

# 確立學習目標與選擇教學技法

## 臨床教學-實習指導

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# 綱要

- 了解教學任務
- 了解教學對象的學習需求
- 如何敘述教學(學習)目標
- 根據學習目標選擇適切學習活動
- 如何評價教學
- 結論

# 臨床教學常見的問題

## Common problems with clinical teaching

- 缺乏目標與對學習(結果)預期
- 重視事實與記憶缺乏問題解決技能與態度
- 目標訂得 不實際 (往往太高)
- 學生多被動觀察少主動參與 (你少給機會)
- 不當督導與缺少回饋
- 缺少反省與檢討機會
- 受到屈辱
- 未得到實習對象(患者)的同意
- 忽略對患者的隱私與尊嚴
- 缺乏對整體課程橫向與縱向關聯

# 臨床教學面臨的挑戰

## Challenges of clinical teaching

- 時間的壓力
- 需求之間的問題衝突(病人需求與學生需求、指導學生或是辦理行政或是做研究?)
- 偶發事件使計畫難以照原定實行
- 學生越來越多(越不像樣?)
- 僧多粥少(醫院的 容量規劃)實習單位與委託學校的契約?
- 資源缺乏
- 環境(如病房)對教學學習不夠友善>>不利教學指導進行
- 醫院與學校對實習指導者的回饋不夠

# Clinical Teaching Techniques

<http://medicaleducation.wetpaint.com/page/Clinical+Teaching+Techniques>

- There are **six** major tasks required of clinical teachers:
  1. Preparing your work environment
  2. Orienting the learner
  3. Facilitating learners developing the thinking skills of physicians
  4. Facilitating learners ability to act like physicians
  5. Assessing learners progress in becoming physicians
  6. Assessing your effectiveness as a clinical teacher.

# 了解學習者

- Next page



# Howard Gardner's multiple intelligences theory (你的學生屬於哪一型?)

<http://www.businessballs.com/howardgardnermultipleintelligences.htm>

<b>intelligence type</b>	<b>capability and perception</b>
<b>Linguistic</b>	words and language
<b>Logical-Mathematical</b>	logic and numbers
<b>Musical</b>	music, sound, rhythm
<b>Bodily-Kinesthetic</b>	body movement control
<b>Spatial-Visual</b>	images and space
<b>Interpersonal</b>	other people's feelings
<b>Intrapersonal</b>	self-awareness

