

Technical Writing and Communication in English

科技英文寫作與溝通技巧 {全程以英語授課}

Instructor: 劉興民

e-Mail: damon@computer.org

Office: 工學院A館403室

Lectures: Mon, Wed 16:15-17:30
工學院A館001教室

Webpage:

<https://www.cs.ccu.edu.tw/~damon/html/writing.html>

- **Course Repository** 課業倉儲

<https://www.cs.ccu.edu.tw/~damon/secure/course-wk.html>

- **Discussion Board** 課程討論區

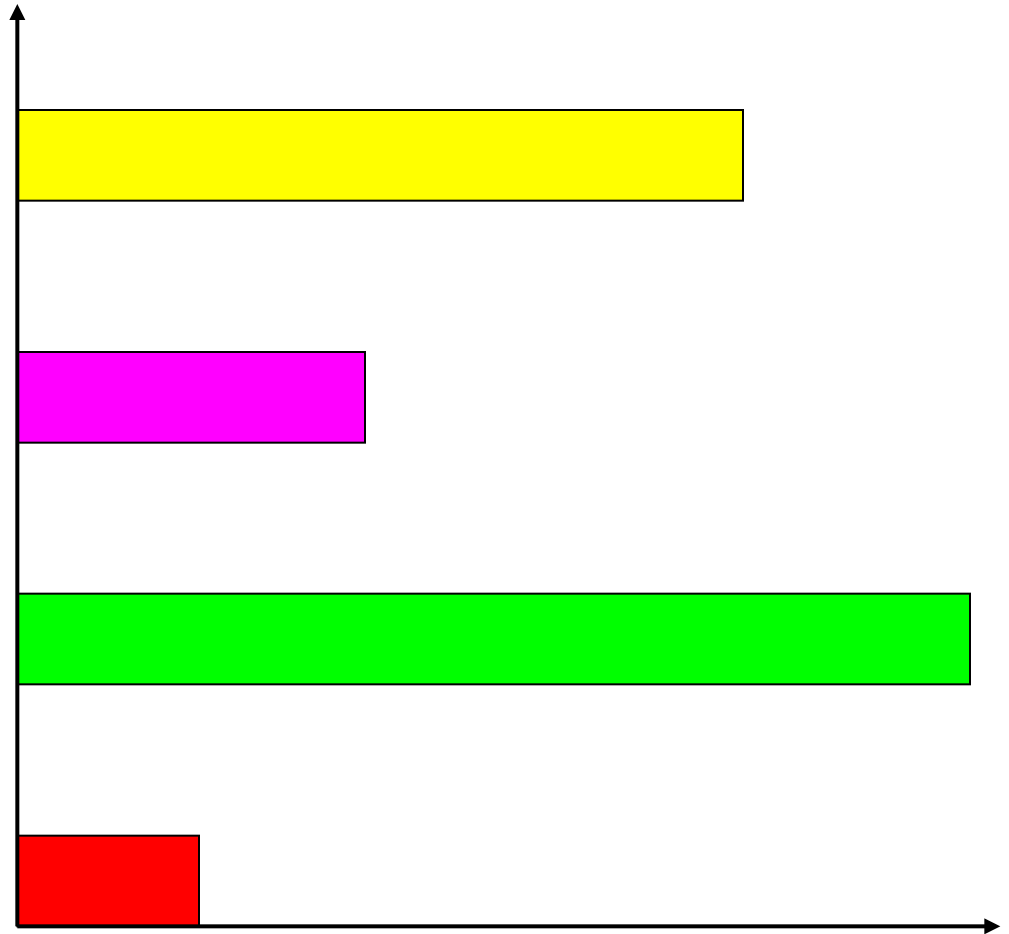
<https://140.123.101.97/login.htm>

Forming a Team

- Students are required to assemble their teams.
- The team must not be large; otherwise, it needs to be broken up.
- Often size of the team is **two**.
- An individual can work **alone**.

廣義的英文學習

- 聽 Listening
(Comprehension)
- 說 Speaking
- 讀 Reading
- 寫 Writing



Student proficiency chart

為什麼要科技 (=科學science+工程engineering) 寫作？

情境 (scenario) I

- 這個手術成功的機會相當大；
- 但是也不能說沒有一定的危險。
- 當然成功的可能性應該會比失敗大不少吧
- 所以請趕快簽下手術同意書？

1. 79%成功；21%失敗？

2. 62%成功；38%失敗？

為什麼要用英文 (而不是中文)?

情境 II

- Want iPhone to wake you?
- 時間-->鬧鈴提醒-->沒有鬧鈴提醒 (是不是沒有鬧鈴提醒這項功能?)
- Clock-->Alarm-->**No Alarm** (or Not Setting An Alarm, or No Alarm Being Set) (沒有設定任何鬧鈴)

為什麼要用英文? (cont)

情境 III

1. 我們終於開始可以用這套系統了。
 2. 終於可以開始用。
 3. 開始終於可以用。
 4. 開始可以終於用。
 5. 可以終於開始用。
 6. 可以開始終於用。
- We are able to start using finally.

“almost” and “only” 用法

- **Only** doctors treated the patients.
(meaning: patients were not treated by anyone who was not a doctor) (病患只有被醫師身份的人所醫治)
- The doctor **only** treated the patients. (醫師醫治那些病患, 除此之外沒做其他事)
- The doctor treated **only** the patients. (醫師醫治的只有病患)

“almost” and “only” 用法 (cont)

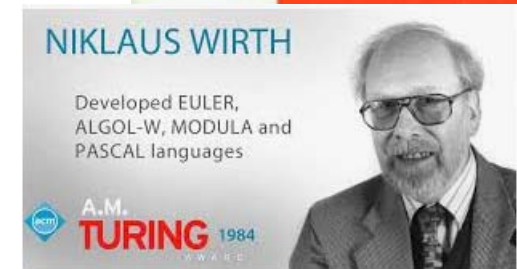
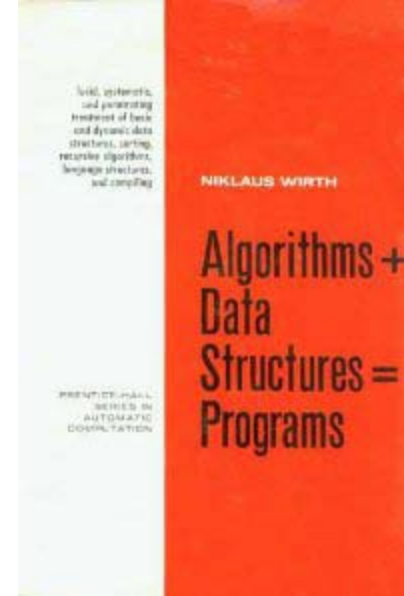
- The doctor treated **almost** all the patients.
(醫師治療了大多數, 而並非全部的病患)
- The doctor **almost** treated all the patients.
(儘管醫師盡了最大的努力, 但沒有病患被醫治)

Algorithms + Data Structures = Programs

Niklaus Wirth

1984 Turing Award winner

<https://dl.acm.org/doi/10.1145/3641309>



Structure + Style = Communication

Jeffrey Scott Vitter

Chancellor大學校長

The University of Mississippi



Indicative Topics

1. Colloquial habits in writing
2. Resumes & job letters (研究所甄試前完成)
3. Kinds of research publication
4. Oral presentations (研究所甄試前完成)
5. Style in technical writing
6. Being concise
7. Using the active voice

Indicative Topics (2)

- 8. Being accurate in wording
- 9. Using parallelism
- 10. Eliminate modifier problems
- 11. Organization of a paper
- 12. Punctuation & grammar
- 13. Proposals & progress reports
- 14. Mathematics

Indicative Topics (3)

15. Figures & tables

16. Algorithms

17. Writing up

18. Ethics倫理學

- 語態修正 Voice corrections
- 使用過多名詞而非動詞 Noun to verb change corrections
- 使用強勢動詞 Creating strong verbs
- 避免過度使用 Avoid starting sentences with the words, "It" and "There"
- 正確的使用代名詞 Use pronouns clearly (they, which, them, this, it, he, she, etc.)

