

“Assessment of/for/as Learning: Strategies for Students and Courses”

Nanjing University
Center for Teaching and Learning
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“TEACHING IS LEADING STUDENTS INTO SITUATIONS IN WHICH THEY CAN ONLY ESCAPE BY THINKING”



“Teaching is leading students into a situation in which they can only escape by thinking”

“教学就是向学生指引一条道路，这条道路只有通过学生自己的思考才能找到出口”



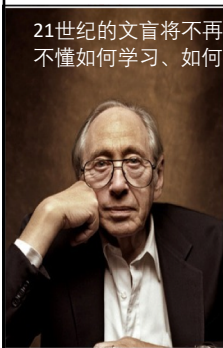
Today is a Different World

21世纪的文盲将不再是那些不能阅读和书写的人，而是那些不懂如何学习、如何抛弃所学、重新学习的人

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.

— Alvin Toffler —

AZ QUOTES



Today's Agenda

- What do we mean by assessment?
- Types of assessments
- Connecting the dots
- Learning outcomes
- Alignment
- Good assessments



Assessment is the ENGINE that drive learning



A Bold Statement 重点声明



Assessments that **do not facilitate student learning** are a waste of teacher and student time !

Memorization is **NOT** Learning 记忆不是学习

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Assessment is Complex 评估是复杂的



Assessment

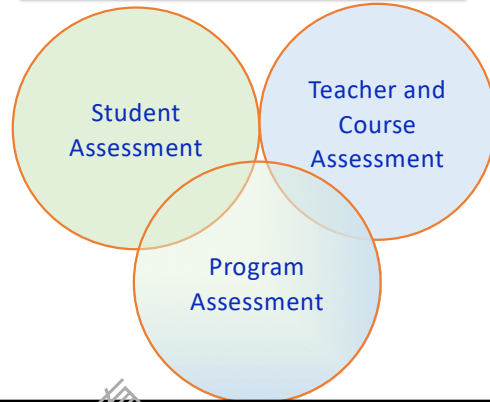
Comes from Latin
 "assidere" meaning
 "to sit with"

Definition:
 "The process of **gathering**
interpreting, recording and
using information about
 student responses to an
 educational activity"



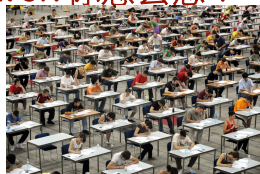
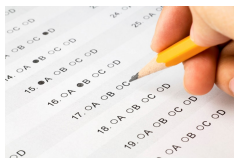
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Assessments Levels



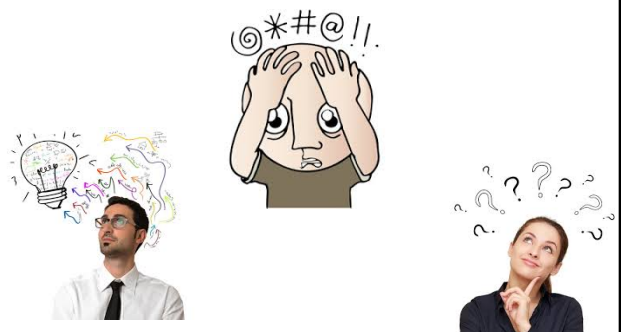
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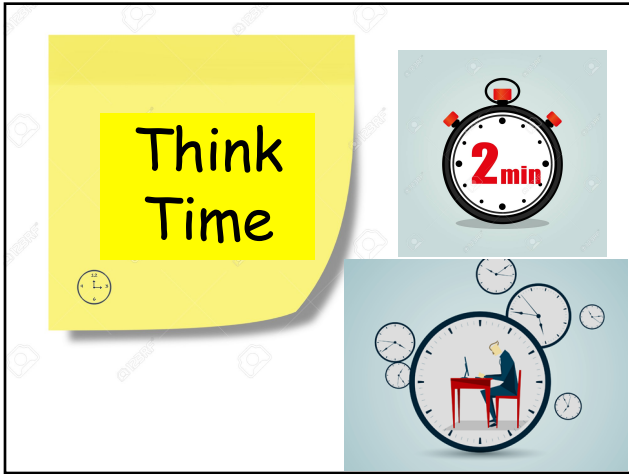
When You Hear Assessment
 当你听到评估
 What do you think of? 你怎么想?