# 學習過程

## The Experiential Learning Cycle

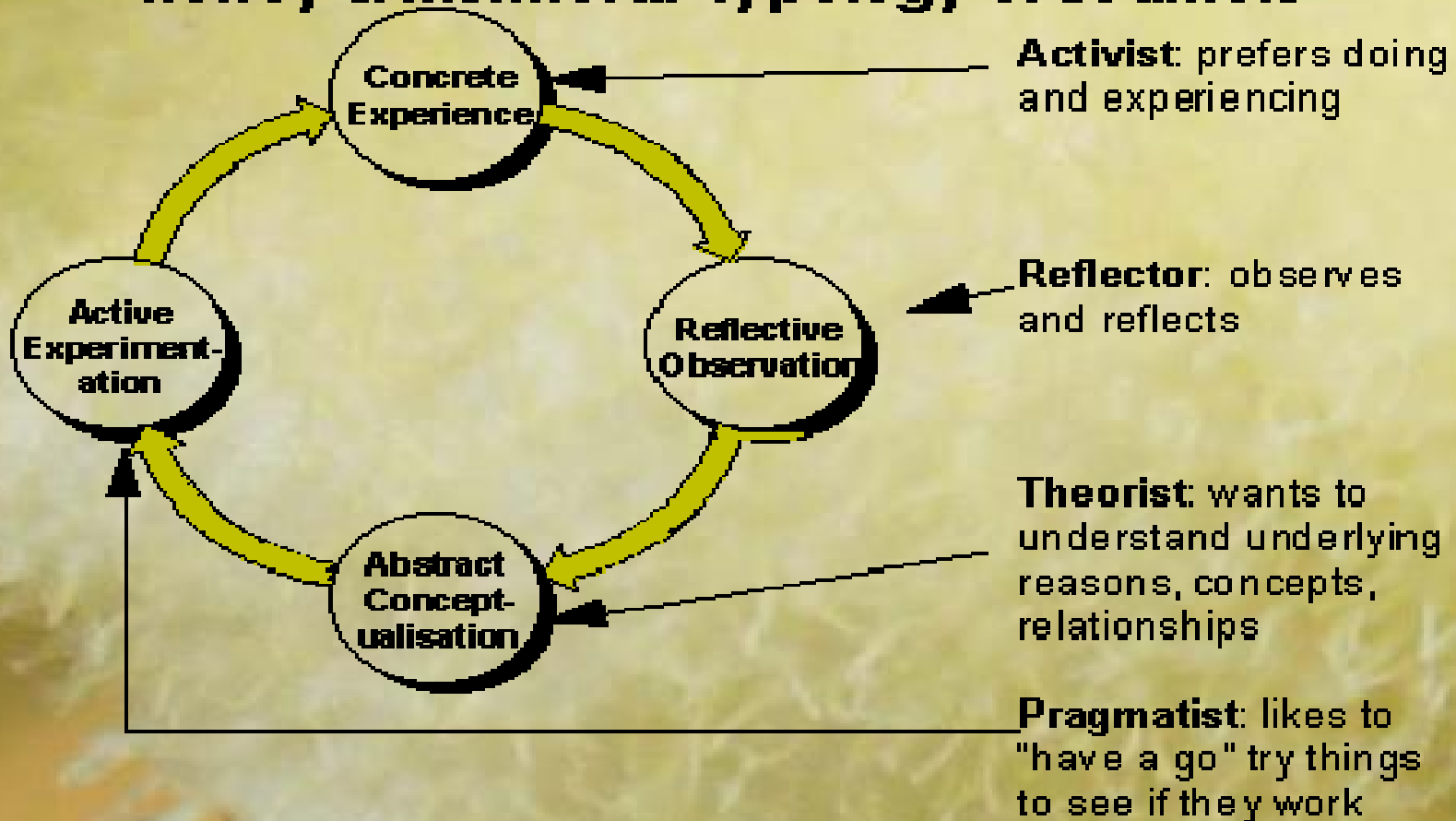
- [Kolb \(1984\)](#) [成人學習模式](#) provides one of the most useful (but contestable) descriptive models available of the adult learning process, inspired by the work of [Kurt Lewin](#).
- KOLB D A (1984) *Experiential Learning: experience as the source of learning and development* New Jersey: Prentice-Hall (0 13 295261 0)