- 刪除多餘和無用的詞句 **Deleting redundancy and extra words (while maintaining the author's meaning)**
- 動詞時態變化 **Verb tense change within a sentence**
- 不完整的對照比較 **Omitting comparisons**
- 主詞和動詞一致性 **Subject–verb agreement**

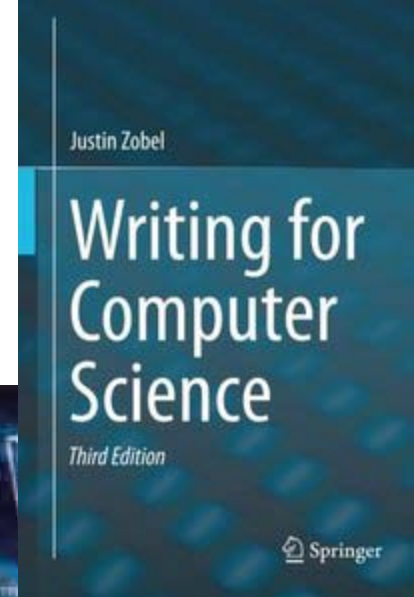
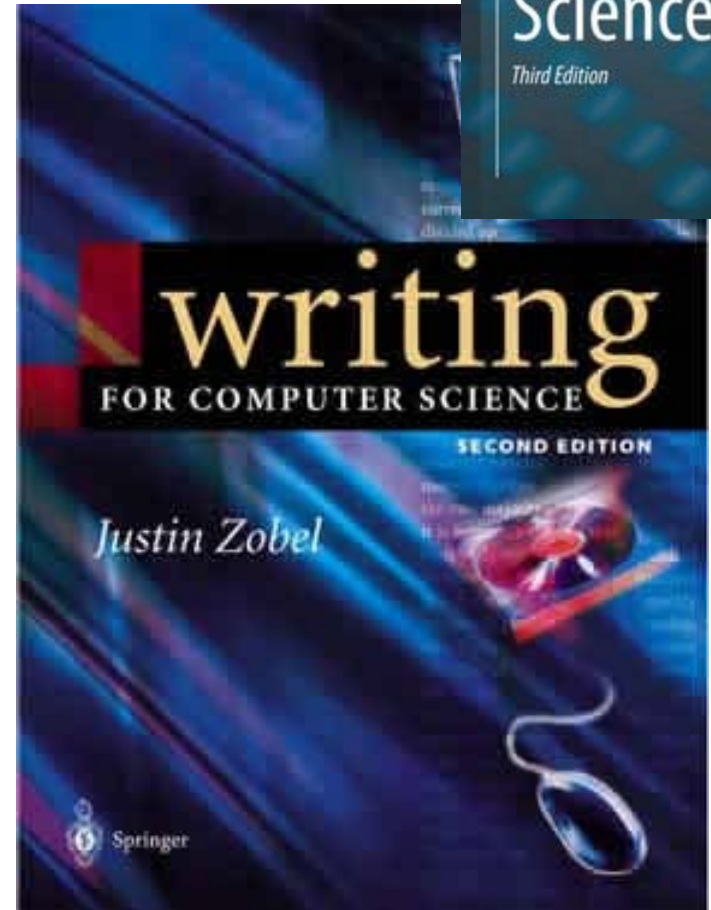
Required Text

Writing for Computer
Science,
Justin Zobel,
2nd Edition,
Springer-Verlag,
ISBN: 1-85233-802-4.

Website:

www.justinzobel.com

[http://www.cs.ccu.edu.tw/~
damon/writing/,Zobel.pdf](http://www.cs.ccu.edu.tw/~damon/writing/,Zobel.pdf)



Reference Text

An English Style Approach for Chinese Technical Writers

精通科技論文(報告)寫作之捷徑,

Ted Knoy 柯泰德,

Revised Edition,

清蔚科技,

ISBN: 957-524-200-9.

Website:

www.chineseowl.idv.tw

科技英文寫作系列之一

精通科技論文(報告)寫作之捷徑

AN ENGLISH STYLE APPROACH FOR
CHINESE TECHNICAL WRITERS

作者：柯泰德(Ted Knoy)

- 使用直接而流利的英文會話
- 讓您所寫的英文科技論文很容易被了解
- 提供不同形式的句型供您參考利用
- 比較中英文句子結構之異同
- 利用介系詞片語將二個句子連接在一起

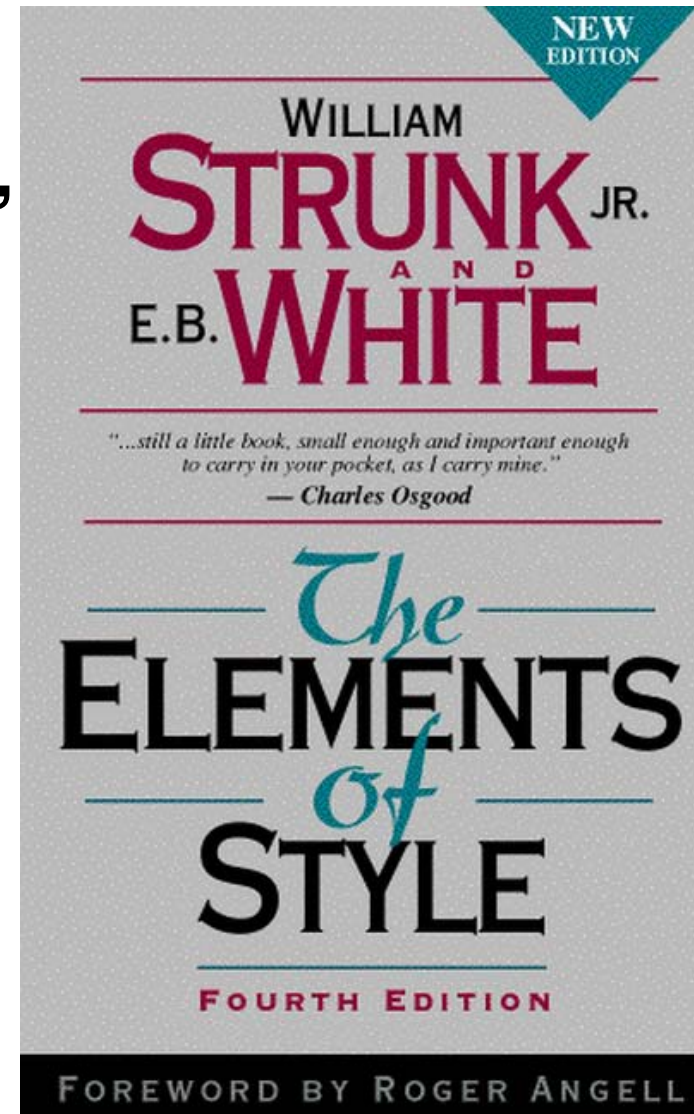
More Reference Texts

The Elements of Style,
William Strunk Jr. and E.B. White,
4th Edition,
Pearson Allyn &
Bacon/Longman Publishers,
ISBN: 0-205-31342-6.

Websites:

http://en.wikisource.org/wiki/The_Elements_of_Style

<http://www.cs.ccu.edu.tw/~damon/writing/TheElementsOfStyle.pdf>



Suggested Readings

**How to Write & Publish
a Scientific Paper,**

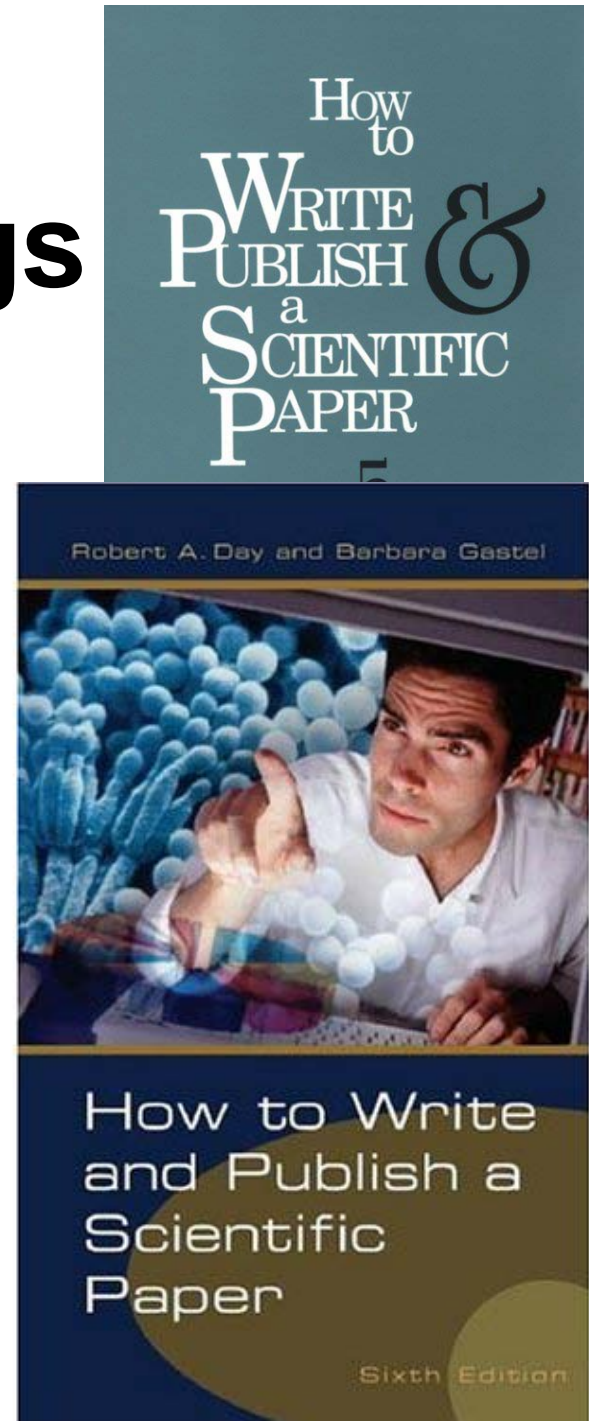
**Robert Day and
Barbara Gastel,**

6th Edition,

**Greenwood Publishing
Group,**

ISBN: 0-313-33040-9.

