

Expanding the Space and Practice for Chinese Literacy Through Immersion

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Many Chinese Dual Language/Immersion Programs Ask these Questions

1. What are theoretical considerations for biliteracy development of Chinese immersion students? – Shuhan Wang
2. What does research say about developing students' initial literacy in Chinese? – Chan Lu
3. What kind of professional development can enhance teachers' effectiveness in helping students develop literacy in Chinese? – Michele Aoki

*Theoretical Considerations of
Biliteracy Development of Chinese Immersion
Students*

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A Theoretical Model:
Continua of Biliteracy

Hornberger 1989; Hornberger & Skilton-Sylvester 2000; Wang 2004

- The model takes a Language **Ecological Perspective**, considering ***Environment, Evolution, and Endangerment*** of language learning and teaching, and language preservation and planning and policy.
- It has been applied in language education worldwide.
- Wang has applied it to the studies of heritage language, critical/world language, and language immersion education, and language planning and policy.

Conditions and Factors Influencing the Development of Biliteracy/Multiliteracy

Context

Media

Content

Development

(Hornberger 1989; Hornberger & Skilton-Sylvester 2000; Wang 2004)

Theoretical Continuum of Context:

*When, where, and who are using the language
and why and how do they use it?*

Micro

Macro

Oral

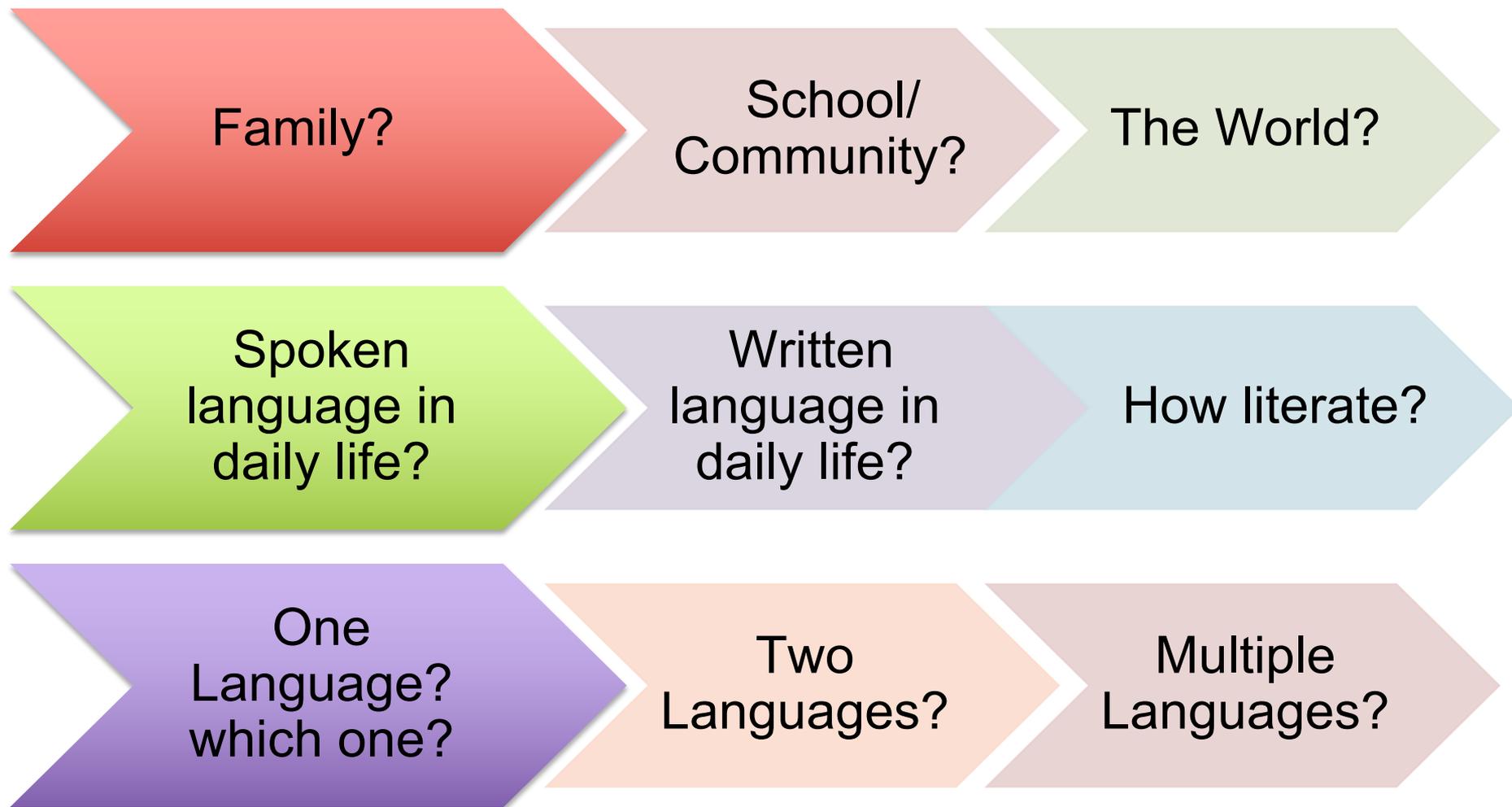
Literate

Bi(multi)lingual

Monolingual

For Chinese Immersion Students:

What are the contexts of Chinese language in their lives?



All learners are situated in different contexts:
How can we increase the contexts in which Chinese can be learned and used?

Think about the Use and Mode:
English vs. Chinese/Another Language...

Private Sphere
Public/Society

Spoken
Written

Monolingual
Bilingual

Heritage learners

World language learners

English/
third language learners

Immersion students

Diverse background

Theoretical Continuum of Media:

What are the relationships between the languages?

Learners'
exposures

Simultaneous or
successive?

Linguistic
structures

How similar/dissimilar are they?
In what way?

Orthographic
systems

How similar/dissimilar are they?
In what way?

For Chinese Immersion Students:
*What do they have to pay attention to in order to learn
English and Chinese?*

Learners'
exposures

Simultaneous or
successive?

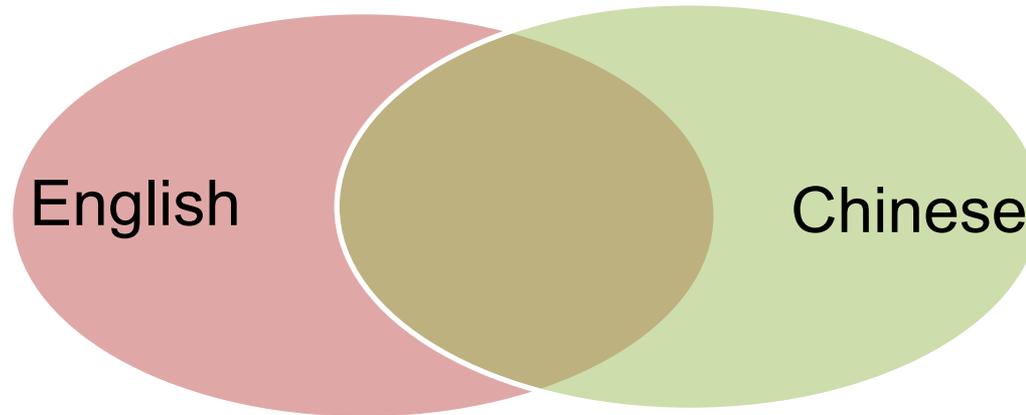
Linguistic
structures

How similar/dissimilar are
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In what way?

Orthographic
systems

How similar/dissimilar are they?
In what way?

