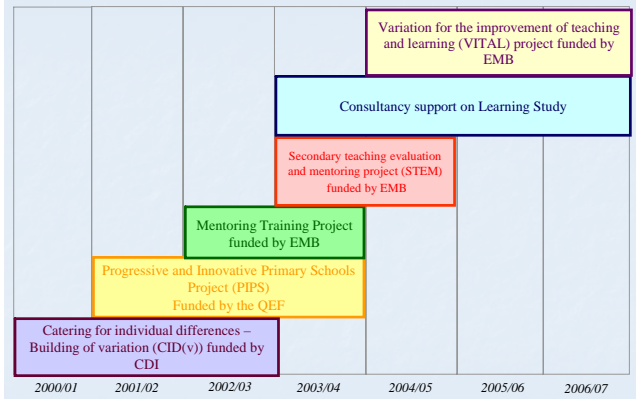


2nd International Conference on Learning Study

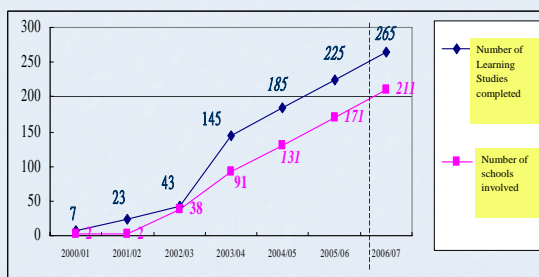
What we can learn from Learning Study in Hong Kong

Lo Mun Ling

The Development of Learning Study in H.K.



Number of Learning Studies completed and number of schools involved



Unpacking the object of learning

An object of learning is :

What the students should learn

The predominant view – standards driven movement

“In the industrial-era school, the process is standardized and the outcomes are variable.

In contrast, the information-era school **holds outcomes constant** and makes the process variable.”

Levine, A (2006). Will Universities maintain control of teacher education? Change, 38, 4. Academic Research Library, p.36.

Arthur Levine was president of Teachers' College Columbia University for 12 years.

...the outcomes of teaching are conceived as measurable outputs. As such, they are specified in a form which renders them predictable and amenable to technical control by the teacher. Within the OBE framework, ‘evidence-based teaching’ can be characterized as a means of improving teaching as a form of technical control over the production of learning outcomes, thereby rendering them increasingly predictable.”

(Elliott, 2006: p. 133).

Teaching, as seen by educators like Maxine Greene, is a question of trying **to empower persons to change their own worlds in the light of their desires and their reflections, not to change it for them.**

Ayers and Miller, (1998). A light in Dark Times. Maxine Greene and the unfinished conversation. New York and London: Teachers College, Columbia University, P.2.
Good teachers join self and subject and students in the fabric of life. *(Palmer, P.L.)*

The teacher’s urgent mission now is to engage, with the help and inspiration of the very children they teach, in a tough and tender campaign toward not only survival but excellence. These are our marching orders: **to save the future by saving those who must inhabit it.** If we believe in children – as teachers must – then we must fight to give these children a chance to overcome. That must be our battle plan, our strategic objective.

(Ayers & Ford, 1996. City Kids, City Teachers).

In an age of rapid change and complexity, the challenge for educators and students is to *'prepare for the unknown by means of the known'*

(Bowden & Marton, 1998).

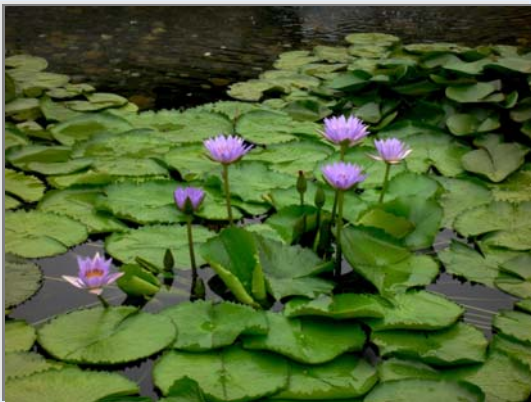
Can learning outcomes be fixed and predicted?

What is an object of learning?

- object of learning
 - General aspect (How, long term goal)
 - Specific aspect (What, short term goal)
- The two aspects of the object of learning (the short term goals and long term goals) are closely intertwined.
- The object of learning is dynamic!