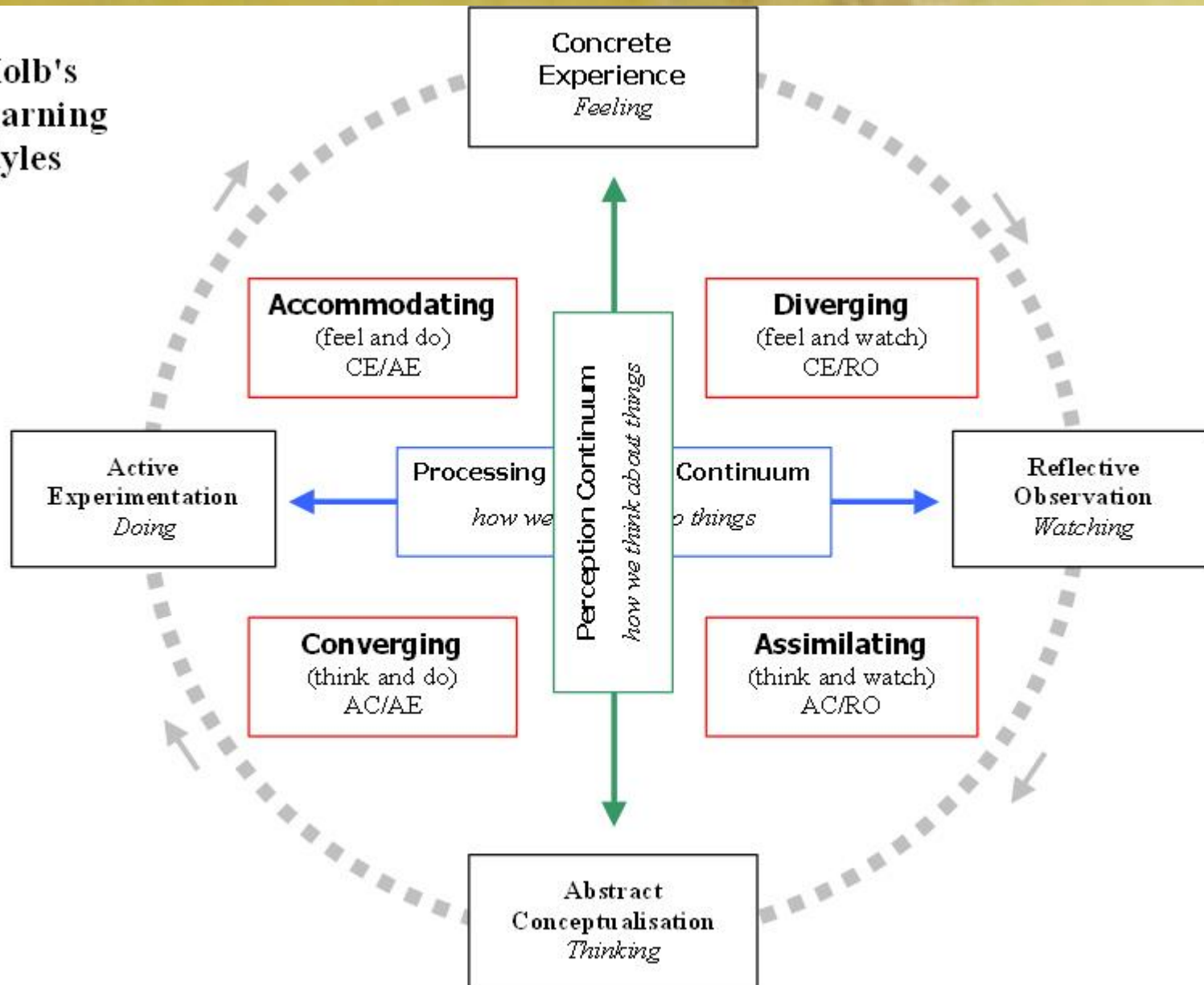
# Experiential Learning Styles

## Honey and Mumford (1982)的分型

### Honey & Mumford: Typology of Learners



# Kolb's learning styles



© concept david kolb, adaptation and design alan chapman 2005-06, based on Kolb's learning styles, 1984  
Not to be sold or published. More free online training resources are at [www.businessballs.com](http://www.businessballs.com). Sole risk with user.

# 技能(**skills**)學習的內容

- 知識/認知(**understanding**)
- 情意/態度(**feeling**)
- 技能/ 動作(**doing**)

# Bloom's taxonomy

## Bloom's學習領域分類

- 1. **Cognitive domain** 認知(intellectual capability, ie., **knowledge**, or '**think**')
- 2. **Affective domain** 情意(feelings, emotions and behaviour, ie.**attitude**, or '**feel**')
- 3. **Psychomotor domain** 技能(manual and physical skills, ie., **skills**, or '**do**')

# Learning Objectives

- 沒有確立目標，貿然進行教學，就如同開著船，航向茫茫的大海，不知去向！

# 為何要敘述學習目標(略)

## 3 points

- 1 Use the objectives to plan the learning activities students will engage in to facilitate their learning. 有目標才能計畫學習活動
- 2 The objectives tell you how the student should be assessed. 才有評價學習的依據
- 3 Students use objectives to plan how and what they will study. 提供學習者計畫其學習

下頁摘要



# 學習目標的用處

- 學習活動發展的依據
- 評價學習效果的依據
- 學生計畫學習的依據

# Writing Objectives 目標敘述的要件

- In order to be useful, objectives need to meet the following criteria:

1 Student Centered

2 Measurable

3 Achievable

4 Relevant

5 Timely

- Who, where, what, how, how much, when.

# 目標訂定前的思考

ask yourselves the following **questions**:

- 1 What should my students be able to do intellectually, physically, or emotionally as a result of what they learn at my station?

Answering the following questions will help you to write objectives:

- What do I expect the student **to be able to do** as a result of my instruction?
- How will the student **demonstrate** that he/she has learned?

