

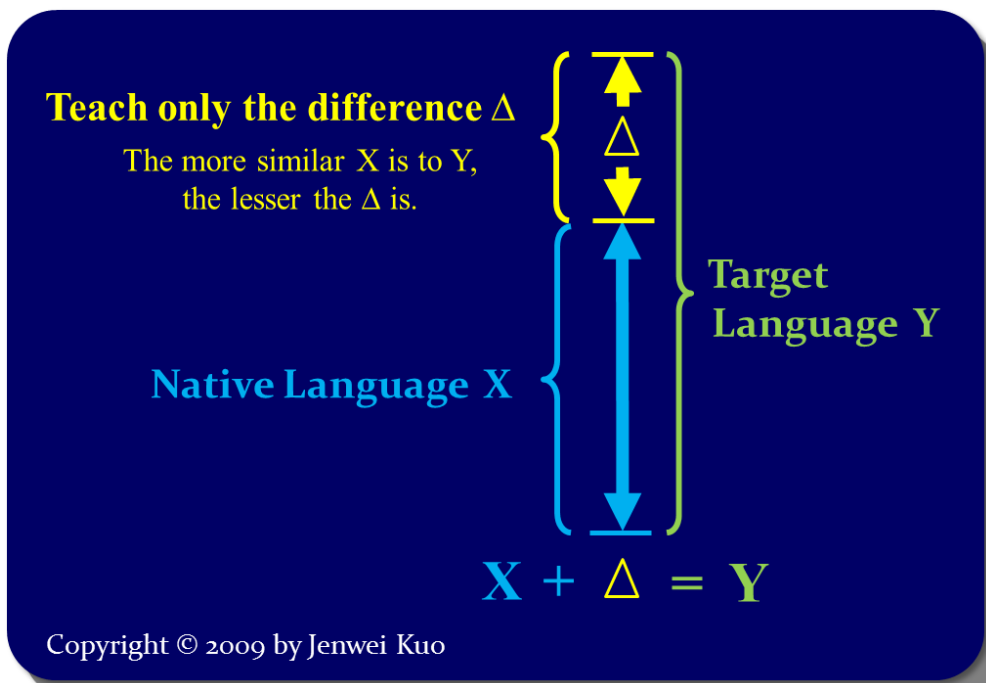
The Delta Method:

Reusing Learner's

1st Language X

To Learn/Teach a

2nd Language Y



Jenwei Kuo
Mandarin Instructor

A Testimonial

I have lived in Taiwan for 2 years and mainland China for 6. After this time, one would expect that I would be fluent in Chinese. However, I have struggled making progress. I learned enough to get by day to day, but my progress came to a plateau quickly. I tried suggestions such as watching Chinese television, but the language ability did not come to me by the exposure process that had worked for others.

In less than 1 year of classes at a rate of 1 class per week, I have learned far more from Mr. Kuo than the 8 combined years that I lived in China. The big difference is that Mr. Kuo's method has given me a logical connection between the Chinese language which I want to obtain and my native English. Mr. Kuo's method points out the key differences between Chinese and my English foundation. After understanding these differences I have been able to bridge the gaps that previously limited my progress.

Mr. Kuo is an excellent teacher. He has wonderful patience. He is always willing to answer any questions before continuing on with the lesson plan. He does not let me or others remain in the dark. He takes the time necessary to clear all misunderstanding before moving on. I also appreciate his approach where he cycles through the review of the previous material prior to the introduction of new subject matter. The review and repetition has helped me very much in my retention. His classes are very entertaining. He uses real life examples to keep each class exciting and interesting.

I feel very lucky that I have been able to attend the language classes offered by Mr. Kuo. At the start of the class, I told Mr. Kuo that I would be his biggest challenge based on my lack of progress after living in China for 8 years. I am very happy that Mr. Kuo rose up to this challenge and helped me move forward toward my goal of becoming fluent in Mandarin Chinese. Thank you, Mr. Kuo.

Tom A, Durham, NC

Abstract

This whitepaper is to introduce to you a breakthrough in learning/teaching Chinese as a second language: the **Delta Method**.