**[http://www.cs.ccu.edu.tw/~
damon/writing/Day.pdf](http://www.cs.ccu.edu.tw/~damon/writing/Day.pdf)**



Extra Readings

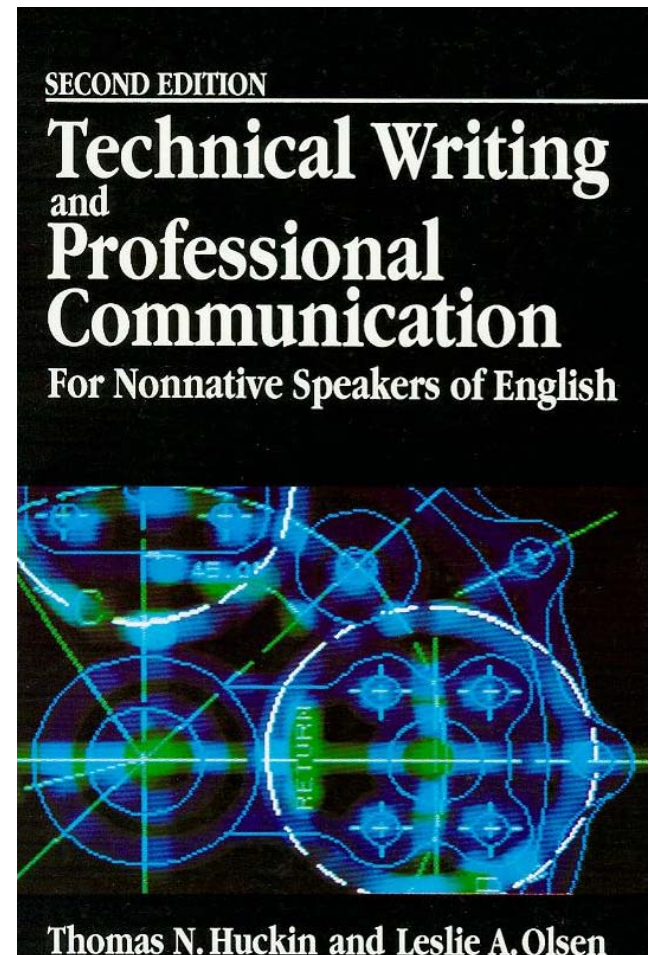
**Technical Writing and
Professional
Communication for
Nonnative Speakers of
English,**

**Thomas Huckin and Lesley
Olsen,**

2nd Edition,

McGraw-Hill,

ISBN: 0-07-030825-X.



More Readings

The MIT Guide to
Science and Engineering
Communication,

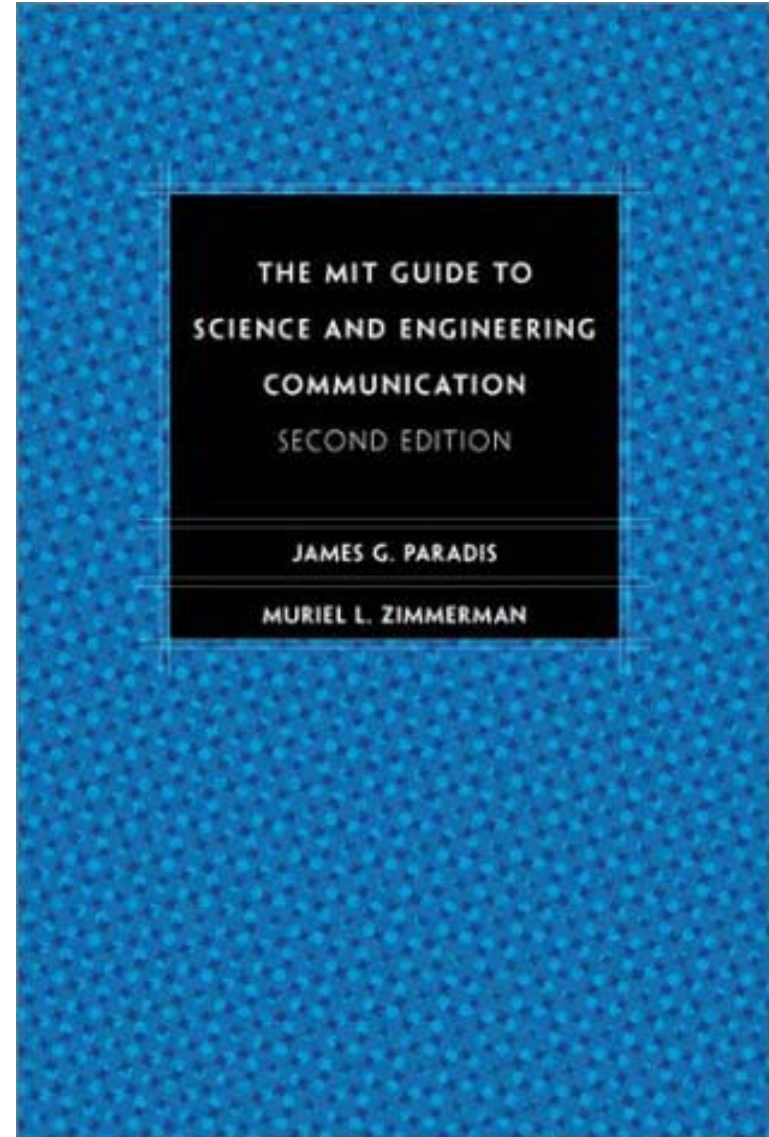
James Paradis and Muriel
Zimmerman,

2nd Edition,

MIT Press,

ISBN: 0-262-66127-6.