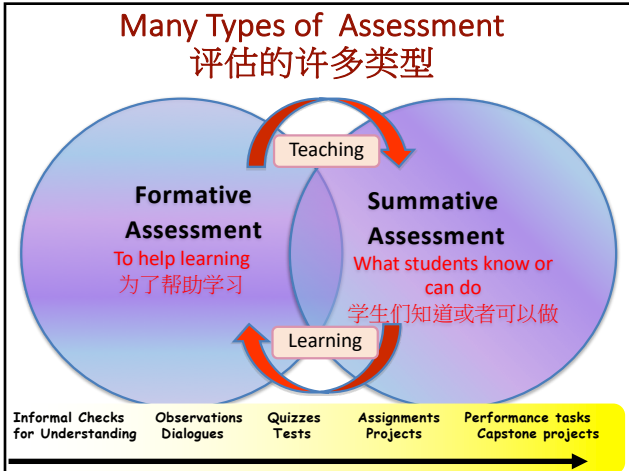
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When you think of assessment
 what do you think of?



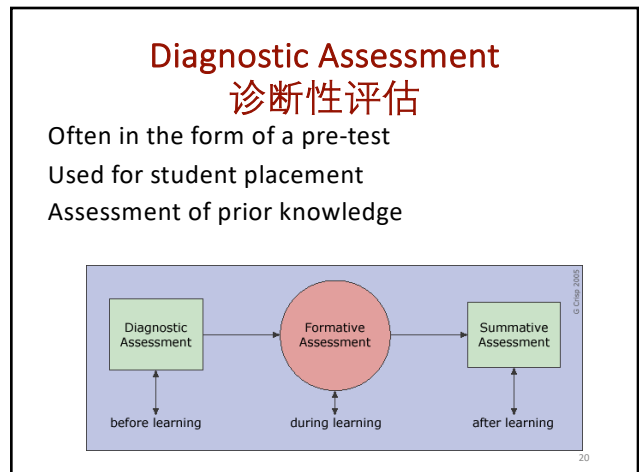


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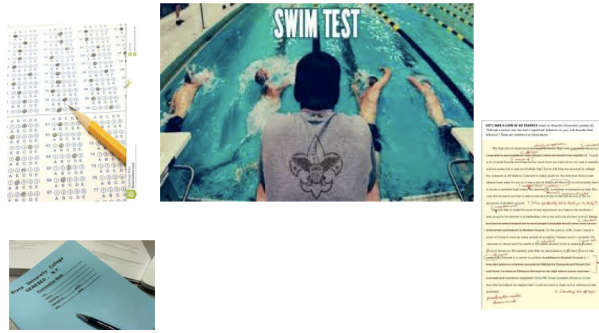


- ### Two Simple Definitions Are NOT mutually exclusive
- **Formative assessments 形成性评估**
 - The educational activities that help learning occur
 - Provide feedback to students and teaches
 - Are often low stakes
 - Facilitate learning
 - **Summative assessments 终结性评估**
 - The evaluation activates to measure students performance
 - Summative assessments should focus on finding out what students know or can do vs. what they don't know or can't do
 - Are often high stakes
 - Should facilitate learning

- ### Uses of Assessment
- | Types | Purposes |
|--|---|
| <ul style="list-style-type: none"> • Formative <ul style="list-style-type: none"> • Feedback • Summative <ul style="list-style-type: none"> • Performance • Diagnostic <ul style="list-style-type: none"> • Pretest • Authentic <ul style="list-style-type: none"> • Skill based • Transformational <ul style="list-style-type: none"> • Impact | <ul style="list-style-type: none"> • Students <ul style="list-style-type: none"> • Performance/grades • Teachers <ul style="list-style-type: none"> • Teaching Effectiveness • Courses <ul style="list-style-type: none"> • Improvement • Program <ul style="list-style-type: none"> • Accountability |
- 19



Authentic Assessments 真实性评价



Authentic Assessment 真实性评估

Assessments that directly measure specific student skills or ability using real-life scenarios.

WHAT IS AUTHENTIC ASSESSMENT?