A common misconception among English speakers about learning Chinese language is that Chinese is an extremely difficult language to learn, for it is such an unfamiliar language and differs in all aspects of western languages. As a result, this misconception creates anxiety, self-doubt, and intimidation – a sign of high ‘Affective Filter’ – a mental resistance that obstructs learning. In addition, the traditional teaching method takes students straight into a totally unfamiliar territory and builds a separate silo there in brute force. Expectably, the Foreign Service Institute (FSI) of The State Department has rated Chinese as the most difficult language for English speakers to learn. Some teachers of Latin-based languages have occasionally utilized the ‘similarities’ in their teaching. However, there is still **no** systematic, well-structured pedagogical solution that would capitalize on reusing learners’ existing knowledge of their native language to fuel and accelerate their learning and catapult them into greater mastery of their target language in a much shorter time.

Today’s language education industry strives competitively to ‘innovate’ by pushing the limits of technology atop the traditional method. However, in addition to extensive use of technology, the true innovation can be found by taking an unconventional perspective, where a rich, untapped resource that already exists in learners can be reused in learning a new language:

“Reuse learner’s 1st language X (e.g. English) to learn a 2nd language Y (e.g. Chinese)”

This innovative method compares the two languages and finds the ‘similarity and difference (**Delta** Δ),’ and presents to learners in a systematic way via the education technique called ‘Scaffolding.’ As a result, the method eliminates ‘Affective Filter’ and enables ‘Schema Activation,’ for it places learners in a familiar and comprehensible environment, and makes acquisition of a new language much easier, faster, and more confidence-inspiring. Details are illustrated in this whitepaper.

Naturally, this method is applicable universally to any language pair:

‘Any 1st language X to any 2nd language Y’

The student learns **only** the difference Δ , between X and Y, thus the more similar between X and Y, the less effort the learners are to absorb the Δ .

The Delta Method

This innovative method compares students' native language X (e.g. English) and the target language Y (e.g. Mandarin). As illustrated in the figure below, the method finds their similarity and difference (**Delta** Δ) between the two languages in the areas such as vowel, consonant, intonation, syllable, grammar structure, number system, usage, etc., and presents to the students in a systematic manner. The more similar X is to Y, the less effort the students are to absorb the difference Δ . As a result, the method places students in a familiar and comprehensible environment, making the acquisition of a new language much easier, faster, and inspiring more confidence. This method was originally formulated by Mr. Jenwei Kuo, and thus was also known as the JWK Method.

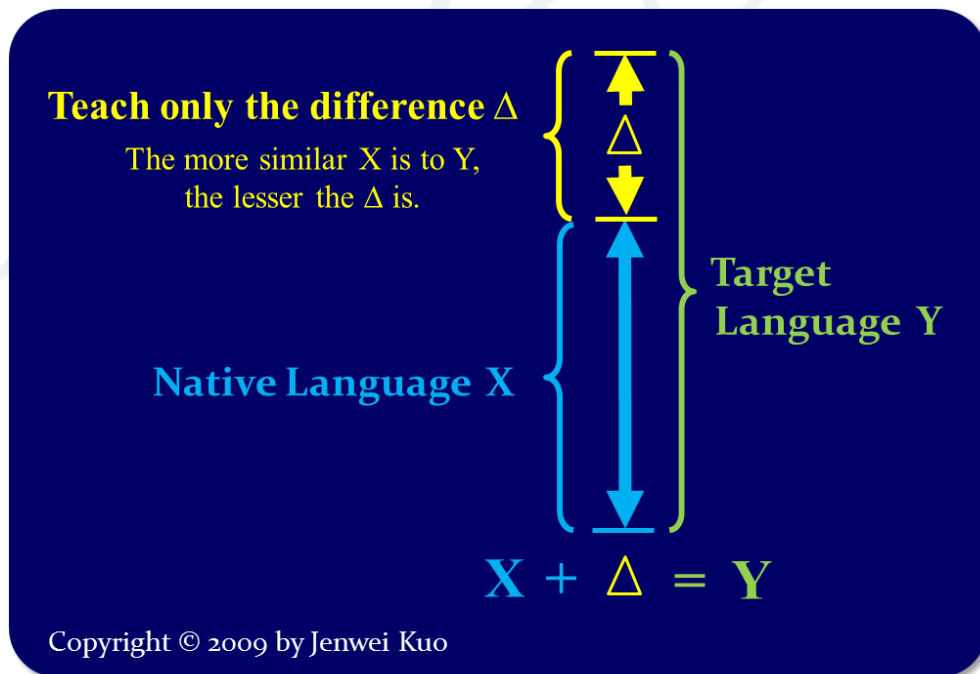
In A Nutshell

Given:

- 1) Student's 1st language X.
- 2) Student is to learn a 2nd language Y.