<http://www.cs.ccu.edu.tw/~damon/writing/MIT.pdf>



Even More Readings

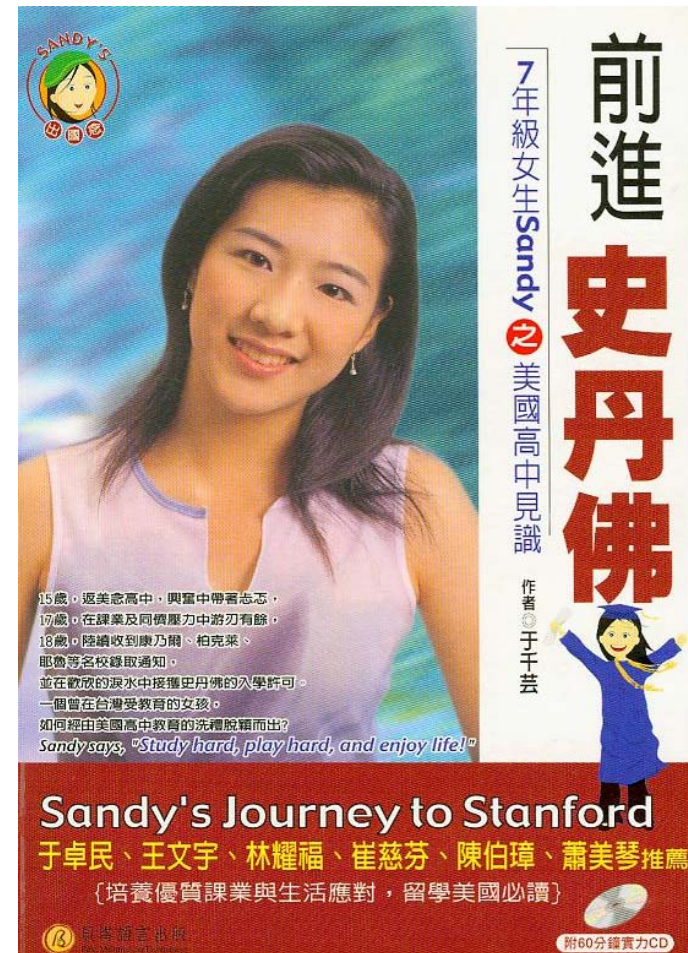
Sandy's Journey to Stanford

前進史丹佛：7年級女生
Sandy之美國高中見識，

Sandy Yu 于千芸，

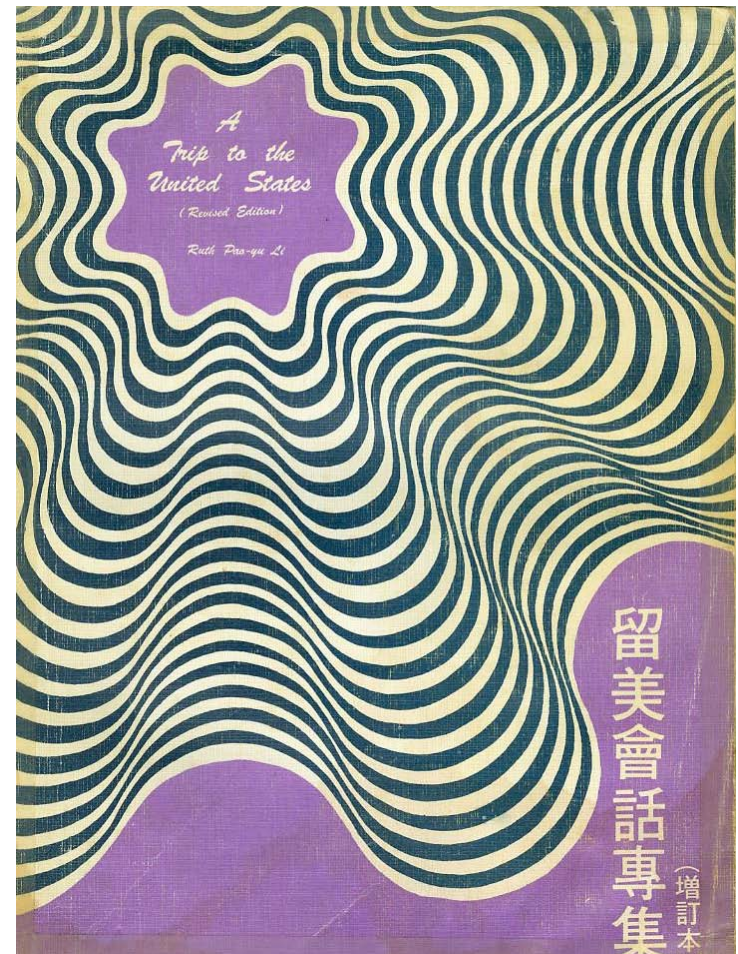
Beta Multimedia
Publishing 貝塔語言，

ISBN: 957-729-296-8.



Even Even More Readings

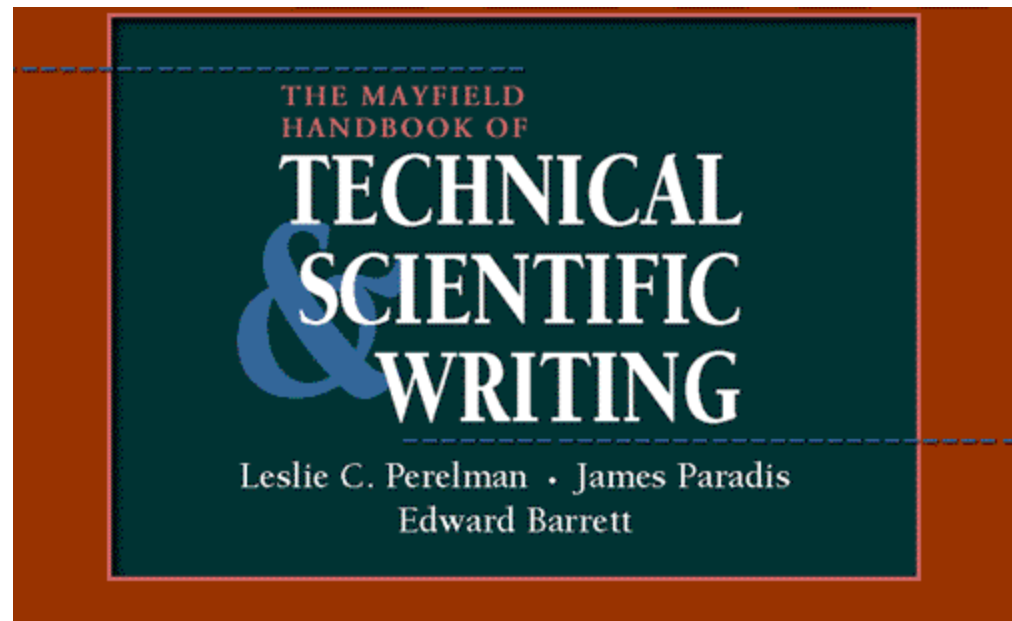
A Trip to the United States 留美會話專集,
Ruth Pao-yu Li 李保玉,
Revised Edition,
Ruth Publishing Company 驚鷺語言,
ISBN: 0-937132-79-9.



The Mayfield Handbook of Technical and Scientific Writing

- L. C. Perelman, J. Paradis, and E. Barrett

<http://www.mhhe.com/mayfieldpub/tsw/home.htm>



國立交通大學電機學院與資訊學院 提昇英文能力訓練課程

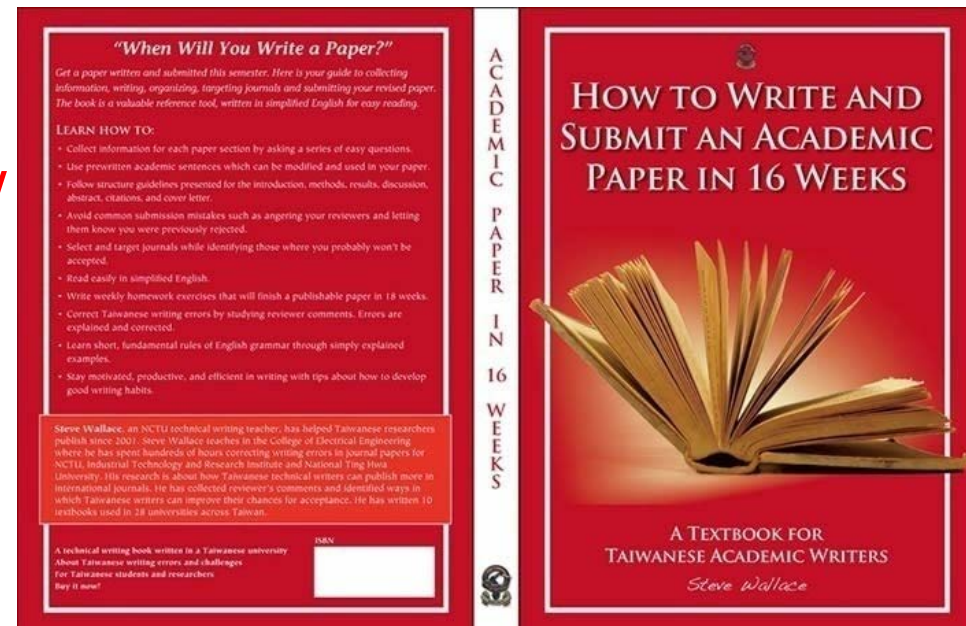
- Steve Wallace

<http://editing.tw/profile/index.php>



- 華樂絲學術英文編修

<http://www.editing.tw/>



Assessment

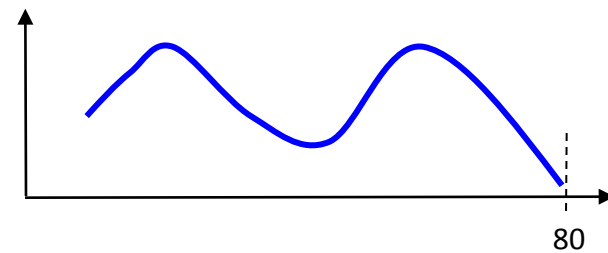
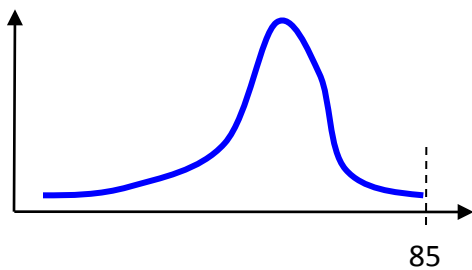
Recitation朗讀, conversation, and in-class copyediting編修 practice (23).....	5%
Midterm.....	30%
Final.....	25%
Grammar / vocabulary quizzes.....	5%
Short assignments (47) / formal papers...	15%
Peer editing (24).....	10%
Punctuality, attendance, and participation in discussions.....	10%