- The learner's awareness has a structure;
- Certain structures of awareness are implied by certain ways of understanding;
- Certain aspects become figural, in focus or focal, whereas other aspects recede to ground.

Marton & Booth (1997). *Learning and Awareness*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers, p.82.



宋)周敦頤 ...愛蓮說
水陸草木之花，可愛者甚蕃。晉陶淵明獨愛菊；自李唐來，世人盛愛牡丹；予獨愛蓮之出於泥而不染，濯清漣而不妖，中通外直，不蔓不枝，香遠益清，亭亭淨植，可遠觀而不可褻玩焉。予謂菊，花之隱逸者也；牡丹，花之富貴者也；蓮，花之君子者也。噫！菊之愛，陶後鮮有聞；蓮之愛，同予者何人；牡丹之愛，宜乎眾矣。(《周敦頤集》卷之八)

- A particular way of experiencing something reflects a simultaneous awareness of particular aspects of the phenomenon.
- Another way of experiencing it reflects a simultaneous awareness of other aspects or more aspects or fewer aspects of the same phenomenon.

Marton & Booth (1997). *Learning and Awareness*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers. P.107

中國語文課程：第一學習階段基本能力

(Chinese language curriculum stage 1: learning the fundamental skills)

範疇 (Scope)	基本能力 (Basic Speaking Competence)
說話 (Speaking)	能清楚講述兒童故事 (can clearly tell children's story;)
	能就日常生活的話題和別人交談 (can communicate with others about daily topics;)
	能順序講述事件的大概 (can outline the event in correct order;)
	能運用日常生活的詞語表情達意 (can express feelings and emotions;)
	能掌握所學字詞的發音 (can produce the right intonation and pronunciation)
	說話聲音響亮 (can speak aloud)

Case 1

- Learning to tell stories.



The challenge for educators and students is to :

'prepare for the unknown by means of the known'

(Bowden & Marton, The University of Learning, 1998)

Object of learning:

- General aspect:
Be able to tell the story that they have read/or heard.
- Specific aspect:
A story — the meaning aspect
 the structural aspect

The internal structure of a story



Cycle 1			Cycle 2				
Time	People	Place		People	Time	Place	Event
Event	Start		Start				
	Development		Development				
	End		End				
	Moral		Moral				

時間	人物	事件發生經過
今天	小華	發現一個小洞
昨天	小華	發現一個小洞
前天	小華	發現一個小洞
後天	小華	發現一個小洞
明天	小華	發現一個小洞
後天	小華	發現一個小洞
今天	小華	發現一個小洞
昨天	小華	發現一個小洞
前天	小華	發現一個小洞
後天	小華	發現一個小洞
明天	小華	發現一個小洞
後天	小華	發現一個小洞

Cycle 1

時間	人物	地點	事件
今天	小華	發現一個小洞	發現一個小洞
昨天	小華	發現一個小洞	發現一個小洞
前天	小華	發現一個小洞	發現一個小洞
後天	小華	發現一個小洞	發現一個小洞
明天	小華	發現一個小洞	發現一個小洞
後天	小華	發現一個小洞	發現一個小洞

Cycle 2

學生前後測表現



Pretest



Posttest

學生把課堂中的學習運用在生活中



Student interview

中國語文課程：第一學習階段基本能力

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範疇 (Scope)	基本能力 (Basic Speaking Competence)
說話 (Speaking)	能清楚講述兒童故事 (can clearly tell children's story;)
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	能運用日常生活的詞語表情達意 (can express feelings and emotions;)
	能掌握所學字詞的發音 (can produce the right intonation and pronunciation)
	說話聲音響亮 (can speak aloud)

The dynamic nature of the object of learning

- To tell a story through memorization
- To tell a story by discerning its critical aspects
- To tell a story by discerning the critical aspects within the internal structure of a story

What can we learn?

- To cater for individual differences, we must analyze and study the object of learning to identify its critical aspects.
- Such critical aspects can be found from students as they interact with what is to be learnt.
- What is being learnt is determined by the critical aspects discerned.
- Can we fix the outcome before we even start to teach?