# 耕自己的田不要耕別人的田



# A Practical Guide for Writing Objectives

Step	Question that might help
1. Review the competencies for the entire course or clinical experience	What are participants expected to learn by the time they finish the term?
2. Write a general goal.	What do I want participants to learn in my sessions?
3. Ask yourself "Why?"	Why do I want participants to learn this (connect theory and professional practice)?
4. Ask yourself, "How will I know that my goal has been reached?"  (This question begins the link to your assessment strategy.)	What do I expect the learners to be able to do as a result of my instruction?  In a short presentation, how can I find out if learning is occurring?
5. Write the objective(s).	<b>Student Centred</b> <b>Measurable</b> <b>Achievable</b> <b>Realistic</b> <b>Timely</b>
6. Check the objective for clarity.	

# 目標敘述舉例

**Upon completion of this unit, the student will be able to do:**

- **describe** the mechanisms of action, the pharmacological effects, the therapeutic actions, and the adverse effects of lithium.
- Provided with the necessary equipment, the student will be able to **intubate** a patient with minimum discomfort to the patient.



# Examples of **Poorly** Written Objectives

- The student will **understand** the basic sciences which are appropriate to taking a patient history (*How will you know that they understand? Can you teach this in an hour?*)
- I will **teach** Module 1 today. (*What will people expect to learn from Module 1?*)
- Students will **read** Chapter 22 (*Why? What do you expect students to learn from Chapter 22?*)
- Students will be able to **understand** the theory of evolution. (*What do the students need to understand? Why would medical students need to know this?*)

# Examples of Medical Objectives

- The student will **access** on-line medical information about asthma treatment.
- The resident will **create** a therapeutic and ethically sound relationship with patients.
- The resident will **describe** how other members of the medical team collaborate in the treatment of people with diabetes.
- Upon completion of this session, you will be able to **manage** the short-term medical and surgical treatment of patients with bowel obstruction.

# 激發主動參與 教學者的功能

- 激發主動參與學習 **Active Engagement**
- <http://medicaleducation.wetpaint.com/page/Active+Engagement>
- Ideal teachers : use themselves as bridges over which they invite their students to cross, 當作學生學習的橋樑
- then having facilitated their crossing, encouraging them to create bridges of their own. 加速學習鼓勵自己架橋 (Nikos Kazantzakis)

# 技能學習的一些理論

- **Four stages theory (learning cycle) 四階段論**
- **The Prochaska and DiClemente stages of change (TTM) 跨理論模式**
- **Schmidt's Schema 基模 Theory (1975)**