The Delta Method:

- 3) The student learns **only** the difference, Δ , between X and Y.
- 4) The more X and Y are similar, the less the Δ is, and so less learning effort.
- 5) In our case, X is **English** and Y is **Chinese**,
- 6) Thus this method can also be called, "**The Delta Method Chinese**".



The Delta Method Universal:

- 7) This method is universally applicable to any language pair of X and Y.

Affective Filter

A common misconception among English speakers about learning the Chinese language is that Chinese, as an anomalous language that differs in all aspects from western languages, is an extremely difficult language to learn. As a result, this misconception creates anxiety, self-doubt, and intimidation — a sign of a high “**Affective Filter**” — a mental resistance that obstructs the learning of a new language. *This new method eliminates it.*

In fact, Chinese happens to be quite similar to English in many ways such as vowel, consonant, intonation, syllable, grammar structure, number system, usage, etc., thus the learning of Chinese should not be difficult for English speakers at all. To be more specific, the similarities are, to name a few:

- (1) Over 90% of Chinese **vowels** are present in English.
- (2) Almost 60% of Chinese **consonants** are present in English.
- (3) Chinese is a tonal language and 100% of its **five tones** are imbedded in the intonation of English.
- (4) The number of **syllables** is also similar. Example: teacher (lǎo shī), student (xué shēng).
- (5) Chinese **grammar structures** are very similar to that of English.
- (6) The two **number systems** are quite similar.
- (7) Some **usages** are similar too, such as: good-looking (hǎo kàn), looking good (kàn hǎo).

Detail examples are illustrated below under the section: “**scaffolding**”.

Activating Schema

The Delta Method makes full use of those valuable coincidences and teaches only the ‘difference Δ ’ between English and Chinese. In other words, this method enables learning Chinese by ‘**Activating Schema**,’ — reusing students’ already-established language knowledge and communication skills (interpersonal, interpretive, and presentational) in English as the foundation, and laying atop only the Δ between the two languages. As a result, this method activates ‘schema’ and completely eliminates the up-front ‘affective filter’ and exchanges much less ‘input effort’ for much more ‘proficiency gain.’

In contrast, the traditional method of language learning takes the students to a totally unfamiliar territory and builds a stand-alone silo there in brute force. This situation is most obvious in the case of Mandarin Chinese, and expectably, that the Foreign Service Institute (FSI) rated Chinese as the most difficult language for English speakers to learn. Some teachers of Latin-based languages have occasionally utilized the ‘similarities’ in their teaching. However, there is still **no** systematic, well-structured pedagogical solution that would capitalize on reusing learners’ existing knowledge of their native language to fuel and accelerate their learning and catapult them into greater mastery of their target language in a much shorter time.

The theory of this method is similar to that of the MPEG video compression technology, without which the internet big names, such as Facebook, YouTube, Hulu, etc., would not be able to exist! MPEG technology compresses video into much smaller-sized files for transmission over the internet and storage on computers and, still, the video can be satisfactorily reconstructed. The key magic of MPEG is that the video data recorded into a file only contains the ‘difference Δ ’ between two consecutive video frames, instead of storing data of each pixel of a whole frame of video in brute force.

Field trials have been conducted at schools and companies within the past seven years and returned a 100% success rate. During the trials, we observed that the students are intrigued and fully

engaged when they are able to relate the material with what they already know. In addition, because this method uses English grammar as its basis, so other than the Δ part, the learning of Chinese grammar is fully integrated but entirely ‘implicit’ to the students, relieving them of a large, strenuous, and unnecessary workload.

Scaffolding

The actual implementation and presentation of The Delta Method is through the use of the well-known **scaffolding** technique in education theories. The scaffolding-based instructional content provides successive levels of temporary support that help students reach higher levels of comprehension that they would not be able to achieve without the scaffolding assistance. Let’s start from the pronunciation.