Case 2

Secondary 4
Chemistry topic

Reaction of metals with acids

Cycle 1: Object of learning

Specific aspect (short term goals):

To know that

- **Some metals react with acids while some do not** (it depends on the position of the metal in the reactivity series, above or below Hydrogen).
- **If a metal reacts with an acid, it will react with all other acids**, irrespective of its type, strength and concentration (since the reaction involves only H ions).

General aspect (long term goals):

- To acquire the correct **attitude towards scientific enquiry**.

	copper	iron	magnesium	zinc
Hydrochloric acid (lower concentration 1M)	✗	✓	✓	✓
Hydrochloric acid (higher concentration 5 M)	✗	✓	✓	✓
Vinegar (lower concentration 1M)	✗	✓	✓	✓
Vinegar (higher concentration 5M)	✗	✓	✓	✓

	copper	iron	magnesium	zinc
Hydrochloric acid (lower concentration 1M)	✗	✓	✓	✓
Hydrochloric acid (higher concentration 5 M)	✗	✓	✓	✓
Vinegar (lower concentration 1M)	✗	✓	✓	✗
Vinegar (higher concentration 5M)	✗	✓	✓	✓

Object of learning:

Specific aspect (short term goals):

To know that

- **Some metals react with acids while some do not**.
- **If a metal reacts with an acid, it will react with all other acids**, irrespective of its type, strength and concentration.

General aspect (long term goals):

- (To acquire the correct attitude towards scientific enquiry).
- **Succumb to authority**.

Object of learning:

Specific aspect (short term goals):

- To know that

?

General aspect (long term goals):

- **To acquire the correct attitude towards scientific enquiry**

Cycle 2: object of learning

Specific aspect (short term goals):

To know that

- Some metals react with acids while some do not (it depends on the position of the metal in the reactivity series, above or below Hydrogen).
- If a metal reacts with an acid, it will react with all other acids, irrespective of its type, strength and concentration (since the reaction involves only H ions).

General aspect (long term goals):

- To acquire the correct attitude towards scientific enquiry
- To generalize to a feasible hypothesis based on the experimental result.

Enactment in the lesson:

4 possible Hypotheses identified:

- 1: All metals react with all acids
- 2: All metals react with some acids
- 3: Some metals with some acids
- 4: Some metals react with all acid

	copper	iron	magnesium	zinc
Hydrochloric acid (lower concentration 1M)	×	✓	✓	✓
Hydrochloric acid (higher concentration 5 M)	×	✓	✓	✓
Vinegar (lower concentration 1M)	×	✓	✓	✓
Vinegar (higher concentration 5M)	×	✓	✓	✓

Cycle 2: object of learning

Specific aspect (short term goals):

To know that

- Some metals react with acids while some do not (it depends on the position of the metal in the reactivity series, above or below Hydrogen).
- If a metal reacts with an acid, it will react with all other acids, irrespective of its type, strength and concentration (since the reaction involves only H ions).

General aspect (long term goals):

- To acquire the correct attitude towards scientific enquiry and gain a deeper understanding of the scientific method and hypothesis testing
- To generalize to a feasible hypothesis based on the experimental result.
- hypothesis testing – conditions for rejecting or retaining a hypothesis.

What can we learn?

- The two aspects of the object of learning (the short term goals and long term goals) are closely intertwined.
- The object of learning is dynamic!

- The subjects we teach are as large and complex as life, so our knowledge of them is always flawed and partial...
- The students we teach are larger than life and even more complex. To see them clearly and see them whole, and respond to them wisely in the moment, requires a fusion of Freud and Solomon that few of us achieve.

Palmer, P. J.1998. *The Courage to Teach*. Jossey-Bass.

- “The knowledge teachers need to teach well is generated when teachers treat their own classrooms and schools as sites for intentional investigation at the same time that they treat the knowledge and theory produced by others as a generative material for interrogation and interpretation.”

“Implicit in the idea of knowledge-of-practice is the assumption that through inquiry, teachers across the professional life span – from very new to very experienced – make problematic their own knowledge and practice as well as the knowledge and practice of others and thus stand in a different relationship to knowledge.”

Cochran-Smith & Lytle, 2001. *Beyond Certainty, taking an inquiry stance on practice*.

The end

Thank you!