Here are some definitions:

"A form of assessment in which students are asked to perform real-world task that demonstrate meaningful application of essential knowledge and skills." –*Jon Mueller (2011)*

"Engaging and worthy problems or questions of importance, in which students must use knowledge to fashion performances effectively and creatively. The tasks are either replicas of or analogous to the kind of problems faced by adult citizens and consumers or professionals in field." –*Grant Wiggins (1987)*

Characteristics of Authentic Assessment 特点

Worthwhile, 值得的, 有用

Significant, 显著

Meaningful, 有意义的学生

Mirrors real world activities 反映了真实的活动

Aligns with the course learning outcomes
对齐与学习成果

Characteristics of Good Assessments?

- ✓ Is meaningful to student and peers
- ✓ Is embedded in the course activities
- ✓ Align with the courses goals or outcomes
 - A writing goal requires writing
- ✓ Course and discipline dependent
 - Speech course requires speaking
 - Lab courses require lab experience
 - Critical thinking requires appropriate materials



“Assessment of/for/as Learning: 評估學習：學生和課程的策略

(Assessment **OF** Learning)
對學習的評估

(Assessment **FOR** Learning)
促進學習的評估

(Assessment **AS** Learning)
作為學習的評估

Assessment for Learning
促進學習的評估

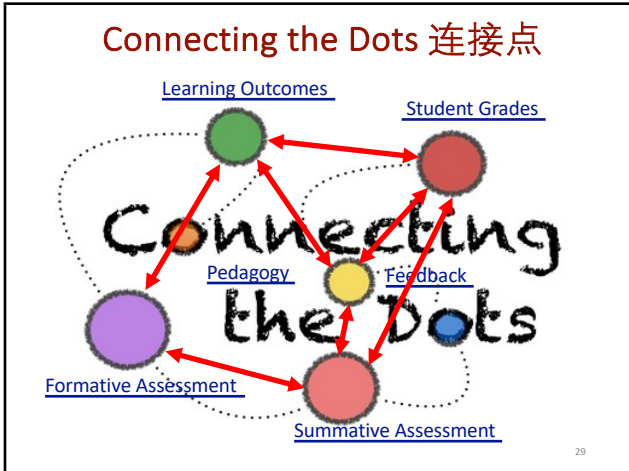
- enables teachers to use information about students' knowledge, understanding and skills to inform their teaching
- teachers provide feedback to students about their learning and how to improve

Assessment as Learning
作為學習的評估

- involves students in the learning process where they monitor their own progress, ask questions and practise skills
- students use self-assessment and teacher feedback to reflect on their learning, consolidate their understanding and work towards learning goals

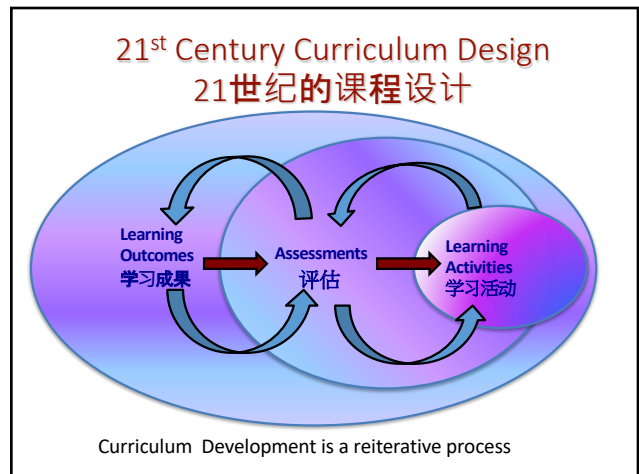
Assessment of Learning
對學習的評估

- assists teachers to use evidence of student learning to assess student achievement against learning goals and standards



Before you can decide how to measure you need to KNOW what to measure!
 你需要知道你要测量什么！

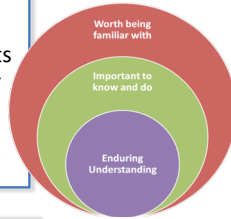
How do you determine what to measure?
 你如何确定要测量的内容？



Learning Outcomes [学习成果]

Learning outcomes are **enduring understandings, skills, or appreciations/attitudes** that students develop as a result of the course or program

学习成果是持久性的理解



Learning outcomes are **NOT the content** that is covered in the course

学习的结果不是你讲的内容



Learning Outcomes [学习成果]

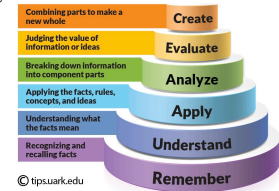
Start with "Student will be able to **to_verb_**."