(1) Vowel Scaffolding

For example, the Chinese vowel “an” can be found in the English word “wand,” Chinese vowel “en” can be found in the English word “often,” the Chinese vowel “eng” can be found in English word “lung,” the Chinese vowel “ian” can be found in English phrase “Japanese yen,” Chinese vowel “e” can be found in the English word “the,” etc. To reuse!

(2) Consonant Scaffolding

No time is required to learning 12 of the 21 Chinese consonants, because they are ‘identical’ to the English. These are b, d, f, g, h, j, k, l, m, n, p, and t. If we include the ‘x’ sound in ‘xièxie (thanks),’ which students picked up from Chinese take-outs, the total would be 13 (> 60%). The other 8 consonants can also be closely approximated by English sounds, such as the Chinese ‘shi’ can be approximated by English ‘shir,’ and then the teacher teaches the difference Δ !

(3) Tone Scaffolding: The 5-Tone Skit

The following is a typical example of demonstrating the similarity between Chinese tones and English intonation. Enjoy, and again, to reuse!

A guy and his girlfriend are on a date chatting on a bench in the park. As the romantic conversation moves along, the guy suddenly jumps up and says:

Guy: Oh **mannnnn** (1st tone), I almost forgot the most important thing in my life!

(He takes out a ring and drops on his knee. The girl seems confused and says a **long** ...)

Girl: **Whaaaaaat?** (2nd tone)

Guy: Will you marry me?

(The girl is speechless for a while. The guy starts to become anxious as each second ticks away, and he pleads a **slow** and **long** ...)

Guy: **Well?** (3rd tone)

(The girl finally responds to his dramatic request with an agitated **long** ...)

Girl: **Nooooo!** (4th tone)

(The guy is terribly disappointed and panicky and stutters ...)

Guy: May ... may I ... I know why?

Girl: This is only our second date!

(The guy is now awakened by the reality and murmurs a **short** and **light** ...)

Guy: **Oh.** (5th tone)

(4) Grammar Scaffolding

a. No Δ (i.e. no difference in grammatical structures)

English: I drink coffee.		
Chinese mentality: {same as in English}		
I	drink	coffee.
我	喝	咖啡。
subject	verb	object

We	play	basket	ball.
我们	打	篮	球。

English: This apple is yellow.			
Chinese mentality: {same as in English}			
This	apple	is	yellow.
这	苹果	是	黄的。
subject	v. to be	subject complement	← Same as in English

adjective: yellow 黄的

Note: In English, following a linking verb, such as the ‘verb to be’ in the example, a subject complement can be an adjective, noun, or pronoun.

b. Small Δ

English: I am saying, ...			
Chinese mentality: {same as in English}			
I	am	ing	say,...
我	是	在	说,...
我	—	在	说,...
我	是	—	说,...

Δ : Progressive tense in Chinese is to put 在 before the verb (the word ‘say,’ in this case)

English: You may come to pick up your tickets.						
Chinese mentality: {same as in English}						
You	may	come	to	pick up	your	tickets.
你	可以	来	(Δ_1)	拿	你的	(Δ_2) 票。
subject	aux. verb	main verb	infinitive verb	object		

Δ_1 : No infinitive ‘to’ function in Chinese.

Δ_2 : No suffix ‘s’ needed for representing plurality in Chinese.

English: You are a teacher, aren't you?				
Chinese mentality: {same as in English}				
You	are	a teacher,	aren't	you?
你	是	老师,	不是	-?
你	是	老师,	不	-?

Δ₁: no articles in Chinese

Δ₂: 'you' is well-known, so it's dropped.

Δ₃: 是 can be customarily dropped.

English: You ate breakfast, didn't you?				
Chinese mentality: {same as in English}				
You	ate	breakfast,	didn't	you?
你	吃了	早饭,	没有	-?

Δ₁: The well-known 'you' is dropped

Δ₂: The 有 in 没有 can also be customarily dropped.

English: I didn't eat breakfast.			
Chinese mentality: {same as in English}			
I	didn't	eat	breakfast.
我	没有	吃	早饭。

Amazing correlation: that the verb following an auxiliary verb is in its 'root' form for both languages.

