



國立臺灣師範大學
National Taiwan Normal University

From Text Analysis to Text Learning: The Cases of SmartReading

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Why Text Analysis (1)

- The puzzles of a librarian:
 - How can I determine the difficulty-level of a book for certain children?
 - How can I convince parents that the books I recommend for their kids are appropriate for the kids' reading competence levels?



Why Text Analysis (2)

- The puzzles of a language teacher:
 - Why do the textbooks with the same grade-label have obviously different difficulty-level of texts?
 - How can I choose appropriate text corresponding to my students' ability levels?

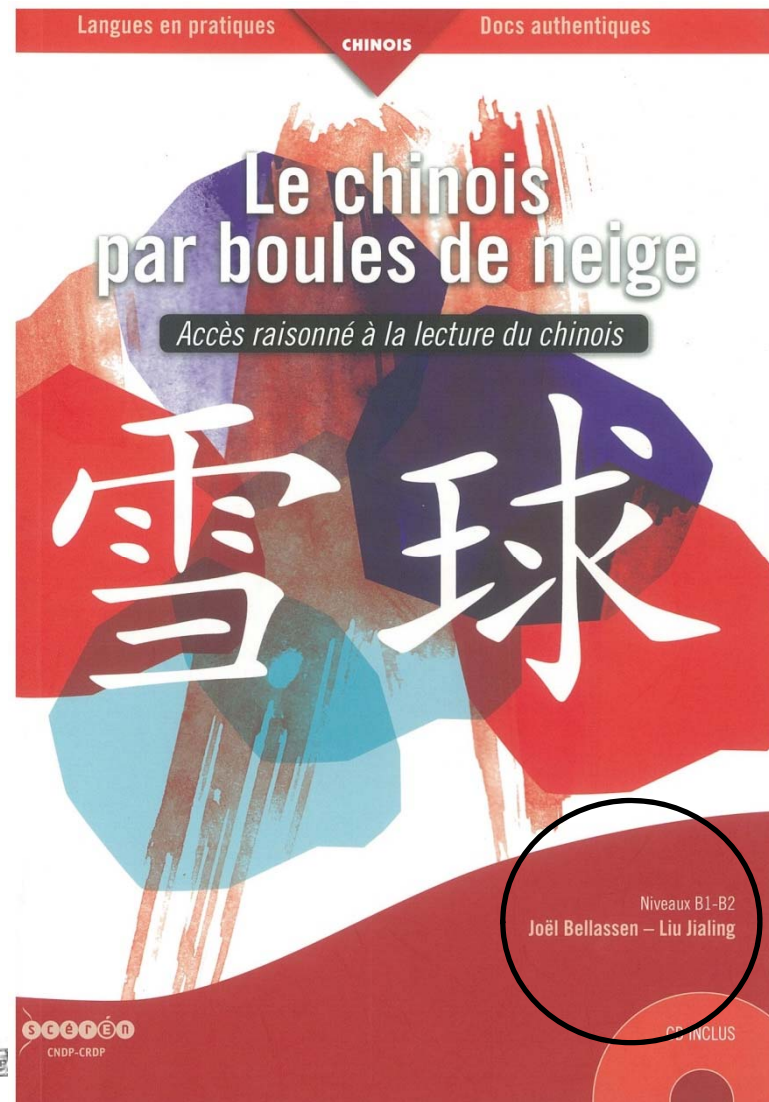


成功之路---跨越篇



University

滾雪球學漢語(雪球)



University

Example Text ---成功之路(BI)

我用石頭砸開了 IBM 的門

接到 IBM 面試通知時，已經是我送出簡歷後的第三個星期了。我正在一個小縣城出差。

當時我在一家激光公司實習，負責機器的安裝和調試。購買我們機器的工廠大部分都在小縣城，這次也不例外。工作結束那天，我們先是找地方好好吃了一頓，然後去一個小髮廊裡洗頭，放鬆放鬆。理髮師建議我把頭髮染染顏色，我看價格不貴，也很時髦，就選了種金黃色的。

頭髮剛染好，我的電話響了，看號碼似乎是 IBM 公司的。我一把扯下胸口的白布，緊張地跑出去接電話。IBM 秘書小姐通知我第二天下午五點到 IBM 公司面試。我開始傻笑，衝回髮廊，指著剛染的金髮大叫：“快給我吧頭髮染回去！染黑！染黑！”頭髮一弄完，我就趕快買了車票往回趕。

第二天，我下了火車直接來到 IBM 公司大樓，發現男士們都穿著很正式的西服。而我是工作服，牛仔褲，白色運動鞋，大大的工具包，特別是頭髮，長得可以擋住眼睛。我突然覺得我不屬於這裡，巨大的壓力讓我覺得自己矮小了許多。



Example Text---雪球(B1-B2)

市場

王經對商業很有興趣。每次看經濟新聞的時候，他都注意看市場供應的情況。他常常注意商品的價格是不是提高了。他認為，商品的價格對人民生活的影響很大。有時候，王經到市場去看看日用品的價格。比如肉、蛋、奶、糖，這些日用品的價格影響著老百姓的生活。王經覺得，如果市場經濟的情況好，對提高人民的生活水平是有好處的。王經很注意當代經濟情況的特點。他看到，現在的商品價格和二十年前的商品價格是不同的。他覺得老百姓的生活比去年好了一些。

王經每天坐公共汽車上班。他住的地區有一個特別的市場，公共汽車正好經過這個市場。這個市場的外國商品很多，特別是英國商品和日本商品。這些商品很漂亮，但價格很高。



Comparison of texts—number of characters

A 等級

	CRIE-CFL	成功之路	新時代華語	實用中文	雪球	Chinesisch ohne Muhe
<i>M</i>	118	530	124	149	404	90
<i>SD</i>	68	221	57	99	20	42

B 等級

	CRIE-CFL	成功之路	新時代華語	實用中文	雪球	Chinesisch ohne Muhe
<i>M</i>	381	1372	258	402	236	127
<i>SD</i>	225	606	34	283	43	25

備註：紅字為最高值，藍字為最低值



Why Text Analysis (3)

- The puzzles of a patient:

Facts about Diabetes

The diabetics need to control their blood sugar. They also need to control their blood lipid. The screening of those patients usually found they are involved with problems about body weight, blood pressure, and fasting lipid and glucose levels. 57.8% of patients had increased lipid levels, 56.8% were overweight, 35% were hypertensive, and 19% had increased fasting blood sugars.

慎選飲食，控制好糖尿病友的血脂

...血脂的控制目標為：血總膽固醇 $< 200 \text{ mg/dL}$ ；血三酸甘油酯 $< 150 \text{ mg/dL}$ ；血低密度脂蛋白膽固醇（LDL） $< 100 \text{ mg/dL}$ ；血高密度脂蛋白膽固醇（HDL） $> 45 \text{ mg/dL}$ 。飲食調整重點包括：體重控制、總油脂量、飽和脂肪酸、單元不飽和脂肪酸、多元不飽和脂肪酸、膽固醇、纖維質攝取量等。



What is text analysis?

- Analyzing the characteristics of text, such as styles, topics, difficulty, ...et al., through the features in texts, such as, word, syntax, semantics and cohesion.

-



The evolution of text analysis

- From single level of features to multilevel of features
- From qualitative to quantitative
- From domain-general to domain specific
- From user-independent to user dependent