不定期點名

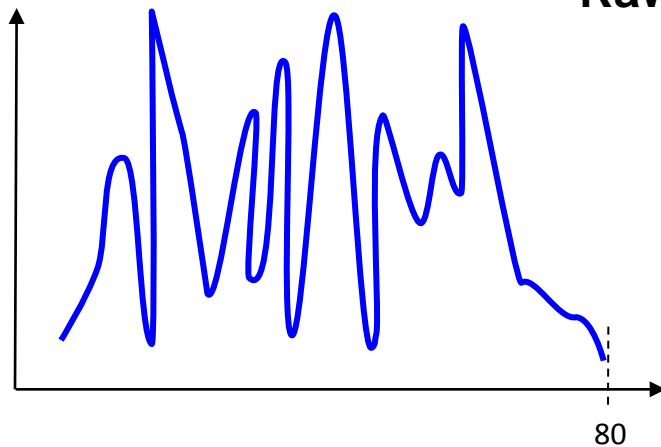
These weights are tentative and subject to future adjustment. (人數少時：略增上課練習比重，減少作業比重)

These weights are **tentative** and
subject to future adjustment

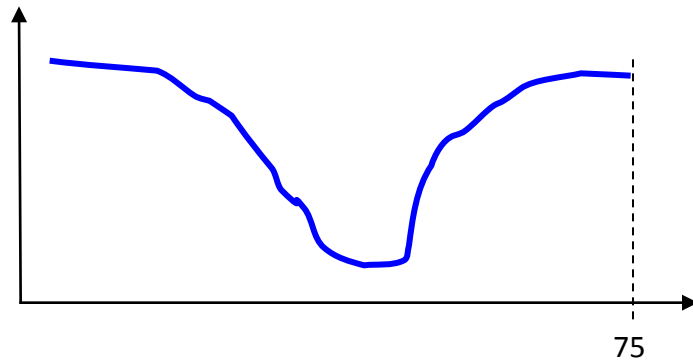
- 寫作/編修滿分為**6**級分1點(也就是100分) 、
5級分0.8點、
4級分0.6 點、
3級分0.4點、
2級分0.2點、
1級分0.1 點、
0級分0點。



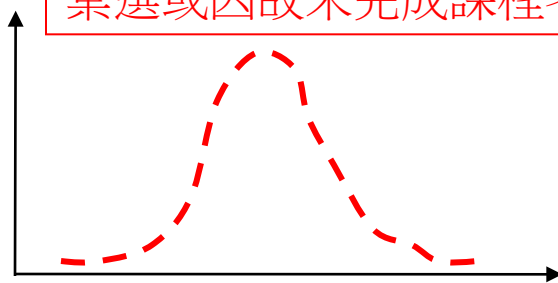
Raw scores



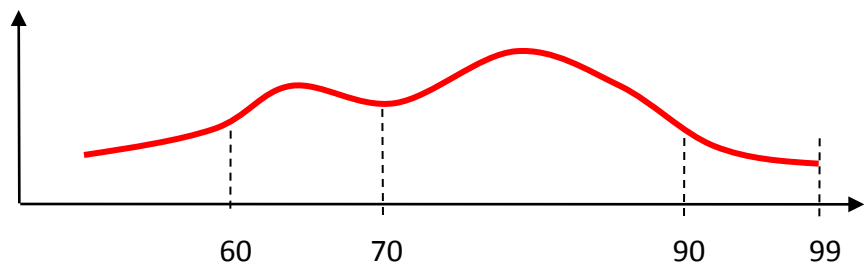
需要寫推薦信的同學，成績至少要達到90分以上；也就是前20%以內。
(並且要修過我教授的至少兩門課以上)



棄選或因故未完成課程者均得0分



Non-linear scaling



千金難買早知道 A word before is worth two behind.

No late work will be accepted

- In industry, late work could cause serious consequences such as huge financial loss.
- We are doing our students a big favor by imposing **no late submission policy** so that they learn this precious lesson as early as possible if they are going to work in industry after graduation.

大學部同學的評分標準

- 為鼓勵大學部同學提早修習本科目，對其將採取不同的評分標準：
- 大學部同學的修課人數將獨立，不納入修課總人數來計算。
- 大學部同學的學期個人總成績，將依據其他研究所同學調整之後的分數，向上再提昇至少**2至5**分 (但以**99**分為上限)。

臨摩範本的寫作練習

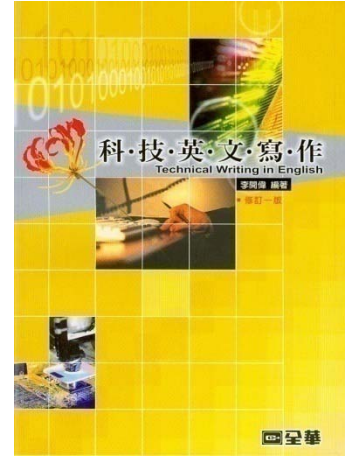
- Free writing自由寫作，無特定主題。
- 把一篇現有的文章段落，依照所給予的範例格式，重新加以改寫。
- 可以附上原文，也可以沒有原文。
- 也可以把改寫練習的單位縮小到是句子。

文法複習與句子分析法

- 義守大學資訊工程學系
- 張佑康老師
- 科技英文課程講義

Commonly Misused Words

使用適當的字彙



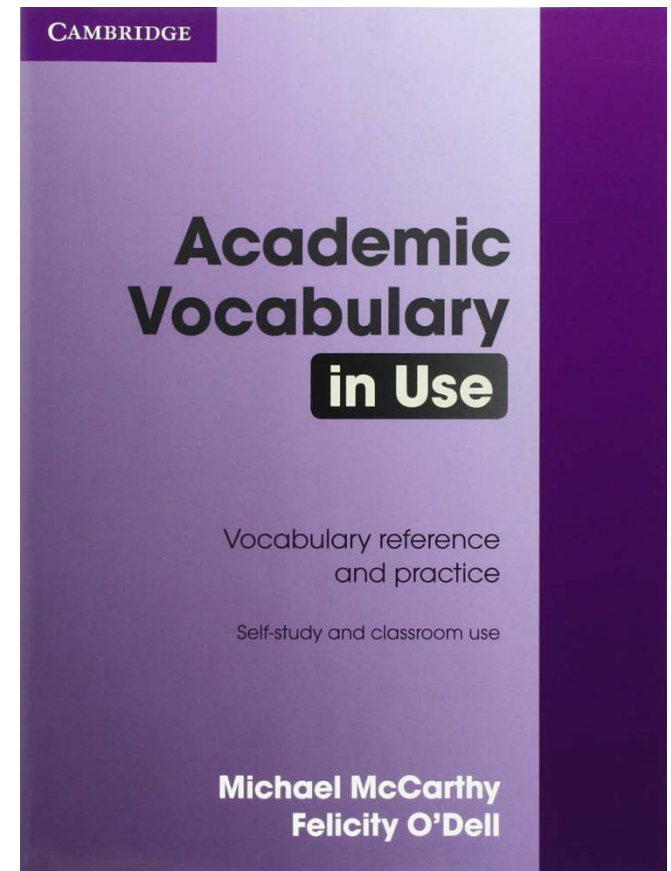
- 科技英文寫作 – 李開偉
- Anyone who wishes to be an effective professional writer (communicator) must have a good **vocabulary**.
- Without a good vocabulary, you simply cannot put into practice all the principles we have been discussing.

Academic Vocabulary in Use (with Answers)

**Michael McCarthy and
Felicity O'Dell,
Cambridge University
Press,**

ISBN: 0-52-168939-2.