# 新技能的學習

## How do we teach a new skill?

*The teaching of a new skill can be achieved by various methods:*

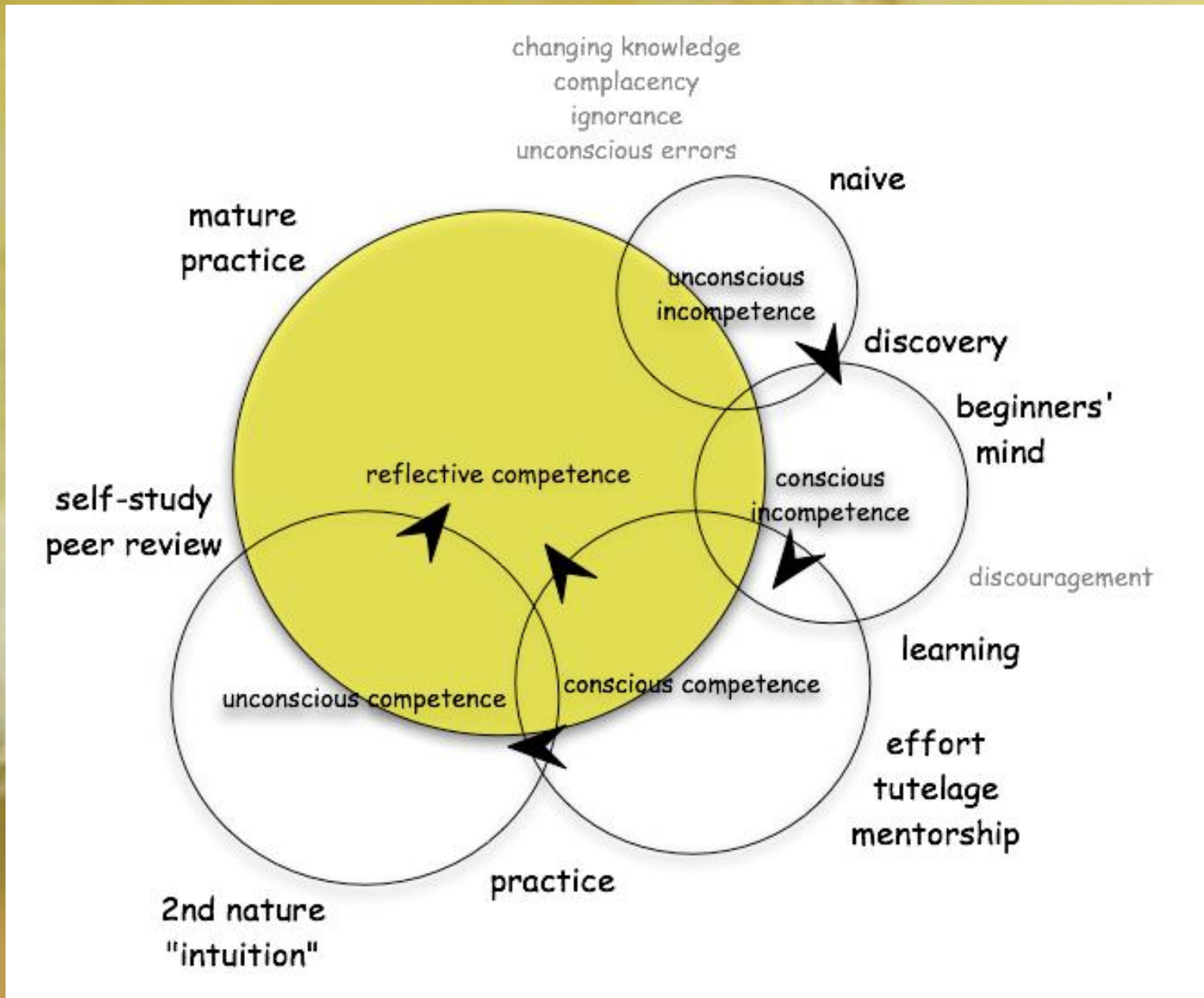
- Verbal instructions
- Demonstration
- Video
- Diagrams
- Photo sequences
- Computer simulation
- Others



# 4 stages learning cycle and teaching strategies

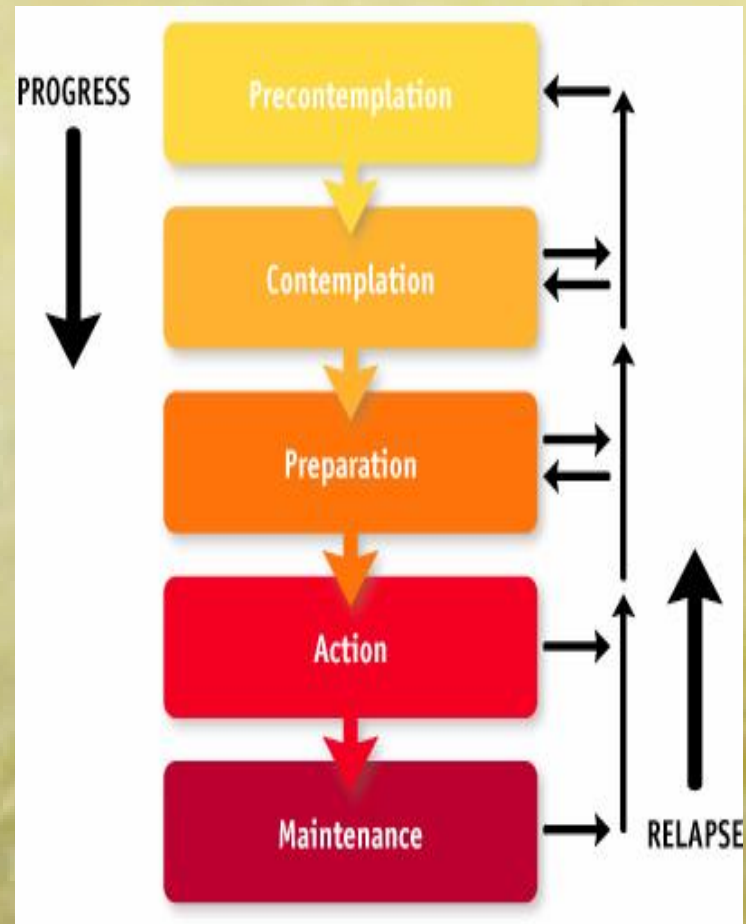
<b>Stage</b>	<b>Learner Needs</b>	<b>Teaching activity</b>
<b>Unconsciously Incompetent</b>	Awareness	Experiential learning Videotape/audiotape Feedback (in extreme cases of incompetence, multiple sources of feedback)
<b>Consciously Incompetent</b>	Teaching	Role modelling Direct teaching
<b>Consciously Competent</b>	Practice	Feedback Supervision
<b>Slip</b>	Reassurance	Constructive feedback Opportunity to correct errors
<b>Unconsciously Competent</b>	Independence	New Challenges