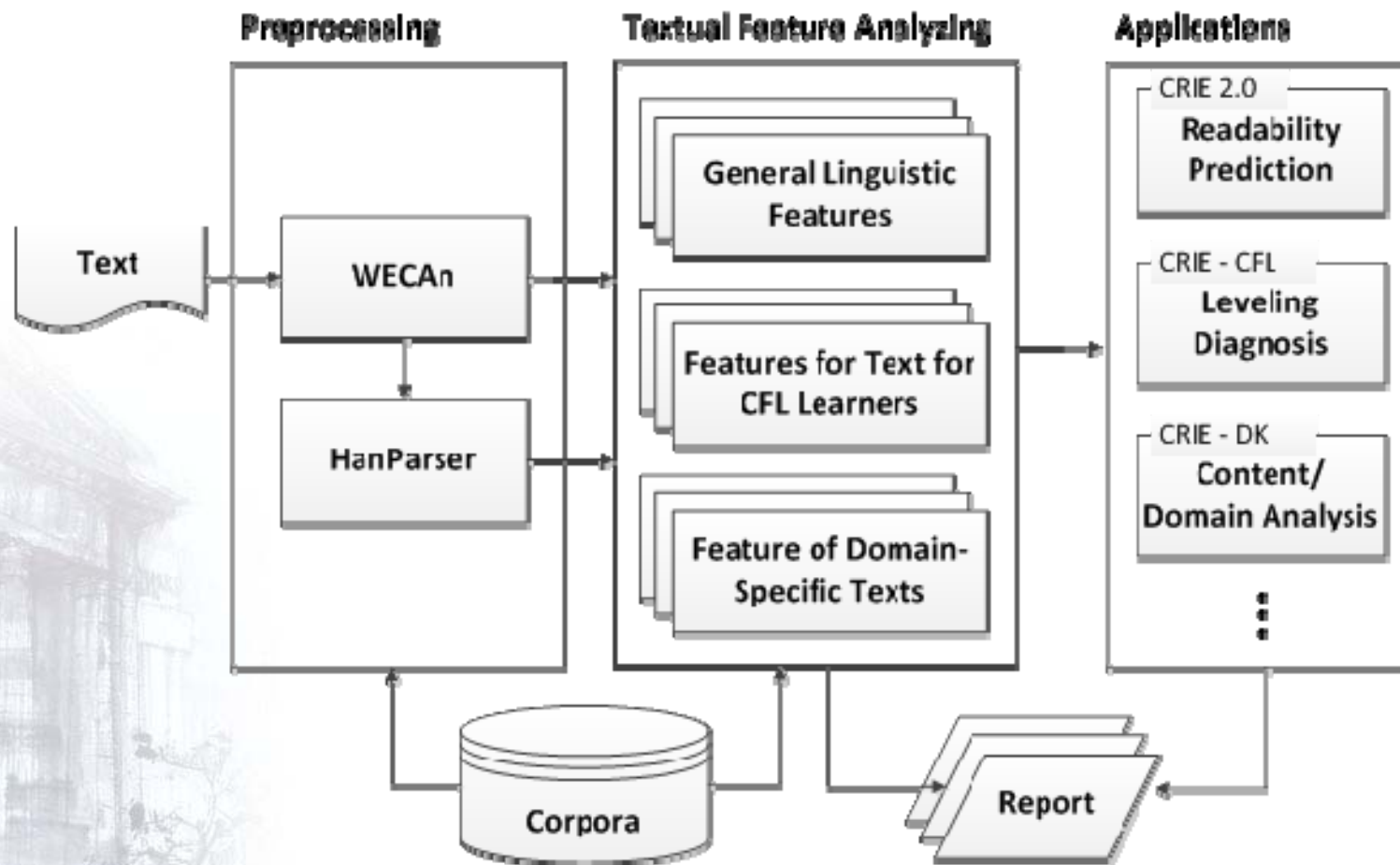


Our approach for text analysis

- Text mining techniques for multi-level, multiple linguistic features
- Combining linguistic features with statistical techniques and machine learning for readability indices



Our techniques/tools for text analysis



CRIE—Homepage



文本可讀性指標自動化分析系統 2.3

Chinese Readability Index Explorer, CRIE 2.3

可讀性研究團隊

心理組
陳茹玲、林維駿、吳銘達

語言組
查日新、杜奕羽、洪嘉慧

實工組
李宜慧、曾厚強

程式組
謝冠生、李亮璇

帳號： 密碼： | [註冊會員](#) | [忘記密碼](#) | [操作範例](#)

請選擇登入系統：

CRIE 文本對象的母語為中文 * * * 分析的文本是給中文為母語的讀者使用
Analysis of texts written for native Chinese readers

CRIE - CFL 文本對象的母語非中文 * * * 分析的文本是給中文為外語的讀者使用
Analysis of texts written for learners of Chinese

CRIE - DK 領域知識文本分析 * * * * *

中文斷詞與句法剖析服務 * * * * *



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【系統維護】謝冠生 E-mail: elearning.ntnu@gmail.com

引用本網站:

1. Sung, Y. T., Chen, J. L., Cha, J. H., Tseng, H. C., Chang, T. H., & Chang, K. E. (2014). Constructing and validating readability models: the method of integrating multilevel linguistic features with machine learning. Behavior Research Methods, in press. DOI: 10.3758/s13428-014-0459-x
2. 宋曜廷、陳茹玲、李宜慧、查日新、曾厚強、林維駿、張道行、張國憲 (2013)。中文文本可讀性探討：指標選取、模型建立與效度驗證。中華心理學刊, 55 (1), 75-106。
3. Chen, J. L., Cha, J. H., Chang, T. H., Sung, Y. T., & Hsieh, K. S. (2012, Nov). CRIE: A tool for analyzing Chinese text characteristics. Paper presented at 42nd Annual Meeting of the Society for Computers in Psychology (SCiP 2012). Minnesota, USA.
4. Sung, Y.-T., Chang, T.H., Chen, J.-L., Cha, J.-H., Huang, C.-H., Hu, M.-K., & Hsu, F.-Y. (2011, July). The construction of Chinese Readability Index Explorer and the analysis of text readability. Paper presented at 21th Annual Meeting of Society for Text and Discourse Process, Poitiers, France.

Pre-processing: word segmentation

- The tool for word segmentation: WECAn (Word Extractor for Chinese Analysis)
- The tool for sentence parsing: HanParser.



Computational methods involved

- Latent semantic analysis
- Support vector machine
- Word2Vector
- Other statistical methods



Findings and lessons learned (1)

- In terms of predicting the difficulty of texts, accuracy of multi-level features based predictions outperform those of uni-level-based prediction.



Findings and lessons learned (2)

- For L1 and L2 reading materials, few features, specifically word level features, are powerful predictors for the difficulty of CFL texts.



Findings and lessons learned (3)

- Domain-general linguistic features are not sufficient for predicting the difficulty level of domain-specific texts.
- For some fields, domain-specific features may be good enough, however, for some fields, integrating domain-general and domain-specific features may be more powerful than using domain-specific features only.



The prediction accuracy: Comparing domain-general with specific features

- 教科書文本範圍：3-9年級社會科1441篇、3-9年級自然科772篇。

24 general features	Social sciences	Sciences
Accuracy	55.10%	49.35%

Sung, Y. T., Chen, J. L., Lee, Y. S., Cha, J. H., Tseng, H. C., Lin, W. C., Chang, T. H. & Chang K. E. (2013). Investigating Chinese Text Readability: Linguistic Features, Modeling, and Validation. *Chinese Journal of Psychology*, 55(1), 75-106.

Domain-specific concepts	Social sciences	sciences
Accuracy	62.66%	75.91%

The predicting accuracy of hybrid models

- 1441 3-9-grade social science articles, 772 3-9-grade social science articles, 541 1-12-grade Chinese articles

	文本數	國文科詞表	社會科詞表	自然科詞表	準確率(%)
混合型文本(國文、社會、自然)	2754	√	√	√	76.94
混合型文本(國文、社會、自然)	2754	√			38.96
混合型文本(國文、社會、自然)	2754		√		43.1
混合型文本(國文、社會、自然)	2754			√	38.02
國文科文本	541	√	√	√	77.26
國文科文本	541	√			82.62
國文科文本	541		√		30.68
國文科文本	541			√	17.74
國文科文本	541		√	√	27.73
社會科文本	1441	√	√	√	73.98
社會科文本	1441		√		70.02
社會科文本	1441	√			38.79
社會科文本	1441			√	34.56
社會科文本	1441	√		√	44.14
自然科文本	772	√	√	√	79.53
自然科文本	772			√	84.84
自然科文本	772	√			35.62
自然科文本	772		√		33.94
自然科文本	772	√	√		39.51

Findings and lessons learned (4)

- Teachers/textbooks editors are not skillful in decoding the ability (difficulty)-level of curriculum standards (e.g., CEFR), they showed obvious disagreement/contradictions in compiling texts within the same ability-level or across ability levels.



Comparison of texts—number of characters

A 等級

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備註：紅字為最高值，藍字為最低值



Comparison of textbooks—number of difficult words

A 等級

	CRIE-CFL	成功之路	新時代華語	實用中文	雪球	Chinesisch ohne Muhe
<i>M</i>	7	75	9	9	38	6
<i>SD</i>	6	40	6	7	8	5

B 等級

	CRIE-CFL	成功之路	新時代華語	實用中文	雪球	Chinesisch ohne Muhe
<i>M</i>	45	219	27	48	33	9
<i>SD</i>	31	107	8	40	8	4

備註：紅字為最高值，藍字為最低值



Within textbook comparisons---雪球

- CFL textbook in France

	CEFR	A2	B1-B2
Characters	<i>M</i>	404	236
	<i>SD</i>	20	43
Two-character words	<i>M</i>	89	76
	<i>SD</i>	11	14
Sentences with complex structure	<i>M</i>	16.13	8.32
	<i>SD</i>	2.7	2.08
Content word	<i>M</i>	239	116
	<i>SD</i>	15	18
Sentences with complex semantic categories	<i>M</i>	19.13	8.63
	<i>SD</i>	6.09	2.85
Complex semantic categories	<i>M</i>	6.52	2.66
	<i>SD</i>	3.1	1.12
Positive conjunctions	<i>M</i>	12.44	8.16
	<i>SD</i>	4.27	4.27

B等級的語言特徵值顯著低於A2等級

Within textbook comparisons---成功之路

- CFL textbook in China

	CEFR	A1	A2	B1	B2	C1	C2
Characters	<i>M</i>	453	836	1231	1612	1128	1776
	<i>SD</i>	125	255	552	629	395	1072
Difficult words	<i>M</i>	61	127	195	261	165	295
	<i>SD</i>	25	44	106	97	57	164
Two-character words	<i>M</i>	124	225	333	425	301	473
	<i>SD</i>	37	68	155	158	103	270
Content word	<i>M</i>	245	457	672	872	616	959
	<i>SD</i>	70	151	321	346	230	608

C1等級的語言特徵值顯著低於B2等

Applications of text analysis (1)