Next example is about a very commonly used Chinese word '把', which however, is considered a fairly difficult word to teach. The good news is that English has it too! Please enjoy.

	subject		verb	object		
English:	He		mopped	the	floor	.
(1) Legit Chinese:	他		擦了	(Δ ₁)	地板	。
						verb
(2) Common Chinese:	他	把	-	-	地板	擦了。
(Δ₂) English:	He	got		the	floor	mopped.

← same as in English

← same as in English

Δ₁: no 'article' in Chinese Δ₂: Not often used in English, but it's a common structure for Chinese.
 Δ₃: Another difference is that in Chinese 'he' indeed mopped the floor, whereas in English, 'he' may not be the person who mopped the floor.

Same as in English, a prepositional phrase such as, 'by a mosquito,' 'to my office,' or 'from New York,' is commonly used to **specify** the verb. So we rename the prepositional phrase as a 'specifier' and the verb 'specifyee.' Now, we introduce a simple but extremely important theory:

In Chinese,

(1) A Specifier is to specify a Specifyee; (2) Specifier precedes Specifyee.

English: Specifyee + Specifier

Chinese: Specifier + Specifyee

Example: Turn right. The word ‘right’ makes the verb ‘turn’ more specific.

English: Turn right.	
verb (specifyee)	adverb (specifier)
Turn	right (/left)
Right	turn
右	转

More examples:

Come	again
再	来

Come	in (/out)
进	来

Go	over
过	去

Come	up (/down)
上	来

Step	forward
向前	走一步

The followings can be considered as exceptions in comparison with the above. However, the fact is that the **prepositions** with ‘displacement’ characteristics, such as: down, up, into, out, etc. are each an **inseparable** part of the specific **verb** as shown in the following examples.

verb	preposition
sit	down

坐	下
---	---

verb	preposition
stand	up

站	起来
---	----

write	down
-------	------

写	下来
---	----

climb	up
-------	----

爬	上去
---	----

walk	into
------	------

走	进
---	---

run	out
-----	-----

跑	出来
---	----

English	He	lets	me	go.	
Chinese	他	让	我	去。	
English	He	lets	me	go	first.
Chinese	他	让	我	先	去。

△: Same theory as the above.

The word “first” is to specify the verb ‘go’.

Let’s examine another commonly used Chinese word ‘被’, which is also considered a fairly difficult word to teach. It becomes much easier if the ‘Specifier precedes Specifinee’ theory is applied.

	subject		verb	prepositional phrase		
English:	I	was	bitten	by	a mosquito.	
	I	was (△ ₁)		by	a mosquito (△ _{2,3})	verb bitten.
Chinese:	我			被	蚊子	咬了。

△₁: If the phrase after ‘verb to be’ is not a noun, then verb-to-be ‘was’ is dropped.

△₂: No article in Chinese.

△₃: Prepositional phrase ‘by a mosquito’ is to specify the verb ‘bitten,’ so it sits *before* the verb.

Similarly, the ‘Specifier precedes Specifinee’ theory helps to resolve the difficulties while teaching the 到...来, 从...来, 到...去 structures, etc.

English: Please <u>come to my office.</u>				
Chinese mentality: Please <u>to my office come.</u>				
Please	to	my	office	come.
请	到	我的	办公室	来。

△: ‘to my office’ is an adverbial prepositional phrase to specify the verb. In Chinese, it precedes the verb.

English: I <u>come from New York.</u>				English: I <u>go to Kroger</u> to buy grocery.				
Chinese mentality: I <u>from New York come.</u>				Chinese mentality: I <u>to Kroger go</u> to buy grocery.				
I	from	New York	come.	I	to	Kroger	go	buy grocery.
我	从	纽约	来。	我	到	Kroger	去	买菜。

△: no infinitive ‘to’ in Chinese.

The following two examples help us enjoy more of the similarity between the two languages.