(Vocabulary reference and
practice)



- 寫作者常常不願意刪掉自己花費許多時間寫作的文字，但是刪減論文內不必要的資訊，可以讓讀者的重點放在重要的內容上。
 -
- 時間允許的情況下，把您的文章暫時擱置，沉澱一段時間後，再來決定要刪掉什麼內容。這樣做能較容易發現拙劣的用詞和無關緊要的資訊。

- 在翻譯經驗中，將中文稿件翻成英文時往往會減少約落**30%~40%**的字數。其中最常發生的刪字情況不外乎是將原稿中已重複多次的字句刪除，以利讀者閱讀理解。
- 而另一情況則是在學術翻譯中，我們會將使用過於頻繁詞彙用縮寫（**Abbreviation**）取代。這樣一來不僅能減少句子中冗長的段落，更是能讓文章讀起來較順暢且能保留讀者的注意力。

- 有些作者在寫原稿的時候偏好用較長的句子將想表達的多數概念串連在一起，使句子閱讀起來有一氣呵成的感覺。然而這樣的句子經過翻譯，勢必要裁切或修飾，因為英文句子不宜過長，且過於冗長的句子讀起來容易失去焦點，導致讀者需自行將句子切割才能理解。
- 因此在**中翻英**的過程中，**字數下降**屬正常現象。

Useful verbs

- represent, analyze, apply, compare, demonstrate, illustrate, summarize, optimize, minimize, maximize, conclude, list, define, report, model, implement, design, consider, involve, simplify, generalize, perform, reduce, obey, fit, contain, consist of, scale up to, be based on, take into account, depend on, increase, decrease, evaluate, predict, assign, require, satisfy, ...

Irregular verbs

- choose – chose – chosen
- find – found – found
- hide – hid – hidden
- hold – held – held
- lead – led – led
- lose – lost – lost
- rise – rose – risen
- seek – sought – sought
- show – showed – shown
- spin – spun – spun
- split – split – split
- spread – spread – spread (wide-**spreaded**; spreaded is a spelling **error**)
- stick – stuck – stuck

Irregular plural nouns

- half – halves
- life – lives
- axis – axes
- matrix – matrices
- child – children
- person – **people**
- automaton – automata
- vertex – vertices
- index – indices (or indexes)
- analysis – analyses
- thesis – theses
- parenthesis – parentheses
- appendix – appendices (or appendixes)
- basis – bases
- emphasis – emphases
- series – series
- medium – media
- criterion – criteria
- phenomenon – phenomena

Prepositions

constraint **on** ... (e.g., constraints on the order)

independent **from** ... but dependent **on** ...

different **from** ... but similar **to** ...

difference **between** ... and ...

prefer ... **to** ...

impact of ... **on** ...

influence **on** ...

effect **on** ... (but to affect ...)

focus **on** ...

perform **in** some manner

generalize **to** ...

a discussion **about/on** ... (but to discuss ...)

research **on** ... but a study **of** ...

reason **for** ...

opportunity **of/for** ...

in spite **of** ... (but despite ...)

regardless **of** ...

take **into** account

in relation **to** ...

in contrast **with** ...

a proportion **of** ... ("a large proportion of data")

in proportion **to** ..., proportional **to** ... ("The time complexity of f proportional to n is...")

the ratio **of** a **to** $b = a/b$

$x\%$ **of** y

under some conditions

by default

contrary **to** ...

in contrast

by contrast (\sim "however")

on the contrary

at an extreme

常見的英文字首 (**Prefix**)

- 加上字首可以使得原先的字變成截然不同的意思。舉例來說，「**comfortable**（舒適）」，若加上字首「**un**」，這個字馬上變成「**uncomfortable**（不舒服）」的意思。

Anti- (against) 反對

- **Antisocial** 反社會的；對社會有害的；危害公共利益的
例句：Increasingly, smoking is regarded as an antisocial habit.（越來越多的人把吸煙視為危害公共利益的惡習。）

Dis- (opposite of) 相反的

英文字首 (Prefix) (2)

- **Disagree** 不同意，持異議，反對

例句：I am afraid I have to disagree with you (on that issue). (關於那個問題) 恐怕我不能同意你的看法。

- **Dishonest** 不誠實的，不正直的；欺詐的

例句：It is dishonest to lie about one's age. (虛報年齡是不誠實的。)

- **Disappear** 消失、失蹤

例句：I do not know how it is possible for a person to disappear without trace. (我不明白一個人怎麼會消失得無影無蹤。)

英文字首 (Prefix) (3)

In- (not) 不，無，非

- Incorrect 不正確的；不真實的

例句：The assumptions made about the economy's rate of growth proved to be incorrect. (對經濟成長率的推測證明是不正確的。)

- Inadequate 不夠的；不足的

例句：She rejected the \$2 million offer as totally inadequate. (她認為200萬美元的出價完全不夠，因而拒絕了。)

英文字首 (Prefix) (4)

- Inability 不會

例句：Inability to use a computer is a serious disadvantage when you are applying for jobs. (在求職時不會使用電腦是個十分不利的條件。)

Inter- (between) 互相；在...之間，在...中間

- Interact 交流，交往；相互作用，互相影響

例句：Dominique's teacher says that she interacts well with the other children. (多明尼克的老師說她與別的孩子相處得很好。)

英文字首 (Prefix) (5)

- **International** 國際性的，國際間的
例句：Several international celebrities were present at the statesman's memorial service. (好幾位國際知名人士出席了這位政治家的追悼儀式。)
- **Interdepartmental** 各部門之間的；涉及不同部門的，跨部門的
例句：This is an interdepartmental project. (這是一個跨部門的專案。)

Un- 缺乏；相反

英文字首 (Prefix) (6)

- **Unrealistic** 不切實際的；不實事求是的；不現實的
例句：I think these sales forecasts are unrealistic, considering how slow sales are at present. (考慮到目前的銷售速度有多慢，我覺得這些銷售預測是不切實際的。)
- **Unscrew** 擰鬆；旋開
例句：I cannot unscrew the top of this jar – it is really tight. (這個瓶蓋我轉不開來——實在太緊了。)
- **Unfairness** 不公平，不公正；不正當
例句：The Act does not really address the fundamental unfairness of the system. (該法案並沒有真正解決制度在基礎上不公平的問題。)

英文字尾 (Suffix)

- 判斷詞性對於單字的運用非常重要，而認識字尾（或稱「後綴」）可以協助您在第一眼看到一個字就立刻判斷出它的詞性。不同的字尾（**suffix**）不僅可以讓一個字擁有不同的詞性，它也可以賦予一個單字不同的功能。

1. 形成「名詞」的字尾

- 「**-ion**」：行為的過程或結果

* **Fusion**（融合；結合；熔合；合併）

His work is a fusion of several different styles of music.（他的作品是幾種不同音樂風格的融合。）

英文字尾 (Suffix) (2)

- * Revision (修正；修改)

These proposals will need a lot of revision. (這些提案需要進行大刀闊斧的修改。)

- * Opinion (意見；看法；主張)

What is your opinion on the matter? (你對這件事有甚麼看法？)

- 「-ness」：性質、情況、狀態

- * Roughness (不平整)

The roughness of the roads is the biggest danger to tires. (路面不平是輪胎最大的危險。)

英文字尾 (Suffix) (3)

- * Darkness (暗；黑暗；陰暗)

I could hardly see anything in the darkness. (在黑暗中我幾乎什麼都看不見。)

- * Awareness (意識)

Public awareness of the problem will make politicians take it seriously. (一旦公眾意識到這個問題，政客們就會嚴肅對待它了。)

英文字尾 (Suffix) (4)

- 「-ment」：行為；狀態；結果

- * Treatment (對待；待遇；處理)

Peter gets special treatment because he knows the boss. (彼得認識老闆，所以受到特殊待遇。)

- * Abandonment (離棄；放棄；拋棄；遺棄)

The abandonment of the island followed nuclear tests in the area. (在這個地區進行核試驗後，這座島嶼被放棄了。)

- * Movement (動；移動；運動)

He made a sudden movement and frightened the bird away. (他突然動了一下，鳥就受驚飛走了。)

英文字尾 (Suffix) (5)

2. 形成「形容詞」的字尾

- 「-ful」：充滿……的

- * Grateful (尤指對其他人) 感激的，表示感謝的

I am just grateful that I am not still working for him. (真是謝天謝地，我現在不用再為他工作了。)

- * Colorful (豐富多彩的；有聲有色的)

The town, of course, has a very colorful history / past. (當然，這座城鎮具有豐富多彩的歷史。)

- * Bountiful (數量) 異常大的

We found a bountiful supply of coconuts on the island. (我們發現島上有充足的椰子。)

英文字尾 (Suffix) (6)

- 「-less」：沒有……的

- * Hopeless (沒希望的)

She was depressed and felt totally hopeless about the future. (她情緒低落，覺得未來毫無希望。)

- * Baseless (沒有事實根據的；無根據的)

She assured me that my fears were baseless. (她向我保證，我的恐懼是毫無根據的。)

- * Reckless (魯莽的；輕率的；不顧後果的)

He was found guilty of reckless driving. (他被判魯莽駕駛罪名成立。)

英文字尾 (Suffix) (7)