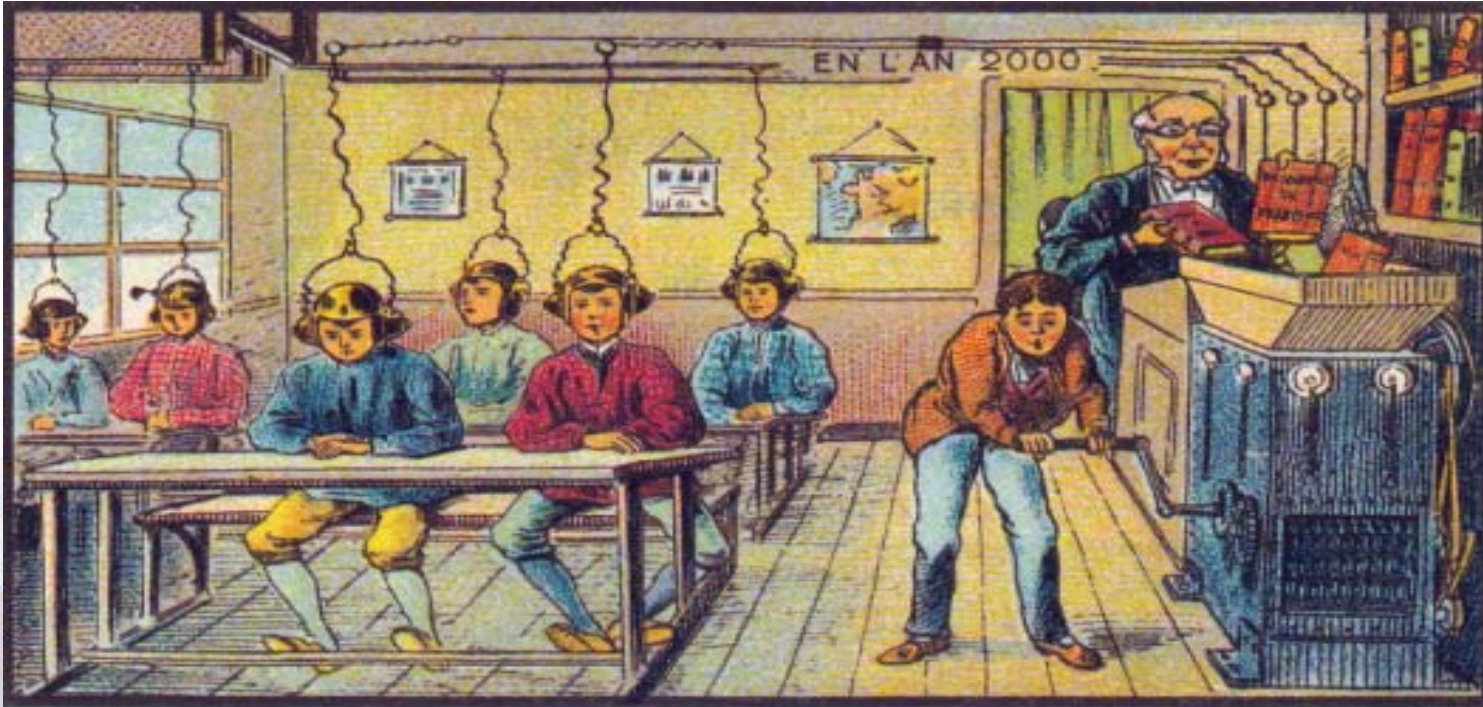
- 「[Smart Reading 慧讀, 會讀](#)」integrates text leveling, adaptive testing, automated essay scoring, and reading strategies training.



Adaptive Education in the East-- Confucius



Adaptive education in the West- Paris



“At School in the Year 2000” A futuristic image of learning as depicted on a postcard from the World’s Fair in Paris, Circa 1899 Image Source: Wikimedia Commons
Curtsey: Phil McRae



Key components for adaptive education (1)

- Knowing students' abilities/aptitudes



Key components for adaptive education (2)

- Knowing the difficulty level of teaching materials and methods for students

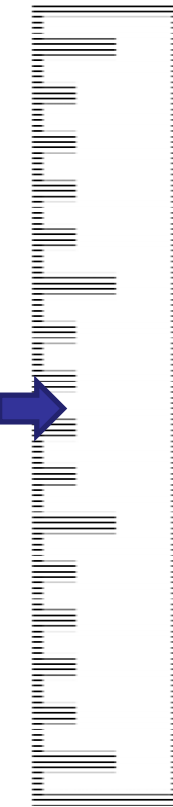


Key components for adaptive education (3)

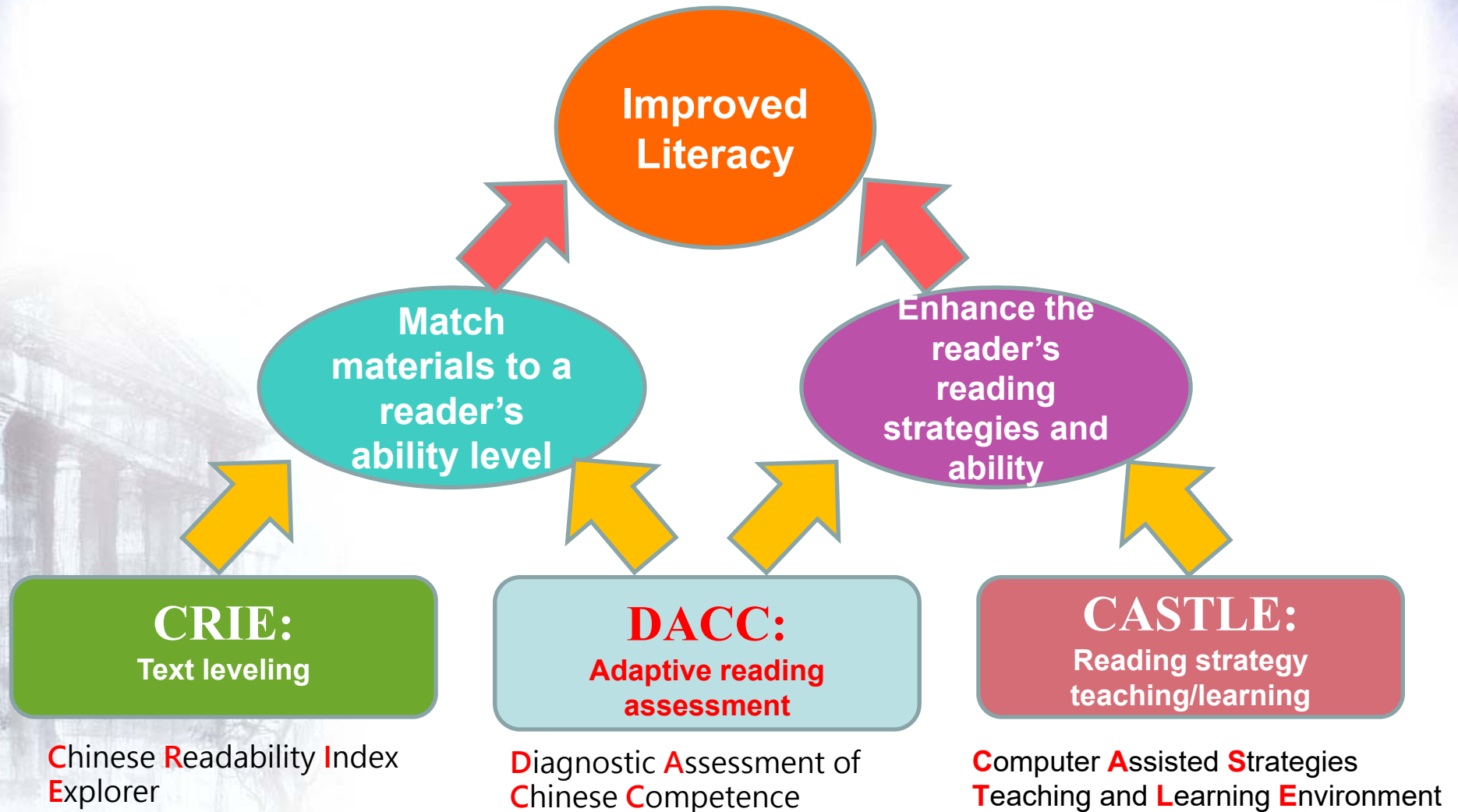
Matching Students with appropriate materials/ methods

