Comments on Reading English Materials

AUGPath

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Introductory Notes for *degaokaolization discussion group*

1 The Reading of English Materials

With the development of science and technology, the use of English has become the norm in international academic exchanges. Top-notch papers are exclusively written in English, and internationally recognized classic books in the field of computer science are also authored in English. There are no Chinese translation versions available for these top-notch papers. Therefore, if one wishes to access information, it is essential to actively engage in reading English materials, rather than waiting for translated versions to be published. The mindset of "I am Chinese, I only read Chinese" no longer aligns with the current trends of development. To stay at the forefront of the era, the ability to read English materials is indispensable.

Reading English materials essentially involves "looking up unfamiliar words in the dictionary and repeatedly reading unfamiliar sentences." Nowadays, there are various online resources available to address urgent needs, such as vocabulary reference tools. However, the key to improving English reading skills lies in perseverance. It is common for all Chinese individuals to initially find reading English to be less efficient. If you observe experts around you effortlessly reading English materials, it is because they have long overcome these challenges. Quoting the words of Mr. Chen Daoxu: "Persist for a year, and you will notice a difference; persist for two years, and you will experience a significant transformation."[1]

2 Some Fun Ideas

– Reading beginners' mathematics book in English

[1] From NJU PA Lab Introduction.

- Note that: How is it expressed in English? What kind of pattern can you notice?
- Feel: Which language is better for narrating and explaining things? Why?
- Tips: There's no need to understand every sentence since they are often quite verbose. You can stop at any time if you feel your interest waning.
- Recommendation:
  - UD: Ulrich Daepp et al.: Reading, Writing, and Proving - A Closer Look at Mathematics, 2nd ed. Springer-Verlag, 2011
  - others...?

– Watching lectures in English
  - Note that: What's the spoken English like?
  - If you are not good at listening...
    - Some videos with clear pronunciation are here to watch! (e.g. 3Blue1Brown...)
  - Recommendation: This may vary.

– Note that some basic ideas shall be constructed via your naive language, since it's fast and reliable. If you are about to take a glance at Advanced Mathematics, then this one is really helpful!高等数学（上）合集
  - Misunderstanding1. ~~This is so simple. I have known for 17 years.~~ But how do you establish axioms for these seemingly obvious things? If you delve deeper, you will realize that it is not simple at all! It is a complex system that encapsulates the wisdom of mathematicians!
  - Misunderstanding2. ~~Only solving the problems, getting a score of 90+ can be regarded as excellent.~~ If you did not receive adequate training during the process, you will find it difficult to learn subsequent courses, and eventually, you may fail. Regardless of your current score, training is **significantly more important**.

– Watch game videos by YouTubers!

– And others...

3 The True Educational Process

Read the following quote from Whitehead:

> Whatever be the detail with which you cram your student, the chance of his meeting in after life exactly that detail is almost infinitesimal; and if he does meet it, he will probably have forgotten what you taught him about it. The really useful training yields a comprehension of a few general principles with a thorough grounding in the way they apply to a variety of concrete details. In subsequent practice the men will have forgotten your particular details; but they will remember by an unconscious common sense how to apply principles to immediate circumstances. Your learning is useless to you till you have lost your textbooks, burnt your lecture notes, and forgotten the minutiae which you learned by heart for the examination. What, in the way of detail, you continually require will stick in your memory as obvious facts like the sun and the moon; and what you casually require can be looked up in any work of reference. The function of a University is to enable you to shed details in favor of principles. When I speak of principles I am hardly even thinking of verbal formulations. A principle which has thoroughly soaked into you is rather a mental habit than a formal statement. It becomes the way the mind reacts to the appropriate stimulus in the form of illustrative circumstances. Nobody goes about with his knowledge clearly and consciously before him. Mental cultivation is nothing else than the satisfactory way in which the mind will function when it is poked up into activity.

- In the past education, do you think yourself get the true educational process? If so, when?
- Do you think the quote make sense?
- If not, why it is hard to carry out the plan in your school?

In fact, similar saying yields that the truth of parenting! Read the following quote by Russell –a person who gave a hit to the base of mathematics.

> When you want to teach children to think, you begin by treating them seriously when they are little, giving them responsibilities, talking to them candidly, providing privacy and solitude for them, and making them readers and thinkers of significant thoughts from the beginning. That's if you want to teach them to think.

Fortunately, some teachers in some high schools(like Yanyan Jiang, Yitong Yin, Yue Li, Tian Tan) has noticed this problem. Here are the things they said:

> 我们都是活生生的人, 从小就被不由自主地教导用最小的付出获得最大的得到, 经常会忘记我们究竟要的是什么. 我承认我完美主义, 但我想每个人心中都有那一份求知的渴望和对真理的向往, "大学"的灵魂也就在于超越世俗, 超越时代的纯真和理想 -- 我们不是要讨好企业的毕业生, 而是要寻找改变世界的力量. -- Yanyan Jiang
>
> 教育除了知识的记忆之外, 更本质的是能力的训练, 即所谓的 training. 而但凡 training 就必须克服一定的难度, 否则你就是在做重复劳动, 能力也不会有改变. 如果遇到难度就选择退缩, 或者让别人来替你克服本该由你自己克服的难度, 等于是自动放弃了获得 training 的机会, 而这其实是大学专业教育最宝贵的部分. -- Yitong Yin
>
> 这种"只要不影响我现在 survive, 就不要紧"的想法其实非常的利己和短视: 你在专业上的技不如人, 迟早有一天会找上来, 会影响到你个人职业生涯的长远的发展; 更严重的是, 这些以得过且过的态度来对待自己专业的学生, 他们的 survive 其实是以透支南大教育的信誉为代价的 -- 如果我们一定比例的毕业生都是这种情况, 那么过不了多久, 不但那些混到毕业的学生也没那么容易 survive 了, 而且那些真正自己刻苦努力的学生, 他们的前途也会受到影响. -- Yitong Yin

Takeaway Message

- There are always enjoyable approaches to tasks!
- To educate is to train, to burden, to change for the better.

Further Discussion

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