学生将能够：**动词**

LOs should go across Bloom's learning taxonomy (many verbs for each level)

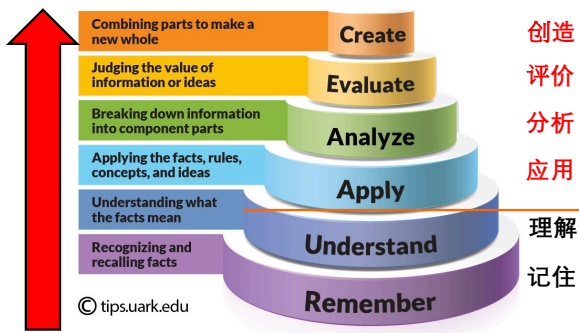
Should be linked to a student product and be measurable. 与学生的产出相连且可以测量。

Revised Bloom's taxonomy
修订版布卢姆学习目标分类



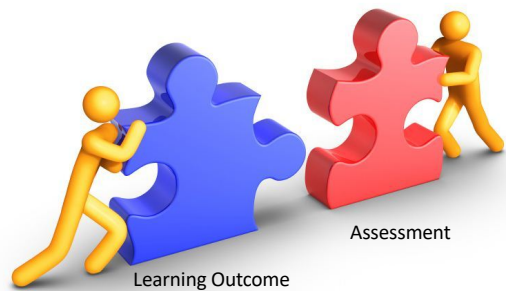
Bloom's Cognitive Taxonomy [认知分类]

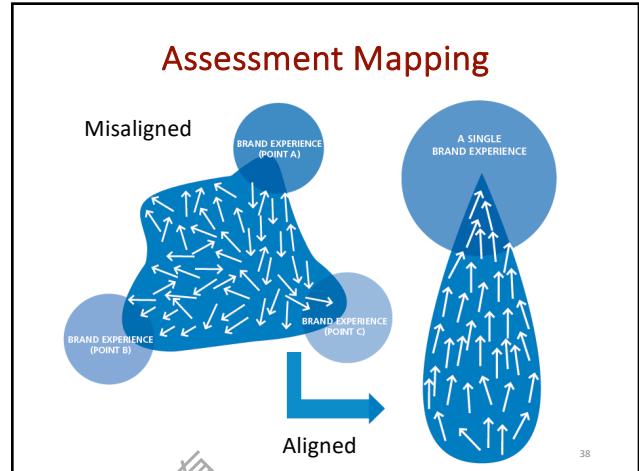
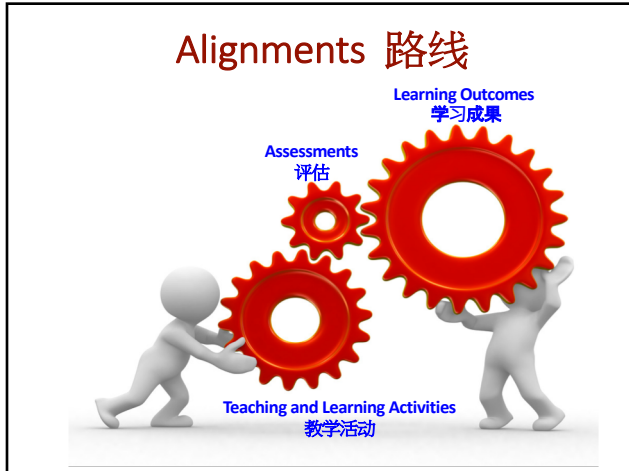
Higher order cognitive skills



Lower order cognitive skills

Alignment is Critical 对齐是关键





What does a “good” assessment look like?

- Is meaningful to student and peers [对学生有意义的]
- Is embedded in the course activities [是活动的一部分]
- Aligns with the courses goals or outcomes [用学习成果对齐]
- Course and discipline dependent [课程与学科是相关的]

Developing Good Assessments is Hard Work

from Writing Good Multiple-Choice Exams , D. Zimmaro, Ph.D. CTL UT-Austin

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Developing Good Assessments is Hard Some Suggestions

1. Create test items while you prepare class lessons. 为你要准备的课程创造一些测试项目。
2. Make note of questions that students ask frequently during class. 在课堂上经常记录学生提出的问题。
3. Make note of common misconceptions students make during class or in homework. 注意学生在课堂或作业中所犯的常见错误观念。
4. Invite students to submit items at the end of class or at other times. 邀请学生在课程结束或其它时间提交项目。

from Writing Good Multiple-Choice Exams, D. Zimmaro, Ph.D. CTL UT-Austin

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How often do you use multichoice questions (MCQs)?