Reader: 500C

Text: 500C



Adaptive reading: Our approach



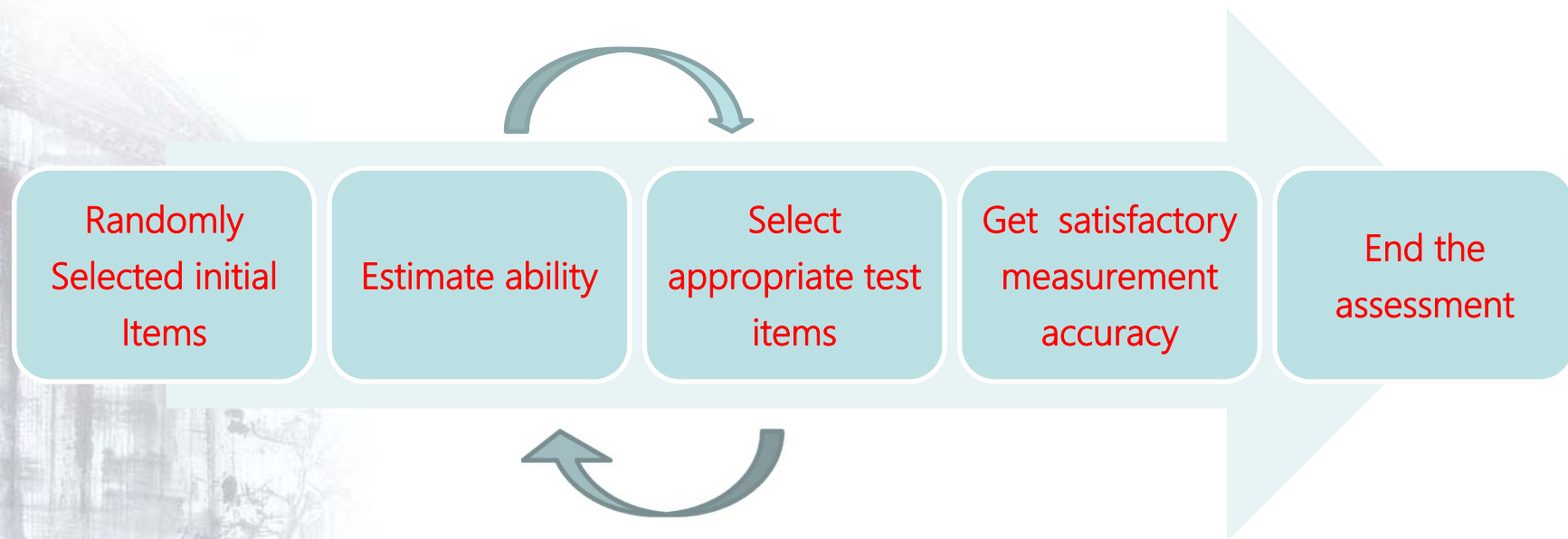
Diagnostic Assessment of Chinese Competence (DACC)

- Establish a reliable, valid, objective, and efficient assessment tool of readers' Chinese comprehension competence.
- Suitable for grades 2 to 9



Advantages of DACC (1)

- Highly efficient and effective computerized adaptive testing.



Advantages of DACC (2)

- Vertical diagnosis for locating a student's grade of reading competence.
- Horizontal diagnosis for various dimensions of competence:
 - vocabulary
 - sentence comprehension
 - main ideas and gist
 - inferential comprehension



CHINESE READABILITY INDEX EXPLORER (CRIE)

An automated analysis tool for analyzing
features of Chinese text



Advantages of CRIE (1)

- An integrated reading psychology, linguistics, and machine learning text readability analytic system
- Multilevel analyses: Includes lexical, syntactic, semantic, and cohesion levels.



Advantages of CRIE (2)

- Comprehensive, power, and valid quantitative indicators for texts of native-, non-native Chinese speakers.
- Indicators valid for domain general, domain-specific, and hybrid domain texts.



Examples of Features

Readability analysis

- ☐ CRIE Readability 1.0
- ☐ SVM readability prediction 1.0
- ☐ SVM readability prediction 2.0

Basic information

- ☐ Paragraphs
- ☐ Average paragraph length

Word level

- ☐ Characters
- ☐ Words
- ☐ Adverbs
- ☐ Verbs
- ☐ Type-token ratio
- ☐ Difficult words
- ☐ Low-stroke characters
- ☐ Intermediate-stroke characters
- ☐ High-stroke characters
- ☐ Average strokes
- ☐ Two-character words
- ☐ Three-character words

Syntax level

- ☐ Sentences
- ☐ Average sentence length
- ☐ Simple sentence ratio
- ☐ modifiers per NP
- ☐ Np ratio
- ☐ Average propositional phrase
- ☐ Sentences with complex structure
- ☐ Parallelism
- ☐ Average number of idioms each sentence

Semantic level

- ☐ Content words
- ☐ Negatives
- ☐ Sentences with complex semantic categories
- ☐ Number of complex semantic categories
- ☐ Intentional words
- ☐ Noun word density
- ☐ Content word frequency in logarithmic
- ☐ Average frequency of content word in domain in Logarithmic
- ☐ Number of Idioms
- ☐ Standard Deviation of number of idioms

Graphical Analysis



華語文可讀性報告

Report of Chinese Text Readability

- User: user202
- File Name: Text_Area_Result
- Date: 2015/7/28 11:38
- Version: CRIE 2.3

Readability analysis

• SVM readability prediction 2.0 = 2

※readability (grade level 1-6:elementary school, 7:junior high school,8:senior high school) prediction of SVM. Currently, the SVM readability predication 2.0 model uses the grade level system in Taiwan as its point of reference.

Reading Level

Instruction : The diagnosis of the features in this report is based on the features you selected

Feature Name

Words

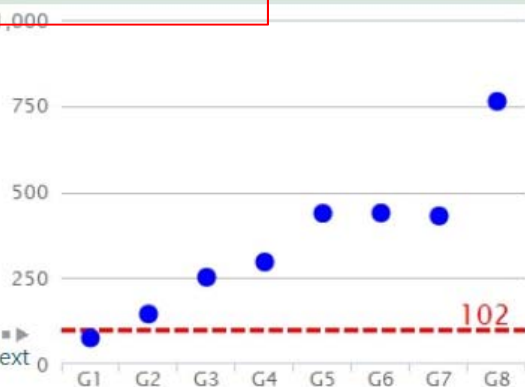
Feature Definition

Total number of words.

Word Counts

102

The value of the feature for the analyzed text



The blue dots means the average of the features in each level

The red dot-line means the value of this feature for the analyzed text

Definition of the Feature

Single File Result

The vertical axis refers to the grade levels (G1-G6 stand for the grade levels in elementary school. G7 stand for junior high school, G8 stand for senior high school)

CRIE - DK

- CRIE-DK uses natural research language and domain-specific terms to establish a new readability model for leveling online materials.
- CRIE-DK is suitable for a wide-range of extracurricular topics. The current model covers Chinese, social studies, natural science, and health. The range of readability covers grades 1 – 6, middle school, and high school. Through using a corpus of 6230 textbooks, it has a prediction accuracy rate of 76%.

Research Group Members

- psychology: Chen, J. L.; Lin, W. J.; Wu, M. T.
- Linguistics: Cha, J. H.; Tu, J. Y.; Hong, J. F.
- Computer Science: Lee, Y. H.; Tseng, H. C.
- Programmers: Hsieh, K. S.; Lee, Y. T.

ID: Password: | [Sing-Up](#) | [Forgot Password?](#) | [Demo](#) |

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[CRIE Analysis of texts written for native Chinese readers](#)

[CRIE-CFL Analysis of texts written for learners of Chinese](#)

[CRIE-DK Analysis of texts by domain knowledge](#)

[WECAn & HanParser](#)

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1. Sung, Y. T., Chen, J. L., Cha, J. H., Tseng, H. C., Chang, T. H., & Chang, K. E. (2014). Constructing and validating readability models: the method of integrating multilevel linguistic features with machine learning. Behavior Research Methods, in press. DOI: 10.3758/s13428-014-0459-x
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4. Sung, Y.-T., Chang, T.H., Chen, J.-L., Cha, J.-H., Huang, C.-H., Hu, M.-K., & Hsu, F.-Y. (2011, July). The construction of Chinese Readability Index Explorer and the analysis of text readability. Paper presented at 21th Annual Meeting of Society for Text and Discourse Process, Poitiers, France.

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Computer Assisted Strategies Teaching and Learning Environment (CASTLE)