A Web of Interrelationships Between the Systems of Languages and Cultures



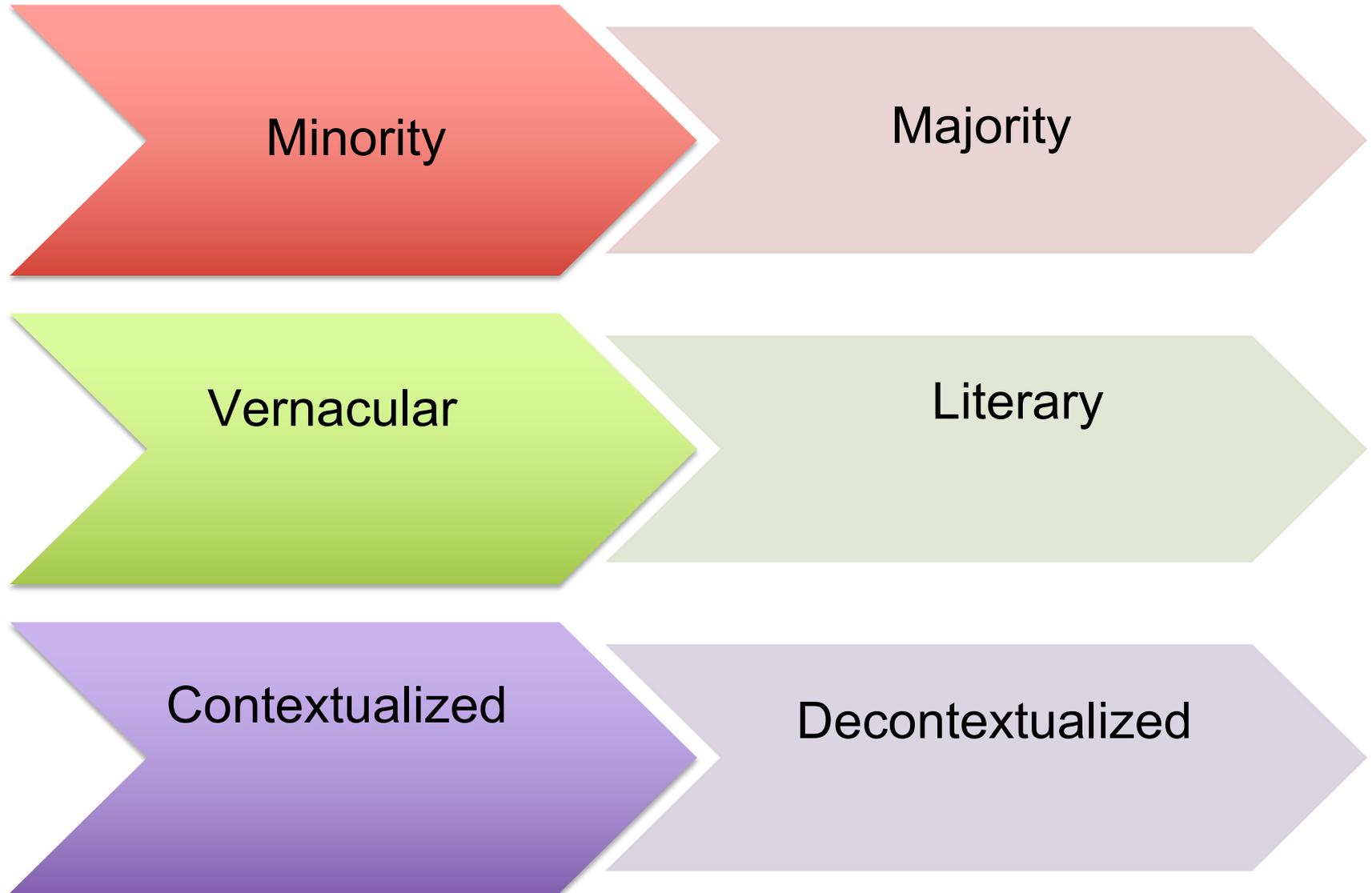
Knowledge: phonetics, phonology, morphology, writing system, syntax, vocabulary, semantics...

Skills: listening, speaking, reading, writing skills....

Functions: greeting, thanking, making requests, inviting, apologizing, making formal speeches or writing, pragmatics, academic discourse.....

Theoretical Continuum of Content

What is being learned in/through Chinese language?



The Continua of Content

- What is content?
- What subject matters are taught in Chinese? What is the key content in these subject matters that are taught in Chinese?
- Is Chinese language itself also a content area? If so, what should be taught as the “content” for Chinese language and how should it be included in an immersion curriculum?