They	give	me	a	gift.
他们	给	我	一件	礼物。
Subject	verb	ind. obj.	direct object	

‘a’ = ‘one’ = 一件

△: in Chinese, 件 is the measure word for gift

← Same as in English

English: I'll treat you <u>to a cup of coffee</u> .				
Chinese mentality: I'll treat you to drink coffee.				
I	[will]	treat	you	to drink coffee.
我	[要] (Δ_2)	请	你	喝咖啡。
Subject	[aux.]	incomplete transitive verb	object	object complement

Δ_1 : to a cup of coffee = 'to drink coffee' in Chinese

Δ_2 : [] means optional, because in fact, in Chinese view, the future tense is actually implied in the sentence.

← same as in English

Below is another example of a consistent, close correlation between Chinese and English. It is on the usage of 'Possessive Tag 的,' similar to the apostrophe s ('s) in English, but Chinese is much simpler.

Possessive Tag 的									
Possessive Adjective				Possessive Pronoun		Possessive Noun			
English	Chinese Mentality (Δ : 's = de 的)			English	Chinese	English	Chinese		
my	I's	wǒ de	我的	mine	Same as Possessive Adjectives	John's today's . . .	John 的 today 的 . . . Same as in English		
your	you's	nǐ de	你的	yours					
his	he's	tā de	他的	his					
her	she's	tā de	她的	hers					
its	it's	tā de	它的	its					
our	we's	wǒmen de	我们的	ours					
your	you's	nǐmen de	你们的	yours					
their	they's	tāmen de	他们的 她们的 它们的	theirs					
whose	who's	shéi de	谁的	whose				—	—

c. Medium Δ

English: How come, there are so many people?					
Chinese mentality: {Same as in English}					
How come	there are	so	many		people?
怎么	有	这么	多	的	人?
怎么	—	这么	多	—	人?

Δ_1 : 的 is the 'adjective tag' for the adjective 'many'

Δ_2 : 有 and 的 can be customarily dropped.

Similar to the logic of 'specifier precedes specifyee' where 'specifying information' always goes **first**, Chinese language often takes the '**topic**' in a sentence to the **beginning** as shown below, forming a Chinese-unique **Topic-Comment** structure.

People,	how come	there are	so	many?
人	怎么	有	这么	多?
人	怎么	—	这么	多?

The next example is to illustrate that Chinese does not have the function of 'it' as a subject (the so-called 'Formal Subject' in English grammar term), but the amazing correlation is that you get perfect Chinese after taking the 'it' down.

English: Who is it?			
Chinese mentality: 它是谁?			
它	is	who?	
—	是	谁?	
—	是	谁	呀?
—	—	谁	呀?

Δ_1 : In Chinese, the subject always goes to the beginning and the verb follows, thus we get "It is who?" No counterpart exists for such 'it' in Chinese, so it's dropped.

Δ_2 : Adding 'ya' 呀 makes the tone softer.

Δ_3 : 是 is customarily optional

English: It is I.		
Chinese mentality: 它是I.		
它	is	I.
—	是	我。
—	—	我。

English: Your answer is correct, but it's not quite clear.													
Chinese mentality: {same as in English}													
	Your	answer	is	correct	, but	it	is	not	quite	clear	.		
1.	你的	答案	是	对	的	，可是	—	是	不	十分	清楚	的	。
	subject		be	adjective		conjunction	sub.	be	adjective phrase				
2.	你的	答案	是	对	的	，可是	—	—	不	十分	清楚	—	。
3.	你的	答案	—	对	—	，可是	—	—	不	十分	清楚	—	。

△: Chinese 是…的 carries extra function for giving stress to ‘…’. Sentence 1 is valid, but not used, due to the repetitiveness of the second 是…的.

The following example illustrates the teaching efficiency of using the ‘Scaffolding’ technique. Please note that 6 grammar points are clearly introduced in one build of the scaffolding.

English: I come <u>from New York</u> .				
Chinese mentality: I <u>from New York</u> come.				
I	<u>from</u>	<u>New York</u>	come	.
我	从	纽约	来	。
Turn it into a specific question:				
English: Do you come <u>from New York</u> ?				
Chinese mentality: You <u>from New York</u> come + ma?				
You	<u>from</u>	<u>New York</u>	come	ma?
你	从	纽约	来	吗?
Turn it into a general question:				
You	<u>from</u>	<u>where</u>	come	?
你	从	哪儿	来	?