An intelligent tutoring system for reading strategies



Modules of CASTLE

線上閱讀訓練系統

Computer Assisted Strategies Teaching and Learning Environment, CASTLE



線上摘要評量與回饋系統

Assessment and
Feedback System for
Summarization



線上資訊定位整合能力教學與評量系統

Teaching and
Assessment System for
Information Integration



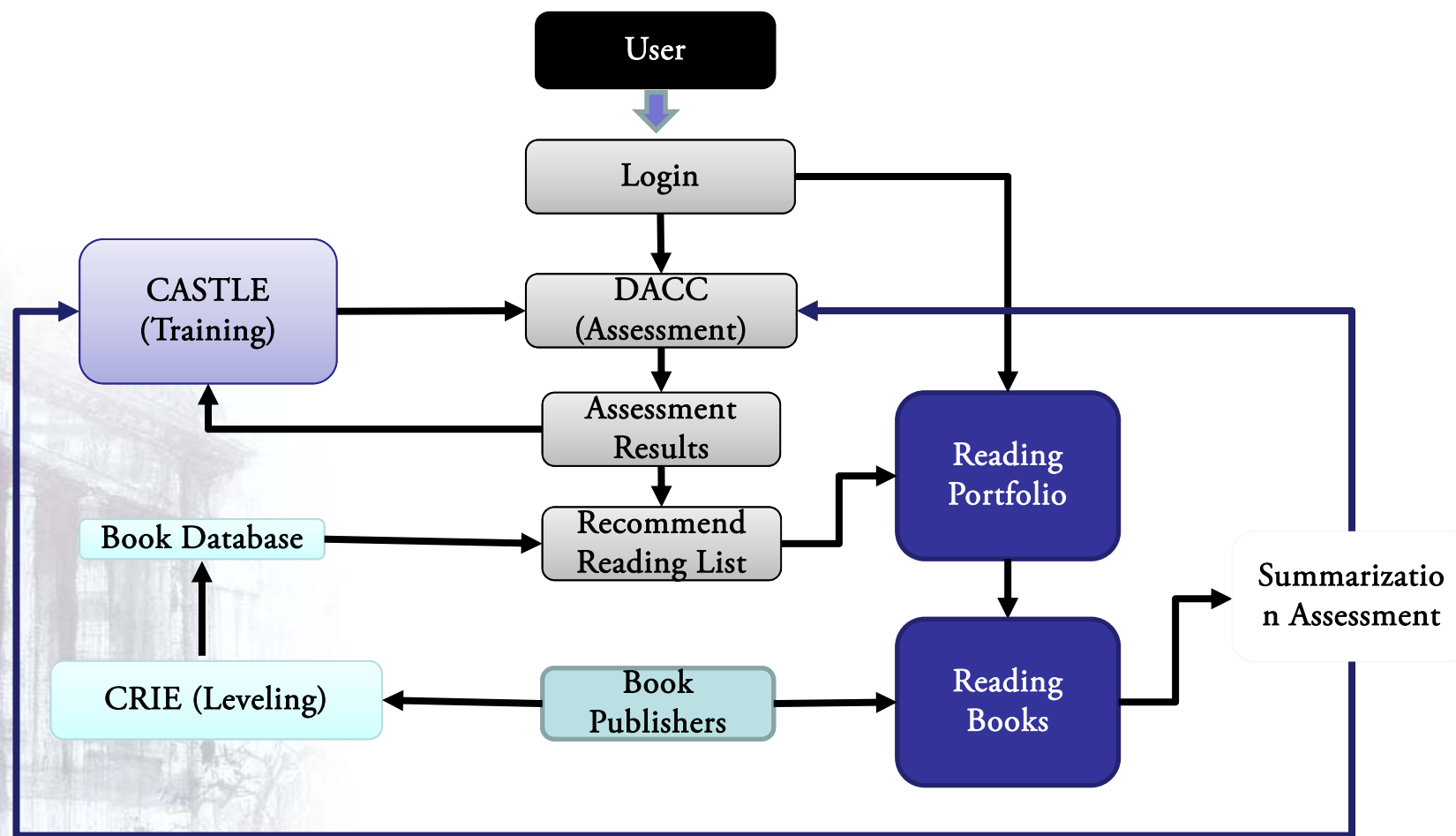
關鍵詞搜尋能力評量與回饋系統

Assessment and
Feedback System for
Keyword Search



國立臺灣師範大學 National Taiwan Normal University

Flow-chart of SmartReading



Partners of Research and Practices

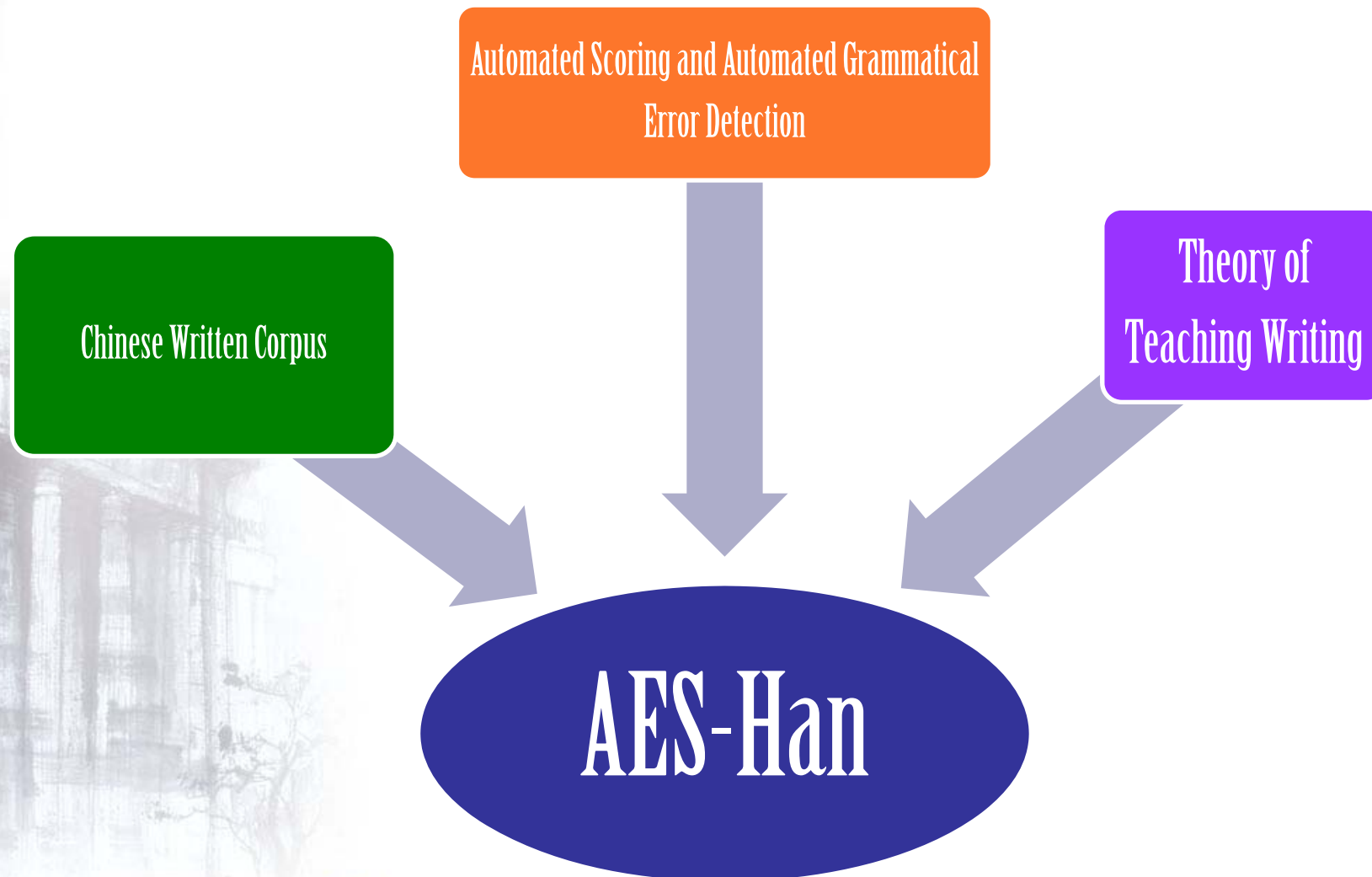
- Chi Mei Hospital
- Hyweb Technology Co. Ltd.
- ISF Academy in Hong Kong
- International Schools of China, Hong Kong, Singapore, and South Korea
- Parenting Magazine
- National Academy for Educational Research
- Taipei E-learning Education Center, Taipei Government
- United Daily News



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Applications of text analysis (2):AES-HAN



The Characteristics of AES-Han:

Grading

- A large collection of written texts centered on a **single topic** with learners at **different proficiency level**