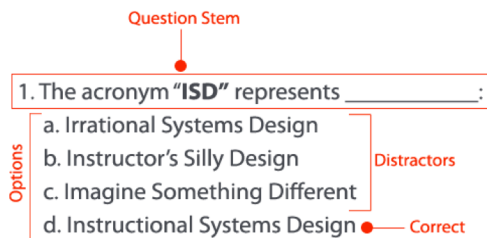
Multiple Choice Questions

22	21	20	19	18	17	16	15	14	13	12	11
三	二	一	十	九	八	七	六	五	四	三	二
黄	林	黄	黄	李	李	黄	黄	林	李		
60	60	60	60	60	60	60	60	60	60	60	60



Multiple Choice Questions 多项选择题

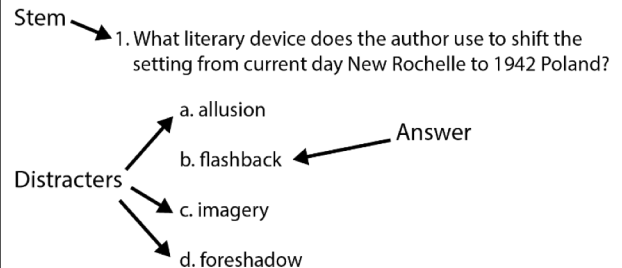
ANATOMY OF A MULTIPLE CHOICE QUESTION



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Structure of (MCQs)?

Parts of a Multiple-choice Question



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Writing Good MCQs Tips

- **Use a simple format**
 - Clear question stem
 - Four choices
 - Choices are parallel
- **Avoid tricky combinations,**
 - Such as A and B but C
 - All of the above
 - None of the above
- **Avoid negative questions**
 - Which of the following is NOT _____



Andrew C. Butler. Multiple-Choice Testing in Education: Are the Best Practices for Assessment Also Good for Learning?, *Journal of Applied Research in Memory and Cognition* (2018).
Read more at: <https://ohvs.org/news/2018-30-multiple-choice-tricky.html#fCp>

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Writing Good MCQs Tips

- **Questions should align to the learning goals**
- **Tests should contain a range of difficulties e.g. Blooms cognitive levels**
- **Use clustered questions**
 - A diagram, problem or scenario is given and then a set of MCQs questions are asked based on it.
- **Find good sources and adapt questions**
 - e.g. the AP tests

Andrew C. Butler. Multiple-Choice Testing in Education: Are the Best Practices for Assessment Also Good for Learning?, *Journal of Applied Research in Memory and Cognition* (2018).
Read more at: <https://ohvs.org/news/2018-30-multiple-choice-tricky.html#fCp>

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The stem of the original item below fails to present the problem adequately or to set a frame of reference for responding.

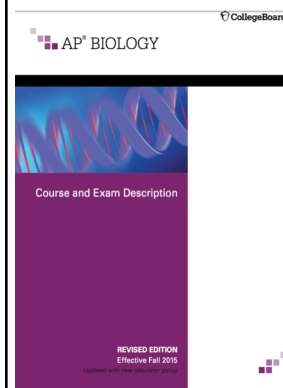
<p>Original →</p> <p>1. World War II was:</p> <p>A. The result of the failure of the League of Nations.</p> <p>B. Horrible.</p> <p>C. Fought in Europe, Asia, and Africa.</p> <p>D. Fought during the period of 1939-1945.</p>	<p>Revised</p> <p>1. In which of these time period was World War II fought?</p> <p>A. 1914-1917</p> <p>B. 1929-1934</p> <p>C. 1939-1945</p> <p>D. 1951-1955</p> <p>E. 1961-1969</p>
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Example 2

There should be no grammatical clues to the correct answer.