△₁: The English prepositional phrase ‘from New York’ is to make the verb ‘come’ more specific. Thus ‘from New York’ is called a ‘**specifier**,’ and ‘come’ is called a ‘**specifyee**.’

In Chinese, the **specifier** precedes the **specifyee**.

△₂: In Chinese, no auxiliary verb ‘Do’ function.

△₃: In Chinese, the subject always goes to the beginning.

△₄: ‘ma’ is a question tag.

△₅: Simply replace the specific ‘New York’ with a general question word ‘where’.

△₆: Because ‘where’ is already a question word, so ‘ma’ is no longer needed.

d. Large Δ (Chinese-specific)

One of the robust features in Chinese language is the unique ability of forming **verb phrases** by which the language gives users an easy-to-use tool for painting precise verbal pictures. One of the ways of forming the **verb phrases** is the Chinese-specific **Verb + Result** construct, such as: 吃饱, 听懂, 记住, 走错, etc. Please see the textbook “New Method Chinese 新法学中文(Textbook)” for more details on **verb phrases**.

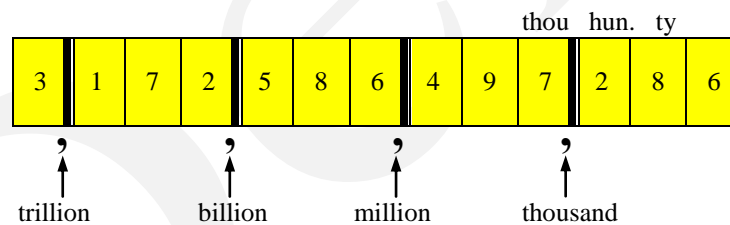
e. Super-large Δ (Chinese-specific)

Chinese grammar correlates with English's at the baseline level, where no language/culture-specific elements are involved, such as idioms (成语), slangs (俚语), poems (诗歌), literatures (文学), old usages (古文), etc. Generally speaking, the levels of proficiency at the baseline can be sufficient enough to cover from novice, intermediate, or even up to advanced applications, depending on how well the scaffolding (including introducing large Δ s) is built in the textbooks or study-tools to assist the learners to make association, transition and internalization. Thus it becomes obvious that the core purpose of this new method is to catapult (投射) learners from novice through intermediate and into the advanced level with ease and confidence.

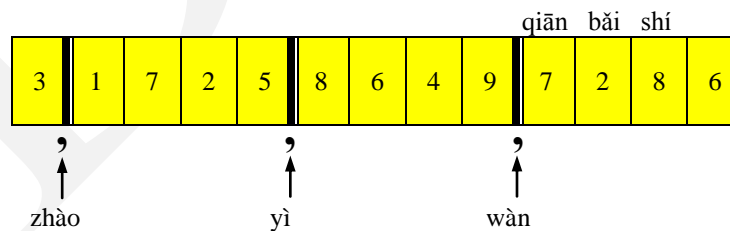
(5) Convention Scaffolding

Again, by contrasting with student's knowledge in English, it has been proven that students (from middle school to adults) are able to learn counting from 0 to a trillion in less than 45 minutes! The similarity and difference between the following two diagrams are:

- **Similarity:** A name for each comma.
- **Difference Δ :** 3 digits (up to hundred) vs. 4 digits (up to thousand).
- **Secret:** As long as you are able to count to a thousand in Chinese, you are able to count to a trillion and more.



Answer: 3 trillion, 172 billion, 586 million, 497 thousand, 2 hundred, 8ty, 6



Answer: 3 zhào, 1725 yì, 8649 wàn, 7 qiān, 2 bǎi, 8 shí, 6

A Frequently Asked Question

“I am not English major. Could I still teach this method well?”

The textbook “New Method Chinese 新法学中文” is written for all Chinese language teachers, either English or non-English major. As shown in the examples above, the book lays out the similarity and difference between English and Chinese in structured manner where English grammar is clearly explained.

Universal Application

Can this new method be applied to other languages? The answer is: Certainly! This method is language-independent: ‘Using a learner's native language X to teach/learn a target language Y,’ where the ‘native’ and ‘target’ can be any languages. The theory is also *reversible*: from X to Y, or from Y to X, the more the language X resembles language Y, the more robust the method becomes.