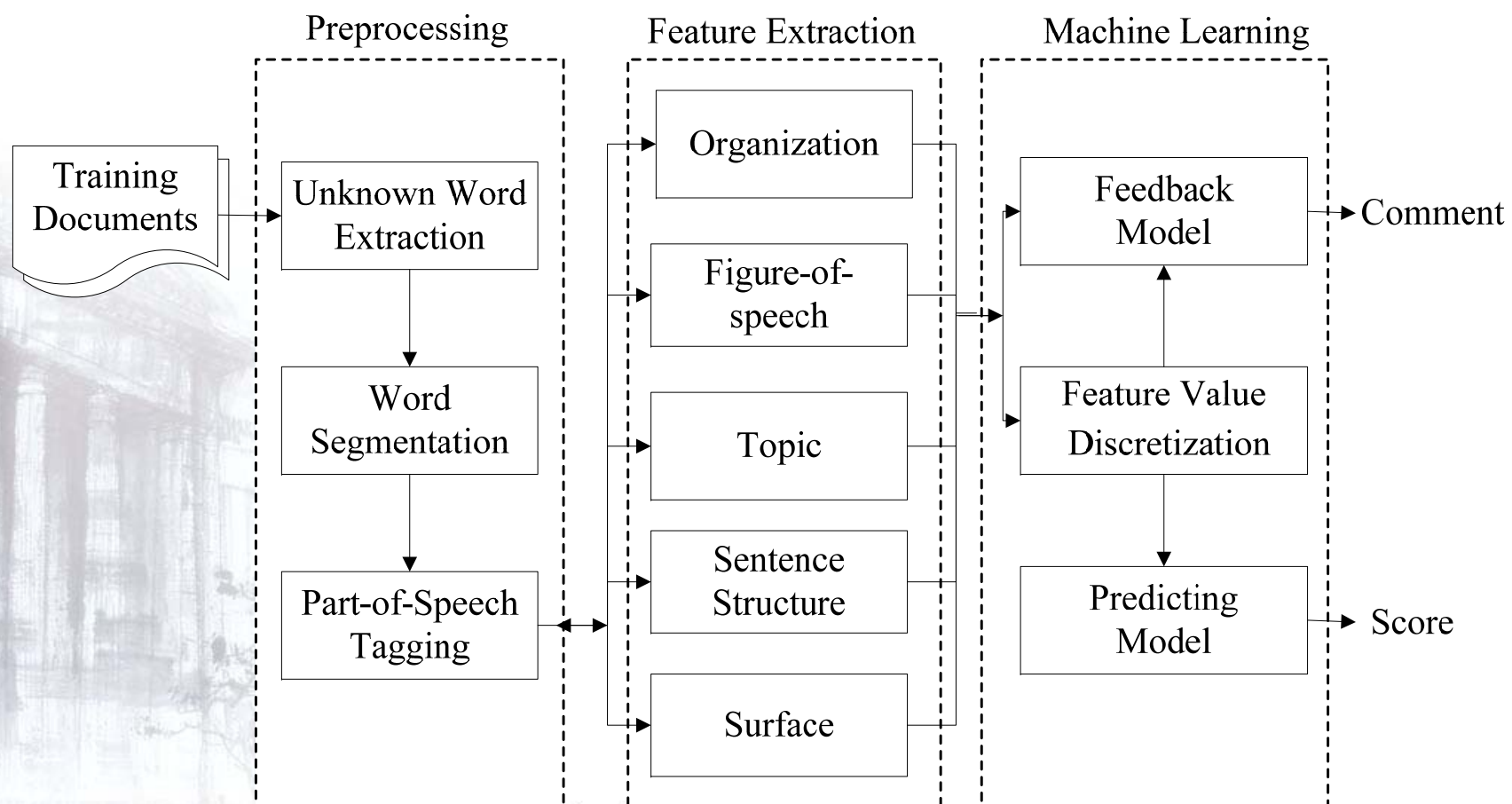
Scoring

- **Four dimensions** for scoring:
 - Content
 - Organization
 - Grammar
 - Words and Punctuations

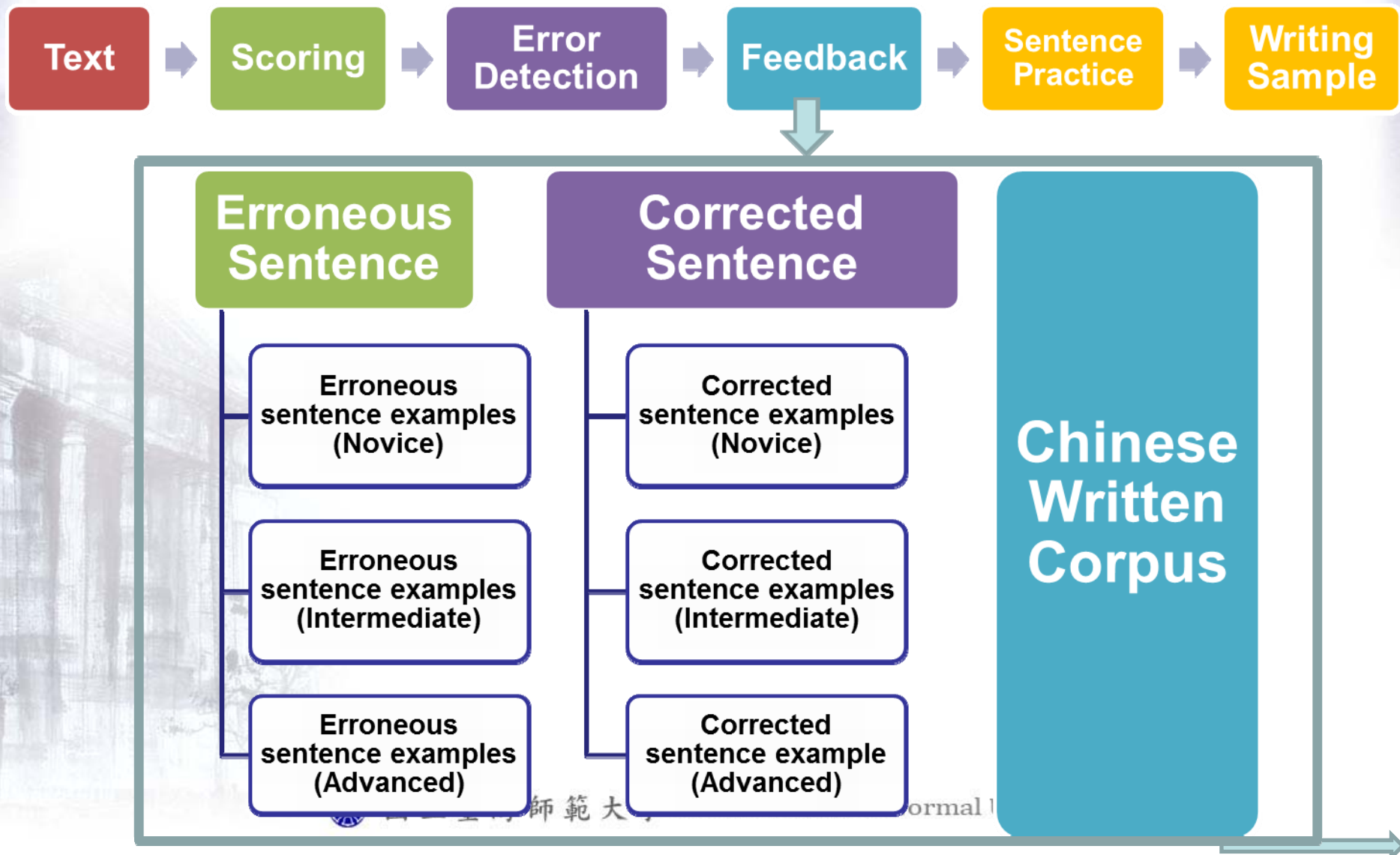
Error Tagging

- Develop **error tagging system** for analyzing error types at different proficiency levels