# The Prochaska and DiClemente stages of change (TTM)

- Pre-contemplation
- Contemplation
- Preparation
- Action
- Maintenance/Relapse
- 



# Prochaska and DiClemente's Stages of Change Model

Stage of Change	Characteristics	Techniques
Pre-contemplation	Not currently considering change: "Ignorance is bliss"	Validate lack of readiness Clarify: decision is theirs Encourage re-evaluation of current behavior Encourage self-exploration, not action Explain and personalize the risk
Contemplation	Ambivalent about change: "Sitting on the fence" Not considering change within the next month	Validate lack of readiness Clarify: decision is theirs Encourage evaluation of pros and cons of behavior change Identify and promote new, positive outcome expectations
Preparation	Some experience	Identify and assist in

# Prochaska and DiClemente's Stages of Change Model

<b>Preparation</b>	<p>Some experience</p> <p>change: "Testing the waters"</p> <p>Planning to act within 1 month</p>	<p>Identify and assist in</p> <p>Help patient identify social support</p> <p>Verify that patient has underlying skills for behavior change</p> <p>Encourage small initial steps</p>
<b>Action</b>	<p>Practicing new behavior for</p> <p>3-6 months</p>	<p>Focus on restructuring cues and social support</p> <p>Bolster self-efficacy for dealing with obstacles</p> <p>Combat feelings of loss and reiterate long-term benefits</p>
<b>Maintenance</b>	<p>Continued commitment to sustaining new behavior</p> <p>Post-6 months to 5 years</p>	<p>Plan for follow-up support</p> <p>Reinforce internal rewards</p> <p>Discuss coping with relapse</p>
<b>Relapse</b>	<p>Resumption of old behaviors: "Fall from grace"</p>	<p>Evaluate trigger for relapse</p> <p>Reassess motivation and barriers</p> <p>Plan stronger coping strategies</p>

# 3 Stages Skill Development

- The Learning Phases - Fitts & Posner ((1967)
- 3 stages of learning a new skill
- **Cognitive phase** - Identification and development of the component parts of the skill - involves formation of a mental picture of the skill
- **Associative phase** - Linking the component parts into a smooth action - involves practicing the skill and using feedback to perfect the skill
- **Autonomous phase** - Developing the learned skill so that it becomes automatic - involves little or no conscious thought or attention whilst performing the skill - not all performers reach this stage



# Schmidt's Schema Theory (1975)

- the initial conditions - starting point
- certain aspects of the motor action - how fast, how high
- the results of the action - success or failure
- the sensory consequences of the action - how it felt
-



<b>Cognitive</b>	<b>Affective</b>	<b>Psychomotor</b>
<b>knowledge</b>	<b>attitude</b>	<b>skills</b>
1. Recall data	1. Receive (awareness)	1. Imitation (copy)
2. Understand	2. Respond (react)	2. Manipulation (follow instructions)
3. Apply (use)	3. Value (understand and act)	3. Develop Precision
4. Analyse (structure/elements)	4. Organise personal value system	4. Articulation (combine, integrate related skills)
5. Synthesize (create/build)	5. Internalize value system (adopt behaviour)	5. Naturalization (automate, become expert)
6. Evaluate (assess, judge in relational terms)		

# Assessment 評價

- Assessment is the third step in the planning process for classroom teaching.
- Linking Objective, Learning Activity and Assessment

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### Linking Objective, Learning Activity and Assessment