- 「-able」：能夠……的

- * Suitable (適宜的；合適的)

The film is not suitable for children. (這部電影不適宜兒童觀看。)

- * Capable (有能力的；熟練的；能幹的)

We need to get an assistant who is capable and efficient.
(我們需要一個能力強、效率高的助理。)

- * Dependable (可以信賴的；可以信任的)

I need someone dependable to take care of the children while I am at work. (我上班的時候需要有一個可靠的人來照顧孩子們。)

英文字尾 (Suffix) (8)

3. 形成「動詞」的字尾

- 「-ize」：使成為……化

- * Organize (安排；組織；籌劃)

They organized a meeting between the teachers and students. (他們組織了一次師生會議。)

- * Memorize (記住；熟記；背熟)

When I was at school, we were required to memorize a poem every week. (唸書的時候，老師要求我們每週背一首詩。)

- * Mesmerize (迷住；迷惑)

I was completely mesmerized by the performance. (我完全被表演迷住了。)

英文字尾 (Suffix) (9)

- 「-ify, -fy」：使……化使成為……

- * Justify 為……辯護；證明……正當（或有理；正確）；是……的正當理由

Are you sure that these measures are justified?（你確定這些措施合理嗎？）

- * Simplify（使簡化；使簡易）

He tried to simplify the story for the younger audience.（在講給年齡較小的聽眾聽時，他盡可能地簡化這個故事。）

- * Satisfy（使滿足；使滿意）

They have 31 flavors of ice cream—enough to satisfy everyone!（他們有31種口味的霜淇淋—足以滿足所有人！）

英文字尾 (Suffix) (10)

- 「-en」：使變成

- * Shorten (使) 變短；(使) 縮短

As you grow older, your spine shortens by about an inch.
(隨著年齡變老，你的脊椎將縮短約一寸。)

- * Enlighten (開導；闡明)

Should the function of children's television be to entertain or to enlighten? (兒童電視節目的作用應該是娛樂還是啓蒙?)

- * Sharpen (使變尖；使鋒利)

My pencil is blunt—I will have to sharpen it. (我的鉛筆鈍了—我得削一下。)

英文動詞＋介系詞的「搭配詞」 (collocation)

- "You want your employees to work with you, not for you."
- 以上例句裡的動詞「**work**」後面用介系詞「**with**」和「**for**」，意思就不同（**work with** = 一起工作，而 **work for** = 為某人/某公司效力）。

Collocation 搭配詞 (2)

1. Rely on (依賴、依靠、依仗)

The success of this project relies on everyone making an effort. (這個專案計劃的成功要靠每個人的努力。)

2. Congratulate on (祝賀、慶賀、恭喜)

I was just congratulating Amy on having won her race. (我那時正在祝賀艾咪賽跑獲勝。)

Collocation (3)

3. Disagree **with** (持異議、反對)

I am afraid I have to disagree with you on that issue. (關於那個問題，恐怕我不能同意您的看法。)

4. Deal **with** { (尤指工作上) 與...打交道，對付 }

She is used to dealing with difficult customers. (她已經習慣了與難纏的顧客打交道。)

Collocation (4)

5. Comply **with** (服從、遵守、依從)

There are serious penalties for failure to comply with the regulations. (不遵守規定者將受到嚴懲。)

6. Prepare **for** (準備、預備、把...準備好、使預備好)

Have you prepared for your interview? (你做好面試的準備了嗎?)

Collocation (5)

7. Apologize **for** (道歉、認錯、謝罪)

Trains may be subject to delay — we apologize for any inconvenience caused. (列車可能會延誤，如果給您造成任何不便，我們在此謹致歉意。)

8. Search **for** (搜查、搜索)

The police searched the woods for the missing boy. (員警在樹林中搜尋失蹤的男孩。)

Collocation (6)

9. Suffer **from** (受苦、受折磨)

She has been suffering from cancer for two years. (她受癌症所苦已經兩年了。)

10. Infer **from** (推斷、推論、推理)

What do you infer from her refusal? (你從她的拒絕中能推斷出甚麼?)

Collocation (7)

11. Resign **from** { 辭職、辭去（職務）、放棄（工作） }

He resigned from the company in order to take a more challenging job. （他從這家公司辭職以便能夠從事更有挑戰性的工作。）

12. Reply **to** （回答、回覆、答覆）

I try to reply to letters the day I receive them. （我儘量在收到信的當天就回信。）

Collocation (8)

13. Lead **to** (導致、引起)

Reducing speed limits should lead to fewer deaths on the roads. (降低限速可以減少交通死亡人數。)

14. Adapt **to** { 使適應不同情況 (或用途) }

We had to adapt our plans to fit Jack's timetable. (我們不得不改變我們的計劃來遷就傑克的時間安排。)

Collocation (9)

15. Boast **about** (自吹自擂、吹噓、誇耀)

Parents enjoy boasting about their children's achievements. (父母喜歡誇耀子女所取得的成績。)

16. Forget **about** (忘記、遺忘)

I completely forgot about Jenny's party. (我完全忘記了珍妮的派對。)

Collocation (10)

17. Participate **in** (參與、參加)

She never participates in any of our discussions, does she? (她從不參加我們的任何討論，不是嗎？)

18. Confide **in** { 向...傾訴、向...吐露情感 (或秘密) }

She is nice, but I do not feel I can confide in her. (她人很好，但我還是覺得我不能對她推心置腹。)

Collocation (11)

19. Aim **at** { (使) 瞄準、(使) 對準、以...為目的 }

This anti-smoking campaign is mainly aimed at young teenagers. (這場反吸菸運動主要是針對青少年的。)

20. Stare **at** { (尤指驚訝、害怕或思考時) 盯著看、凝視、注視 }

Do not stare at people like that, it is rude. (不要那樣盯著人看，很不禮貌。)

- “shelf” 當名詞是「架子」或是任何突出來的東西，作動詞時則有「排放在架上」、「擱置」的意思：“**On the shelf**”是“**postponed**”，延遲擱置的意思。
- "off the shelf" 是「**現成的**」而不是「客製化的」，經常用在軟體銷售：
You can purchase **off-the-shelf** software or have it **customized to suit** your needs. (你可以購買現成的產品，或是我們可以依照你的需求提供客製化服務。)
- Their services are **tailored to** clients' needs.

- I bought this car as it is **state of the art** and has AI-assisted driving.
我買這輛車是因為它配備了最新技術，並且有人工智能輔助駕駛功能。
- I do not like this **state-of-the-art** phone as it is too complicated.
我不喜歡這部高科技手機，因為它太複雜了。
- 在名詞前使用時，單詞之間需要加連字符，構成**合成形容詞**「**state-of-the-art**」。

Common errors in English

Confusion of adjectives & adverbs

He spoke to me very friendly (in a very friendly way)

He drives too fastly (too fast)

She sang very lovely (Her singing was very lovely)

I cannot see clear without my glasses (see clearly)

The prisoner got clearly away (got clear away)

Come closely; I want to tell you something (Come close)

The moon is close related to the Earth (closely related)

He was deadly asleep (He was dead asleep)

« dead » = adv., exactly, completely. Ex., you are dead wrong.

The drug is a dead poison (a deadly poison)

You seem to take matters too easy (too easily)

He decided to work slow and easy (slowly and easily)

I worked too hardly last week (worked too hard)

I like the eggs boiled hardly (boiled hard)

I will come back as quickly as I can (as quick as I can)

We had a real good time (really good time)

If we work slow and steady, we can finish it by noon (slowly and steadily)

Redundancy encore 再來一次

Redundant words can make a sentence loose, powerless, and even ridiculous. For example,

- The **wet** rain soaked us to the skin.
- Each person must take care of his own **individual** work.
- I am going to paint my **own** house this summer.
- **Both** John and Mary are leaving.
- Ultrasound is not audible **to the ear**.
- Most of stars are invisible **to the eye** in a moonlight night.
- We shall combine the three departments **into one**.
- The chairman's explanation represents a consensus **of opinion**.
- We must cooperate **together** (cooperate **jointly**).
- We have 10 **different** kinds of soup on the menu.
- The **end** result was that there was little room for improvement in our work.
- The **end result** of the experiment proved that we had failed. (= conclusion)
- It is always enjoyable **for a person** to relax on a warm day. (to delete)
- The lake is too cold **for people** to go swimming (too cold for swimming).
- We must repeat our experiment **again**.
- He is going to repeat the lecture **for a second time**.
- The garden is surrounded **entirely** by the wall.

