

談個人一些不合時宜的教學理念

周成功

長庚大學生物醫學系

1-15-2014

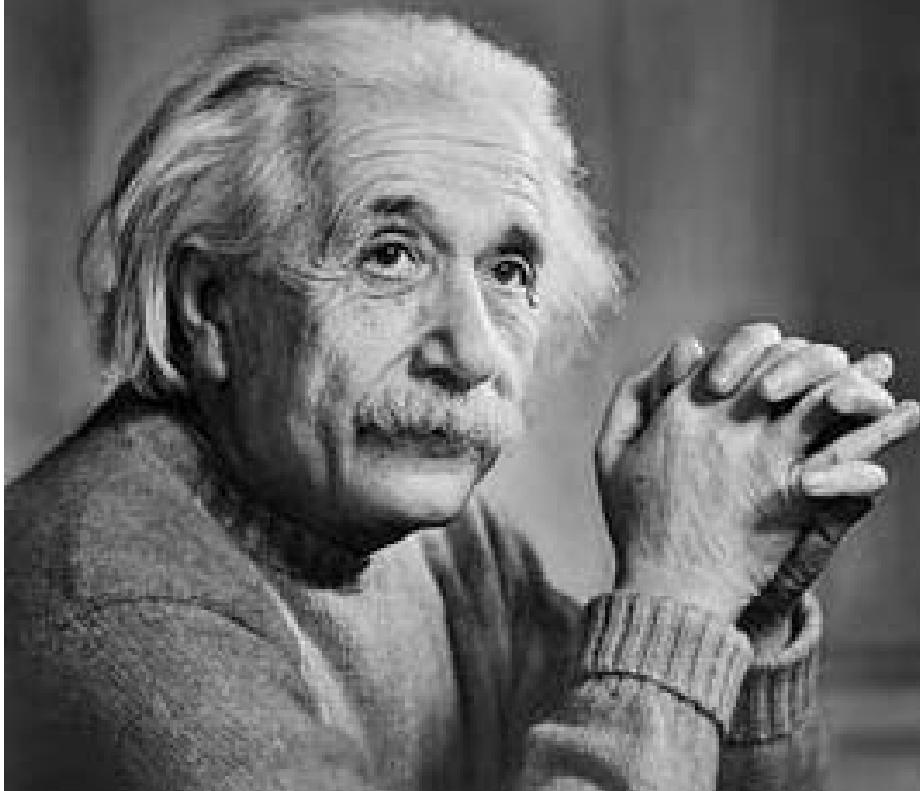
師者：傳道，授業，解惑也！

Goals for a Princeton undergraduate education

- The ability to think, speak and write clearly
- The ability to reason critically and systematically
- The ability to conceptualize and solve problems
- The ability to take initiative and work independently
- The ability to think independently
- The ability to work in cooperation with others and learn collaboratively
- The ability to judge what it means to understand something thoroughly
- The ability to distinguish the important from the trivial, the enduring from the ephemeral
- Familiarity with different modes of thought (including quantitative, historical, scientific, moral and aesthetic)
- **Depth of knowledge in a particular field**
- The ability to see connections among disciplines, ideas and cultures.
- The ability to pursue lifelong learning

If you can't explain it **simply**, you don't understand it well enough.

– Albert Einstein



36 lectures in biology
by S. E. Luria.

Published 1975 by MIT Press

A view of life 1981

S.E. Luria

Stephen Jay Gould

Sam Singer

“we have avoided a sensationalistic presentation of the “latest news”, however, preferring to give the student a balanced mixture of background and excitement.”

“A curiosity about the frontiers of science is no substitute for fundamental knowledge.”

What is life?

- Lecture 1: What is life?
- Lecture 2: Why life becomes so complicated?
- Lecture 3: Chemistry and Enzyme.
- Lecture 4: How energy transformed in living cell?
- Lecture 5: Central dogma of molecular biology.
- Lecture 6: Chromosome, genome and sex
- Lecture 7: Human evolution and why are we sick?
- Lecture 8: Why do we age?
- Lecture 9: Philosophy of biology.
- 每週有固定分量的指定閱讀。
- 每週要撰寫反思日誌，內容包括：

反思日誌

- (1) 今天上課我學到了什麼？
- (2) 對於今天的上課內容我有什麼想法和感覺？
- (3) 分析一下，自己為什麼會有以上的想法和感覺？
- (4) 老師沒有說清楚或是應補充的建議。
- (5) 對指定閱讀碰到或想到的問題。