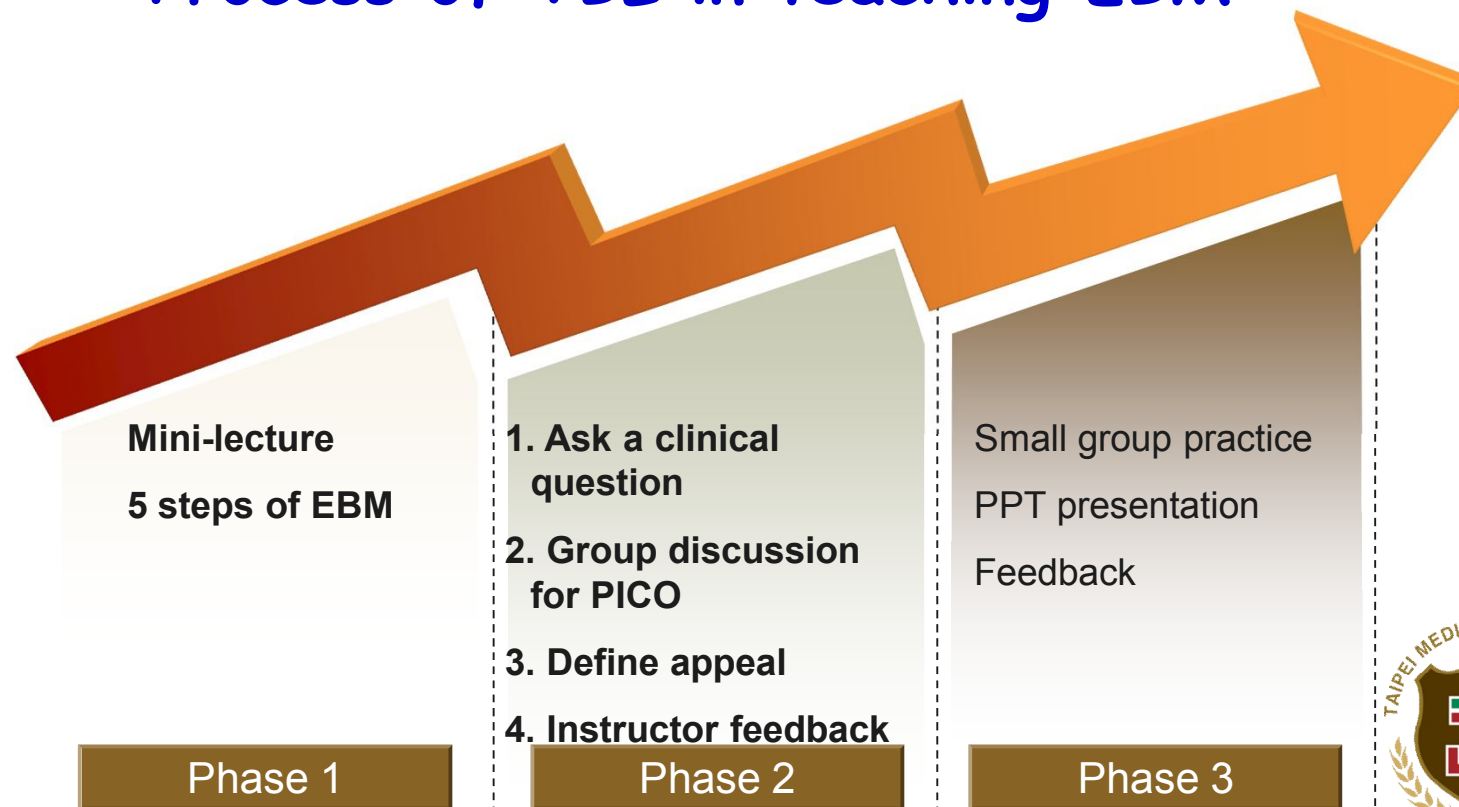
■ Principle 1 — Groups Must Be Properly Formed and Managed

■ Principle 2 — Students Must be Made Accountable
Principle 3 — Team Assignments Must Promote Both Learning and Team Development
Principle 4 — Students Must Receive Frequent and Immediate Feedback

Michaelsen, L.K. et al. (1982) . *Exchange: The Organizational Behavior Teaching Journal*

Team-Based Learning Phases

Phase 1	Phase 2	Phase 3
Preparation (pre-class)	Readiness Assurance	Application of Course Concepts

Individual Study — Instructor Feedback — Small-group Assignments

Written Group Appeals

Group Test

Individual Test
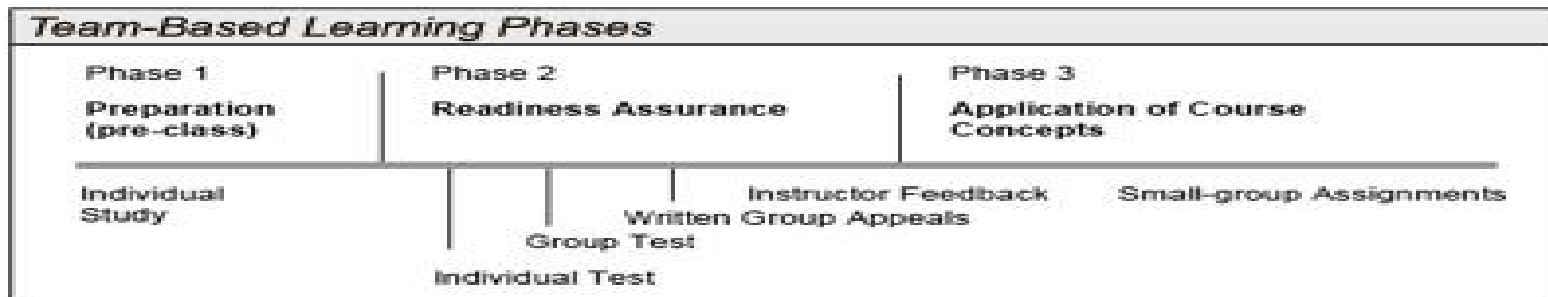
Process of TBL in teaching EBM

Mini-lecture

5 steps of EBM

Phase 1

1. Ask a clinical question

2. Group discussion for PICO

3. Define appeal

4. Instructor feedback

Phase 2

Small group practice

PPT presentation

Feedback

Phase 3

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Conclusion

- Group emulation workshop can facilitate teaching EBM.

- Network instruction in each small group improves the EBM learning process.

- Group feedback is the key point in group emulation workshop.

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Thank you!