<p>Original →</p> <p>1. Albert Eisenstein was a:</p> <p>A. Anthropologist.</p> <p>B. Astronomer.</p> <p>C. Chemist.</p> <p>D. Mathematician.</p>	<p>Revised</p> <p>1. Who was Albert Einstein?</p> <p>A. An anthropologist.</p> <p>B. An Astronomer.</p> <p>C. A chemist.</p> <p>D. A mathematician.</p>
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An AP - Biology Example

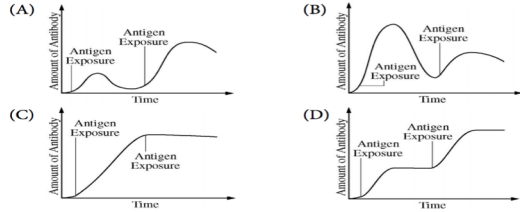


<https://apcentral.collegeboard.org/pdf/ap-biology-course-and-exam-description.pdf?course=ap-biology>

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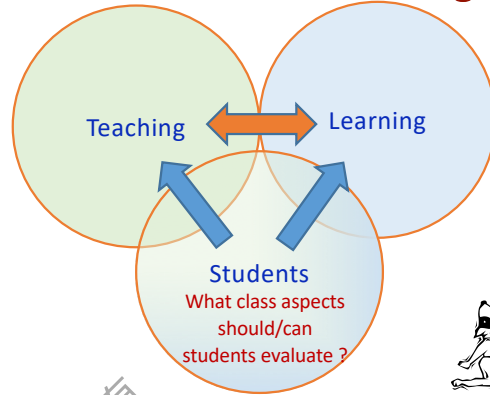
An AP - Biology Example

23. An individual's humoral response to a particular antigen differs depending on whether or not the individual has been previously exposed to that antigen. Which of the following graphs properly represents the humoral immune response when an individual is exposed to the same antigen more than once?

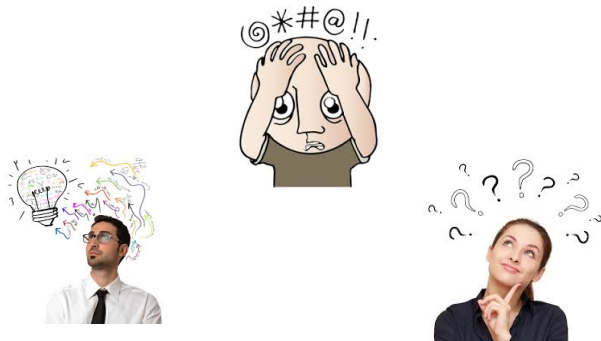


Essential Knowledge	2.D.4: Plants and animals have a variety of chemical defenses against infections that affect dynamic homeostasis.
Science Practice	1.2: The student can describe representations and models of natural or man-made phenomena and systems in the domain.
Learning Objective	2.29: The student can create representations and models to describe immune responses.

Assessment of Teaching



I assess my teaching by _____



Course and Teaching Assessment

- Feedback from students
 - Mid-term survey
 - End of course survey
 - SETs
- Class Observation
- Video taping
- Grade profile
- Practitioner research
 - Teaching as Research (TAR)



Student Evaluations of Teaching

The Daily Free Press



The Independent Student Newspaper at Boston University
Sunday, September 30, 2018

NEWS ▾ SPORTS ▾ FEATURES ▾ OPINION ▾ BLOGS ▾ MULTIMEDIA ▾

CAMPUS, NEWS

Course evaluations ineffective, misused, report finds

ASSESSING COURSE EVALUATIONS

Student evaluations of teaching (SET) do not measure teaching effectiveness.

SET seem to be influenced by the gender, ethnicity, and attractiveness of the instructor.

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Reality [现实]

- It takes time to get things right
把事情做好需要时间
- Every road has a few bumps and curves
每条道路都有颠簸和曲线



Your plan
你的计划






Reality
现实世界



Final Thoughts



如果我们用昨天的方法教授今天的学生，我们就剥夺了他们的明天。
John Dewey, 1910
- John Dewey

不以改进学习为目的的教学提升，将无法提供学习者未来就业所需要的学习改进。

Less ~~More~~

少即是多

21世纪的教学是教学生如何更有效地学习

Thank You [谢谢]!

问题或意见？




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Mark Your Calendar



LILLY-ASIA: EVIDENCE-BASED TEACHING AND LEARNING
Lilly Conference – Hong Kong – 16-18 May, 2019

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