Ambiguity

- **Ambiguity** means that a word or a phrase has two or more meanings; and it is difficult to determine which one is correct.
- Ambiguity may be classified into (1) **semantic** ambiguity and (2) **grammatical** ambiguity; or,
- as Evans puts it, into (1) **unintentional** ambiguity and (2) **intentional** ambiguity.
- Intentional ambiguity is often used in politics, diplomacy, advertisement, etc. Such kind of ambiguity is difficult or even impossible to translate.

A. Morphological 型態上的 ambiguity – same form, different meanings

1. He is a sweet 甜食 salesman (a salesman to sell sweet, or he is sweet)
2. She is an English teacher (a teacher from England, or a teacher of English)
3. Flying plane can be dangerous (flying, or the plane, is dangerous)
4. She showed her baby pictures (showed baby pictures to her; showed pictures of her baby; showed her pictures of baby age)
5. He may not go (not allowed to go; it is possible that he does not go)
6. He said he hoped to see more of you (see you more often; see more persons than you alone)

B. Structural ambiguity

1. **This is Smith's picture** (a picture of Smith; a picture of Smith's; a picture by Smith).
2. **I knew him from a child** (knew him when I was a child; when he was a child).
3. **Robert Blair wrote a poem on a tomb-stone** (wrote a poem about a tomb-stone; wrote and copied it on a tomb-stone; sitting on a tomb-stone and wrote a poem).
4. **He loves the dog more than his wife** (he loves dog more than he loves wife; he loves the dog more than his wife does).

C. Relational ambiguity

1. Who is the man next to the woman **reading a newspaper**?
2. He made up his mind **once more** to try his luck.
3. He told me **yesterday** he had been to the University.
4. What she said **finally** had its calculated effect.
5. **A small boat anchorage** 停泊所 (a small anchorage; an anchorage for small boats). Solution: small-boat anchorage; small boat-anchorage.

12 Overused Words 濫用詞彙

- 避免相同的字重複地出現, 讓文章內容枯燥乏味

1. Also

- 其替換詞包括 'furthermore', 'moreover', and 'in addition'

2. Answer

- 動詞: 其替換詞包括 'address' and 'resolve'
- 名詞: 其替換詞包括 'solution' and 'explanation'

3. **Good**

- 其替換詞包括 ‘preferable’, ‘satisfactory’, ‘superior’, ‘valuable’, ‘excellent’, ‘positive’, and ‘high-quality’

4. **Bad**

- 其替換詞包括 ‘poor’, ‘unsatisfactory’, ‘inferior’, ‘negative’, and ‘deficient’

5. **Change**

- 動詞: 其替換詞包括 'transform', 'modify', and 'adjust'
- 名詞: 其替換詞包括 'transformation', 'modification', and 'adjustment'

6. **Describe**

- 其替換詞包括 'portray', 'characterize', and 'report'

7. **Explain**

- 其替換詞包括 ‘clarify’, ‘elaborate’, and ‘account for’

8. **Important**

- 其替換詞包括 ‘significant’, ‘vital’, ‘crucial’, ‘critical’, ‘imperative’, and ‘essential’

9. **Said**

- 其替換詞包括 ‘mentioned’, ‘stated’, ‘explained’, ‘argued’, or ‘claimed’

10. **Therefore**

- 其替換詞包括 ‘consequently’, ‘accordingly’, or ‘as a result’

11. Use

- 其替換詞包括 'utilize', 'employ', 'apply', and 'adopt'

12. Show

- 其替換詞包括 'display', 'demonstrate', 'indicate', and 'reveal'
- <https://proofed.co.uk/writing-tips/10-overused-words-and-brilliant-alternatives-you-never-knew-you-needed/>

The Meaning of English Names

- http://www.world-english.org/boys_names_list.htm
- http://www.world-english.org/girls_names.htm
- 常見英文男女名字
- 國字羅馬拼音

英文諺語

- 英文諺語中存在著各類型的隱喻，有時逗趣、有時又充滿哲理。諺語隱射著前人的生活智慧，不僅易於學習，更可為了文章添了幾分色彩。在學習與閱讀中英諺語時我們能將其分成數大類以利學習。

社交類

- All is fair in love and war. 在情場和戰場上可以不擇手段。

英文諺語 (2)

- **Blood is thicker than water.** 血濃於水（用於強調親情的重要性）。
- **A friend is never known till needed.** 需要之時方知友；不到需時，不知友情可貴。
- **Business is business.** 公事公辦。
- **Four eyes see more than two / Two heads are better than one.** 兩人總比一人看得全面（又可譯為「集思廣益」）。

英文諺語 (3)

- He who pays the piper_{風笛手} calls the tune. 有錢有勢；花錢的人說話算數。
- Happy is the man who learns from the misfortunes of others. 吸取他人教訓，自己才會走運。
- Be stabbed_刺 in the back. 受到他人背叛。
- Life without a friend is death without a witness. 沒有朋友的生活如同於孤獨的一人死去。

英文諺語 (4)

- Like father, like son; like mother; like daughter. / The apple does not fall far from the tree. 有其父必有其子（又可譯為「虎父無犬子」）。
- Misfortune tests the sincerity of friends. 患難見真情。

日常生活類

- Actions speak louder than words. 做比說更重要。

英文諺語 (5)

- A good beginning is half done. 好的開始是成功的一半。
- Back to square one. 回歸原點，重頭開始。
- Do not trouble trouble until trouble troubles you. 別自找麻煩。
- Easier said than done. 說比做容易。
- Experience is the father of wisdom and memory the mother. 經驗是知識之父，記憶是知識之母。
- Facts speak louder than words. 事實勝於雄辯。

英文諺語 (6)

- Fortune favors the bold. 天助勇者。
- Hot-button issue. 具爭議性的話題。
- Haste makes waste. 欲速則不達。
- History repeats itself. 歷史往往重演（泛指後人常與前人犯下同樣的錯誤）。
- Good medicine for health tastes bitter to the mouth. 良藥苦口利於病。
- No news is good news. 沒有消息就是好消息。

英文諺語 (7)

- No pleasure without pain. / No pain, no gain. 沒有付出就沒有收穫。
- Once bitten, twice shy. 一朝被蛇咬，十年怕草繩。

Good動物引用類

- Birds of a feather flock together. 物以類聚（又可譯為「近朱者赤，近墨者黑」）。

英文諺語 (8)

- Do not count your chickens before they hatch. 不要高興得太早（在事情真正發生之前，話別說太早）。
- If you chase two rabbits you will not catch either one. 如果你同時追逐兩隻兔子，你兩隻都抓不到（又可譯為「一心不可二用」）。
- Like a fly on the wall. 暗中偷聽者；暗中觀察者。
- To take the bull by the horns 喇叭. 勇於直接面對問題。

英文諺語 (9)

- To cry crocodile tears. 鱷魚的眼淚（又可譯為「貓哭耗子」）。
- To have the lion's share. 獲得最大份額或最大的一份。
- The elephant in the room. 一個問題因太過於龐大或麻煩，導致沒有人願意去碰。

Enjoy Writing Your Science Thesis or Dissertation

Supplementary reading:

- A step-by-step guide to planning and writing a thesis or dissertation for graduate science students.
- 2nd edition, Elizabeth Fisher and Richard Thompson.
- Chapter 1: Overview

<http://www.cs.ccu.edu.tw/~damon/writing/,writing-science-thesis.pdf>

Top US **Computer Science** Programs

美國研究所申請流程 – 資料準備

<http://www.cs.ccu.edu.tw/~damon/writing/GraduateSchoolApplication.pdf>

U.S. News & World Report

<https://www.usnews.com/best-graduate-schools/>

1. Massachusetts Institute of Technology

Stanford University

University of California – Berkeley

4. Carnegie Mellon University

5. University of Illinois – Urbana-Champaign

- 6. Cornell University**
 - Princeton University**
 - University of Washington**
- 9. Georgia Institute of Technology**
 - University of Texas – Austin**
- 11. California Institute of Technology**
 - University of Wisconsin – Madison**
- 13. University of California – Los Angeles**
 - University of Maryland – College Park**
 - University of Michigan – Ann Arbor**

CSRankings:

Computer Science Rankings

<http://csranks.org/#/index?all>

- CSRankings is a metrics-based ranking of top computer science institutions around the world.

Ranked in **Electrical / Communications**

- 1. Massachusetts Institute of Technology**
- 2. Stanford University**
University of California – Berkeley
- 4. University of Illinois – Urbana-Champaign**
- 5. California Institute of Technology**
- 6. Georgia Institute of Technology**
University of Michigan – Ann Arbor
- 8. Carnegie Mellon University**
- 9. Cornell University**
- 10. Princeton University**
Purdue University – West Lafayette