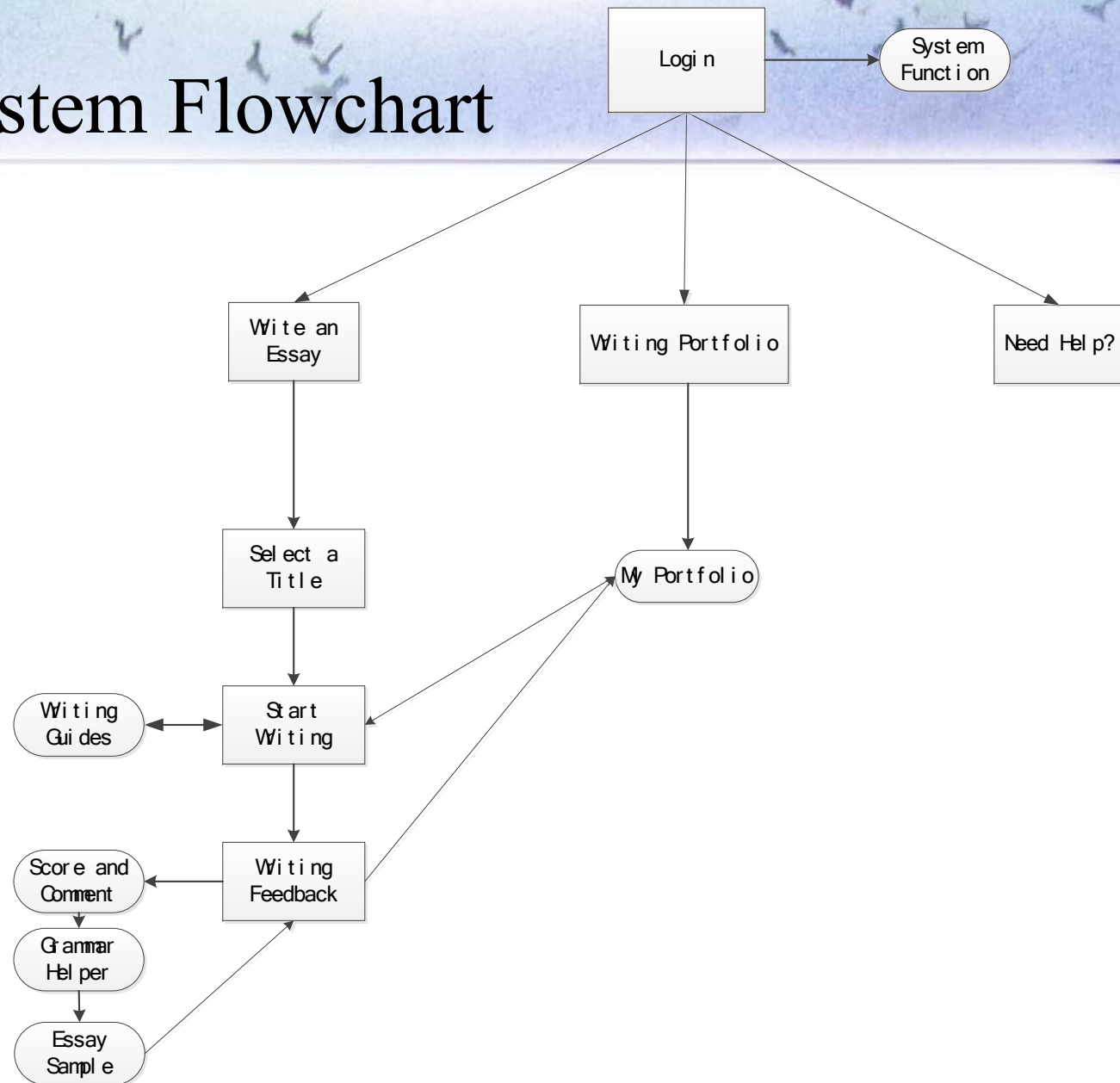


The Flow Chart of AES-Han for Teaching Writing



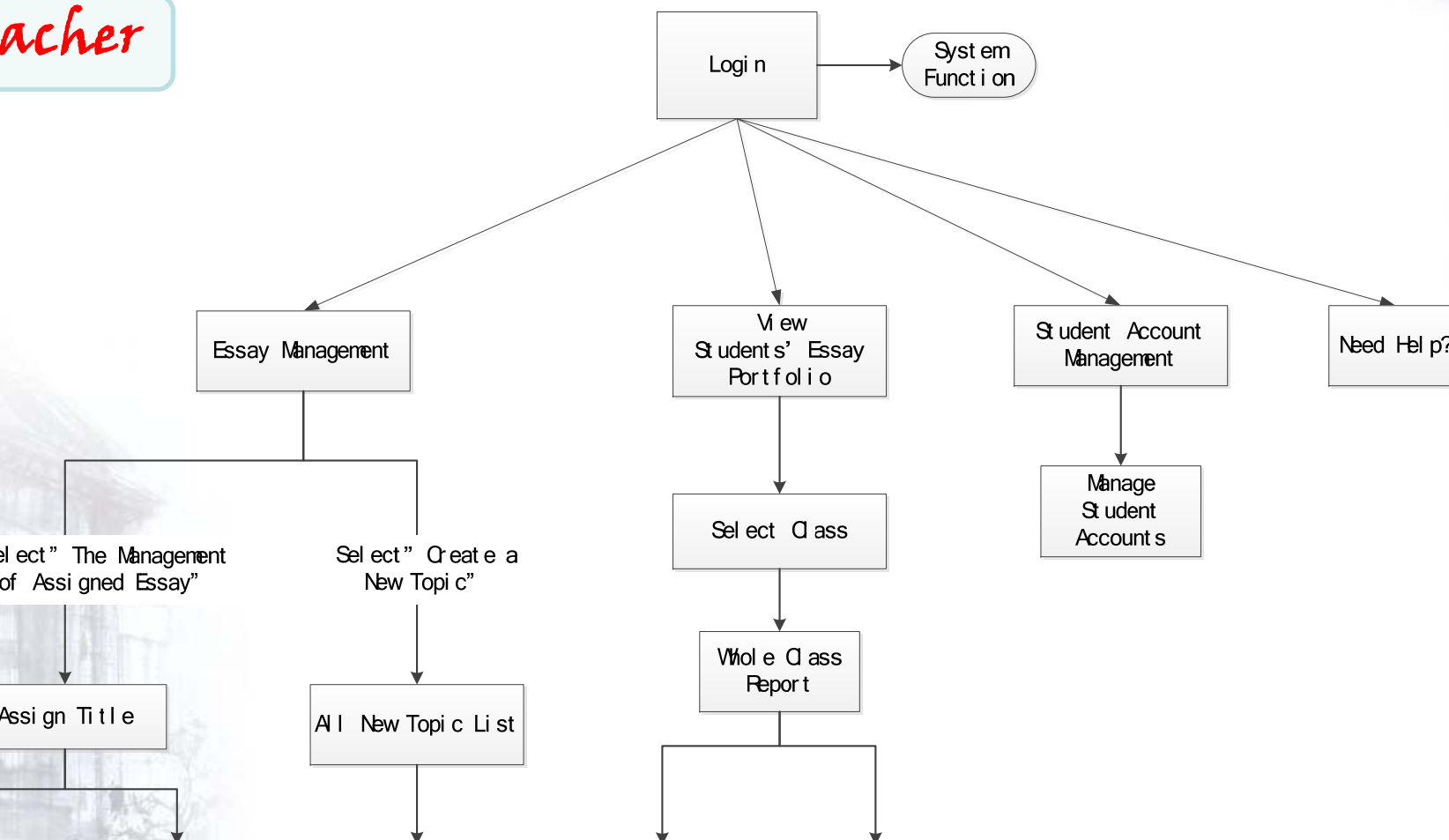
AES-Han System Flowchart

Student



-Han System Flowchart

acher



AES-Han DEMO

「Automated Essay Scoring for Han, AES-Han」

2.96.191.8081/AES-Han_NEW/?AspxAutoDetectCookieSupport=1



華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

language :

- English
- 繁體中文
- 简体中文
- English
- 한국의
- Indonesia

I'm a student

I'm a teacher



AES-Han can evaluate the overall quality of your writing, including the purpose and the content, organization and structure, grammar as well as words and punctuation.



AES-Han can help you understand your writing proficiency and grammatical errors. AES-Han can also help you develop the process of writing, including drafting, organization and editing techniques.

Login

jenichang111@gmail.com

Log in



The Introduction of System Function for Student

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Home [Writing exercises](#) [Writing Portfolio](#) [Need help?](#)

[Log out](#)

The System Function of AES-Han



Writing exercises

- Write an essay
- Get writing feedback
- View scores and comments
- Grammar Helper
- Essay samples (only for some topics)



Writing Portfolio

- My portfolio



Need help?

- System Operation

Writing Guides

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Home

[Writing exercises](#)

[Writing Portfolio](#)

[Need help?](#)

[Log out](#)

Writing exercises

Select an essay topic

一個值得去的地方 ▼

Writing Assistant :

一個你最喜歡去的地方(哪裡?為什麼?和誰去?什麼時候去?)

為什麼?聽到什麼?吃什麼?感覺如何?做了什麼?有什麼好玩的事?什麼讓你印象最深刻?

介紹朋友去嗎?為什麼?

Start writing essay

Start writing essay

Writing Exercise

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

[Writing exercises](#) [Writing Portfolio](#) [Need help?](#)

[Log out](#)

Current word count: 1 Words

Current word count: **389** Words

Topic：一個值得去的地方

我叫阮維勇，我是越南人，從越南我有聽過很多人從台灣回來說台灣是一個美島，每個地方都很漂亮，空氣好，樣我受影響到中國學中文不如台灣。一天我的感受就是一樣我的想像，台灣是一個美島，我去過很多地方，最漂亮的比如是陽明山國家公園、美麗華、六福春、東物園，吃的東西有大夜市、師林夜市、饒和夜市。樣我值得去的地方就是師大夜市，那邊是第一個我租屋的地方。每天上課回來晚上除了寫功課，有空我都去逛夜市。來台灣後每天都很熱鬧，除了去吃的東西可以去買、去喝，有時後人太多走不來，人山人海走一個巷子要花了一個多小時。入到裡面去我們可以看到，吃、喝、玩，最有明的是可樂餅，又好吃又便宜，再近去有牛肉麵，近去裡面都有各式各樣的東西。在越南很少逛街地方，所以來台灣就受到影響去買東西也很方便，兒且台灣人很體貼都會幫忙我們的外國人，台灣真的是一個美島。

Save this essay

Submit this essay

Writing Feedback-Score and Comments

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

[Writing exercises](#) [Writing Portfolio](#) [Need help?](#)

[Log out](#)

[Writing exercises](#) [Writing Portfolio](#) [Need help?](#) [Log out](#)

[Writing exercises](#) [Writing Portfolio](#) [Need help?](#) [Log out](#)

[Writing exercises](#) [Writing Portfolio](#) [Need help?](#) [Log out](#)



Topic：一個值得去的地方

大家好！我叫阮維勇，我是越南人，從越南我有聽過很多人從台灣回來說台灣是一個玉島，每個地方都很漂亮，空氣好，樣我受影響到中國學中文不如台灣好。

來台灣第一天我的感受就是一樣我的想像，台灣是一個美島，我去過很多地方，最漂亮的比如是陽明山國家公園美麗華六福春東物園，吃的東西有夜市是師大夜市師林夜市饒和夜市。樣我值得去的地方就是師大夜市，那邊是第一個我租屋的地方。每天上課回來晚上除了寫功課，有空我都去逛夜市。

到師大夜市來每天都很熱鬧，除了去吃的東西可以去買去喝，有時後人太多走不東，人山人海走一個巷子要花了一個多小時。入到裡面去我們可以看到很多東西，吃喝玩，最有明的是可樂餅，又好吃又便宜，再近去有牛肉麵，近去裡面都有各式各樣的東西。

說到夜市，在越南很少逛街地方，所以來台灣就受到影響去買東西也很方便，兒且臺灣人很體貼都會幫忙我們的外國人，台灣真的是一個美島。

Writing Feedback-Grammar

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Home Writing exercises Writing Portfolio Need help?