Classification	Instructional Objectives <b>The learner will be able to:</b>	Learning Activities/ Teaching Method	Assessment Methods
<b>Remembering</b> Recalling specific information	Recognise List Describe Identify Retrieve Name Locate/Find	Graphic Organizers Mnemonics Crosswords Puzzles Jeopardy or other games Note Taking Drill and Practice Flash Cards	Simple Multiple Choice (MCQ) True/False Fill in the blank Label Diagram
<b>Explaining</b> Explaining ideas or concepts	Interpret Summarise Infer Paraphrase Classify	Concept mapping Short Case Cooperative Task Write, Pair, Share	Short Case Presentation Short Answer Blog/Journal Graphing Matching Short Presentation

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	<b>Explaining</b> Explaining ideas or concepts	Interpret Summarise Infer Paraphrase Classify Explain Attribute	Concept mapping Short Case Cooperative Task Write, Pair, Share  Role Play Matching Games	Short Case Presentation Short Answer Blog/Journal Graphing Matching Short Presentation Poster Session MCQ with vignettes
	<b>Applying</b> Using information in another familiar situation	Implement Carry out Use Execute Operate Take Perform	Simulation Lab Discuss Rounds Cases Standardized Patients Virtual Patients Chart Review 5 Step Procedure Teaching Field Trips	Demonstration Case Study SOAP 360 Assessment Patient/family Assessment OSCE MCQ with vignettes
	<b>Analyzing</b> Breaking information into parts to explore understandings and relationships	Analyse Compare Contrast Organize Deconstruct Outline Structure	Collaborative Tasks PBL Spreadsheets Research Project 5 Minute Preceptor Writing a Wiki Reflection	Survey Report Paper Project Report Group Presentation Grand Rounds Create a Mind Map Reflective Writing

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	<b>Analyzing</b> Breaking information into parts to explore understandings and relationships	Analyse Compare Contrast Organize Deconstruct Outline Structure Integrate	Collaborative Tasks PBL Spreadsheets Research Project 5 Minute Preceptor Writing a Wiki Reflection Problem Solving Open Ended Questions Complex Case Study Concept mapping	Survey Report Paper Project Report Group Presentation Grand Rounds Create a Mind Map Reflective Writing Problem Identification Extended Matching MCQ
	<b>Evaluating</b> Judging the value of ideas, materials and methods by developing and applying standards and criteria	Check Hypothesise Critique Judge Test Detect Experiment Monitor Value	PBL Complex Case Study Research Project Discussion Critical Thinking Exercises Critiquing Exercises Feedback Error Identification  Reflection	Peer Review Create Rubrics Comparison Report Criteria Selection Tasks Error Identification Project Report Rubric

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	<p><b>Evaluating</b> Judging the value of ideas, materials and methods by developing and applying standards and criteria</p>	<p>Check Hypothesise Critique Judge Test Detect Experiment Monitor Value</p>	<p>PBL Complex Case Study Research Project Discussion Critical Thinking Exercises Critiquing Exercises Feedback Error Identification</p> <p>Reflection</p>	<p>Peer Review Create Rubrics Comparison Report Criteria Selection Tasks Error Identification Project Report Rubric</p>
	<p><b>Creating</b> Putting together ideas or elements to develop an original idea or engage in creative thinking</p>	<p>Design Construct Plan Produce Invent Devise Make Build</p>	<p>Produce a Video, Art, Animation, Photograph, Roleplay, Concert, Game, Practice Guidelines Build a Model, Simulation Publish a Blog, Journal Article, Poster Session</p>	<p>Final Product Rubric Peer Review Expert Review Creativity Rubric</p>

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# 參考資料

- 劉俊昌 健康教學方法 五南圖書公司
- <http://medicaleducation.wetpaint.com/>
- <http://processcoaching.com/fourstages.html>
- <http://www.brianmac.co.uk/tech.htm>
- <http://www.businessballs.com/kolblearningstyles.htm>
-

# 考考你！

下列各題敘述，你認為有道理（劃○）或沒道理（劃X）？

- 1.沒有學習目標就無法規劃學習活動
- 2.沒有學習目標就無從評價教學成效
- 3.教學目標的敘述，要以學習者為中心
- 4.教學目標的訂定要可以測量
- 5.教學目標的訂定要實際，可以達成
- 6. 技能的指導也要同時兼顧知識和情意層面的學習
- 7. **Unconsciously competent**是指學習者仍處在茫然無知的狀態