Log out

and comments Grammar Helper

Examples Check the colored sentence

Commonly mistyped words are indicated in the essay in

Grammar in green

Correct Sentence Examples

面有一條長河流
非是一條很熱鬧的街
有一百五十條以上的小河
那條美人魚堅持守護我

Topic：一個值得去的地方

我要推薦的地方是高雄。高雄在臺灣的南部。從臺北到高雄坐火車大約四個小時。

高雄有一個長河流。我覺得那個河流很漂亮。我也喜歡高雄附近的海灘。在海玩很有趣。
我們一到海邊就開始了游泳。

我喜歡到處經驗新的文化。在高雄不但可能享受自然方面，兒且食物方面。我希望你一定
要去看看好美的觀光地跟自然風景！

Writing Feedback-Essay Samples

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

[Home](#) [Writing exercises](#) [Writing Portfolio](#) [Need help?](#)

[Log out](#)

[Feedback](#) [Comments](#)

[Grammar Helper](#)

[Essay samples](#)

A1

A2

A2

B1

B2

我要介紹的地方是茨城，在日本的關東地方，關東包
東京、神奈川、千葉什麼的。所以茨城離東京不太遠，
坐火車的話，大概一個半小時。在茨城中心的城市叫
水戶，我的老家就在這裡。

水戶最重要的出產是納豆，納豆是一種黃豆發酵之後
的食品，因為有一種獨特的味道，像台灣的臭豆腐一
樣，所以日本人中也有不喜歡吃的。雖然不喜歡吃的人
多，可是對日本人來說是很重要的食物，我覺得不算難
吃。如果你敢吃的話，就應該吃，可能越吃越喜歡。

在水戶有一個很有名的公園，叫階樂園，是日本三大
櫻花之一。對日本人來說，櫻花是很重要的，可是對茨城
來說，因為階樂園的關係，梅花更重要。春天的時候，
公園的梅花漂亮得沒話說，每年去旅行的人都不

一般來說，茨城中最有名的人是德川光國，現在叫水
戶門。他是以前統治茨城地方的人，可是大家都喜歡
他，因為他影響了日本的文化，比如說，他是在日本第一
位吃拉麵的人，除了拉麵以外，他還吃餃子、奶酪什麼
的。不管什麼外國東西都沒關係，都吃而且他對什麼事情
都感興趣，他想看什麼就去看，到處都去。去那裡時

順便改革那裡的政治，這樣的故事改編成戲劇，這個
故事在日本非常有名，所以連小孩子都知道。而

題目：一個值得去的地方

我要推薦的地方是高雄。高雄在臺灣的南部。從臺北到高雄坐火車大約四個小時。

高雄有一個長河流。我覺得那個河流很漂亮。我也喜歡高雄附近的海。在海玩很有趣。我們一到海邊就開始了游泳。

我喜歡到處經驗新的文化。在高雄不但可能享受自然方面，而且食物方面。我希望你一定要去看看好美的觀光地跟自然風景！

Writing Portfolio

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

[Home](#) [✎ Writing exercises](#) [☰ Writing Portfolio](#) [❗ Need help?](#)

[🚪 Log out](#)

My portfolio

翁's Writing Portfolio :

Topic	Assessment Date	Date last saved	Date of completion	Status	Holistic score
一個值得去的地方	2015-07-30 11:26:22	2015-07-30 11:27:04			N/A
一個值得去的地方	2015-07-30 10:43:23	2015-07-30 10:48:07			N/A
一個值得去的地方	2015-07-25 16:52:17		2015-07-25 17:07:05	View results	4

The Introduction of System Function for Teacher

to student mode

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

[Home](#) [Essay Management](#) [Review students' portfolio](#) [Student Account Management](#) [Need help?](#)

The System Function of AES-Han

[Log out](#)



Essay Management

To provide the management of assigned essay
Provide the function of creating new topic



Review students' portfolio

- To provide the function of marking students' essay



Student Account Management

- To provide each class account management



Need help?

- System Operation

Student Account Setting

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

[Home](#) [≡ Essay Management](#) [📄 Review students' portfolio](#) [👤 Student Account Management](#) [🔔 Need help?](#)

[Log out](#)

帳號建立步驟:

範例下載:[點這裡](#)。

編輯Sample.xls檔案，規則如下:

- a. 副檔名需為xls
- b. 需有欄位"Email" (學生Email:此資料會成為日後登入之帳號)
- c. 需有欄位"Name" (學生姓名)
- d. 需有欄位"Class_Name" (班級名稱)

[點這裡上傳編輯好檔案，建立學生資料\(不可超過15MB\)](#)。

his browser support: html5

彈出新視窗並下載已完成建立之學生資訊Excel表。(請注意系統有無封鎖視窗彈出)

依據Excel表所載帳號密碼，交由學生登入使用。(學生第一次登入會要求變更密碼)

Essay Management

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Essay Management | Review students' portfolio | Student Account Management | Need help?

Create a new topic







Log out

Topic List

Topic	Genre	Modify	Delete
我最難忘的經驗	記敘文		×
泡溫泉記	記敘文		×
閱讀習慣的重要性	論說文		×
給家人的一封信	記敘文		×
給老師的一封信	記敘文		×

Create a new topic

Custom A New Writing Topic

閱讀習慣的重要性	論說文		
給家人的一封信	記敘文		
給老師的一封信	記敘文		

Create a new topic

Create a new topic

Genre: Title:

Content:

Cancel Save

Assign Essay

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Essay Management | Review students' portfolio | Student Account Management | Need help?

To provide the management of assigned essay

Log out

Select grade level: 中文特級班 | [The number of essay which assigned to each class](#)

Built title | Custom Title | Selected title

Topic	Students can view the feedback directly			顯示評分規準
一個值得去的地方	<input checked="" type="checkbox"/> Scores and comments	<input checked="" type="checkbox"/> Grammar Helper	<input checked="" type="checkbox"/> Essay samples	All ▾
夏天的海邊	<input checked="" type="checkbox"/> Scores and comments	<input checked="" type="checkbox"/> Grammar Helper	<input checked="" type="checkbox"/> Essay samples	All ▾
我的留學生活	<input type="checkbox"/> Scores and comments	<input type="checkbox"/> Grammar Helper	<input type="checkbox"/> Essay samples	All ▾

Save

Review Students' Essay

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Essay Management Review students' portfolio Student Account Management Need help?

Review students' portfolio

Log out

Test grade level: 中文初級班

Test title: 一個值得去的地方

Student ID number	Name	Topic	Assessment Date	Holistic score	Correcting state	Print
A11111111	小叮嚀	一個值得去的地方	2015-07-30 16:06:29	5	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 15:45:38	4	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 15:44:17	5	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 15:36:28	4	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 15:34:36	5	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 12:14:54	4	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 11:48:37	4	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 11:31:12	4	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-30 11:27:34	4	Already corrected	<input type="checkbox"/>
A11111111	小叮嚀	一個值得去的地方	2015-07-25 16:52:17	4	Already corrected	<input type="checkbox"/>

Add Teacher's Comment

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Essay Management Review students' portfolio Student Account Management Need help?

and comments

Grammar Helper

Log out

CEFR ACTFL score results



Topic：一個值得去的地方

我要推薦的地方是高雄。高雄在臺灣的南部。從臺北到高雄坐火車大約四個小時。高雄有一個長河流。我覺得那個河流很漂亮。我也喜歡高雄附近的海灘。在海玩很有趣。我們一到海邊就開始了游泳。我喜歡到處經驗新的文化。在高雄不但可能享受自然方面，兒且食物方面。我希望你一定要去看看好美的觀光地跟自然風景！

錯別字與標點符號使用上的錯誤，但不影響理解。在詞語表現上，大致能運用基本詞語偶有變化。建議作者用字更精確會更好。

Revise Grammatical Errors

華語文寫作自動評分與回饋

Automated Essay Scoring for Han, AES-Han

Essay Management Review students' portfolio Student Account Management Need help?

Log out

Grammar Helper

Check the colored sentence

only mistyped words are indicated in the essay in

mar in green

et Sentence Examples

Topic：一個值得去的地方

我要推薦的地方是高雄。高雄在臺灣的南部。從臺北到高雄的車程大約需要三個小時。

高雄有一個長河流。我覺得那個河流很漂亮。

我們一到海邊就開始了游泳。

我喜歡到處經驗新的文化。在高雄不但可能看到很多不同的文化，而且你還可以看到很多不同的風景。我希望你一定

要去看看好美的觀光地跟自然風景！

MAYBE YOU COULD WRITE 「在高雄
不但可以享受自然方面，」

- 1.Remove this error
- 2.Don't display error on student's end
- 3.Correct this error

合作單位

- College Board
- Hong Kong Evaluation and Assessment Agency
- 奇美醫院
- 親子天下雜誌
- 國家教育研究院
- 台北市數位學習教育中心
- 香港國際學校
- 印尼國際學校



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Sung, Y. T., Lin, W. C., Dyson, S. B., Chang, K. E., & Chen, Y. C. (2015). Leveling L2 Texts Through Readability: Combining Multilevel Linguistic Features with the CEFR. *Modern Language Journal*, in press.

Sung, Y. T., Chang, K. E., & Huang, J. S. (2008). Improving children's reading comprehension and use of strategies through computer-based strategy training. *Computers in Human Behavior*, 24(4), 1552-1571. (SSCI)

The background of the slide features a light blue and white gradient. In the upper portion, there are several small, dark silhouettes of birds in flight. On the left side, there is a faint, vertical silhouette of a building. The main text is centered in the lower half of the slide.

感謝指教

敬謝指教