Language as the Content of Study:

World Readiness Standards for Learning Languages (ACTFL, 2014)

The 5Cs



Communicating in the Language

- Comprehensibility
- Comprehension
- Language Control
- Vocabulary
- Cultural Awareness
- Communication Strategies

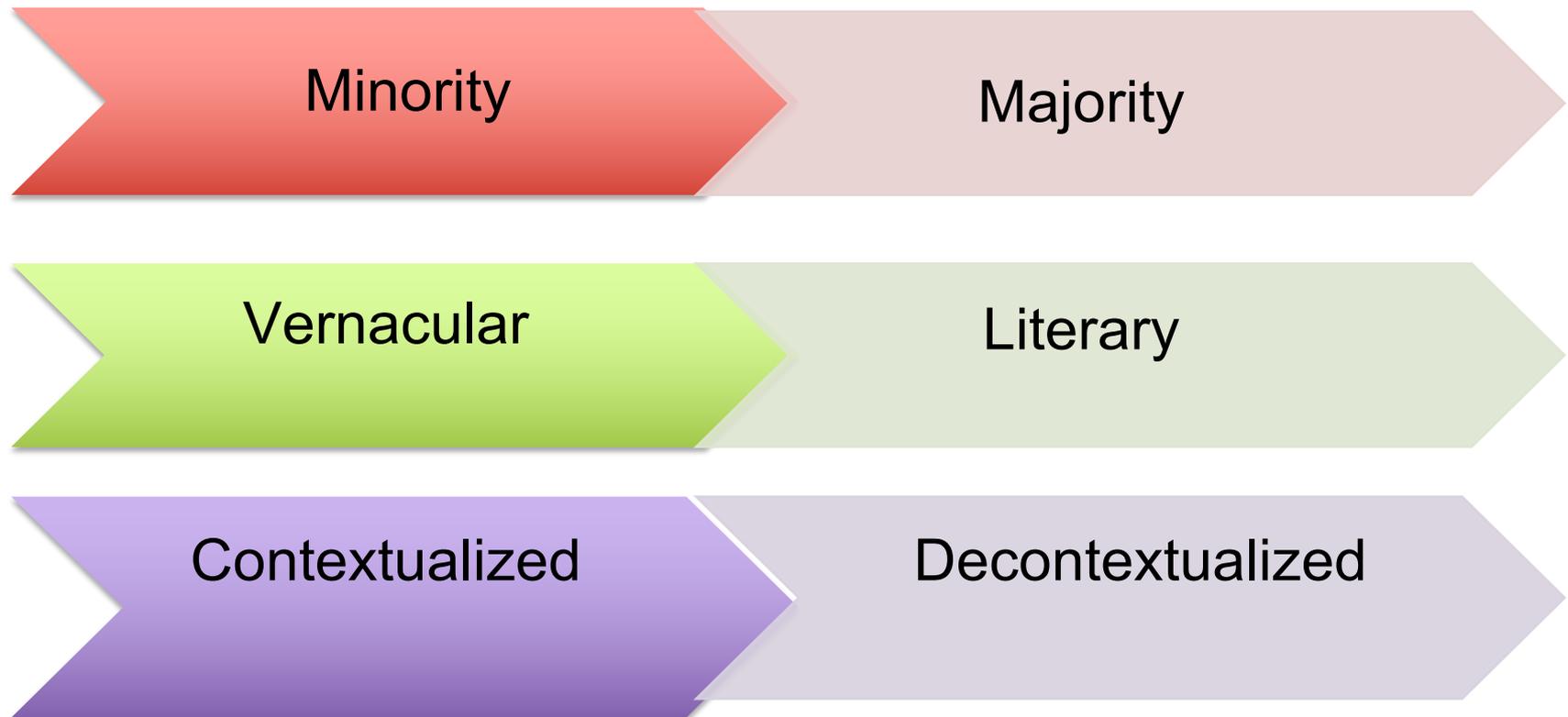
Subject Matters as the Content of Study

- Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects
- Common Core State Standards for Math
- Next Generation Science Standards



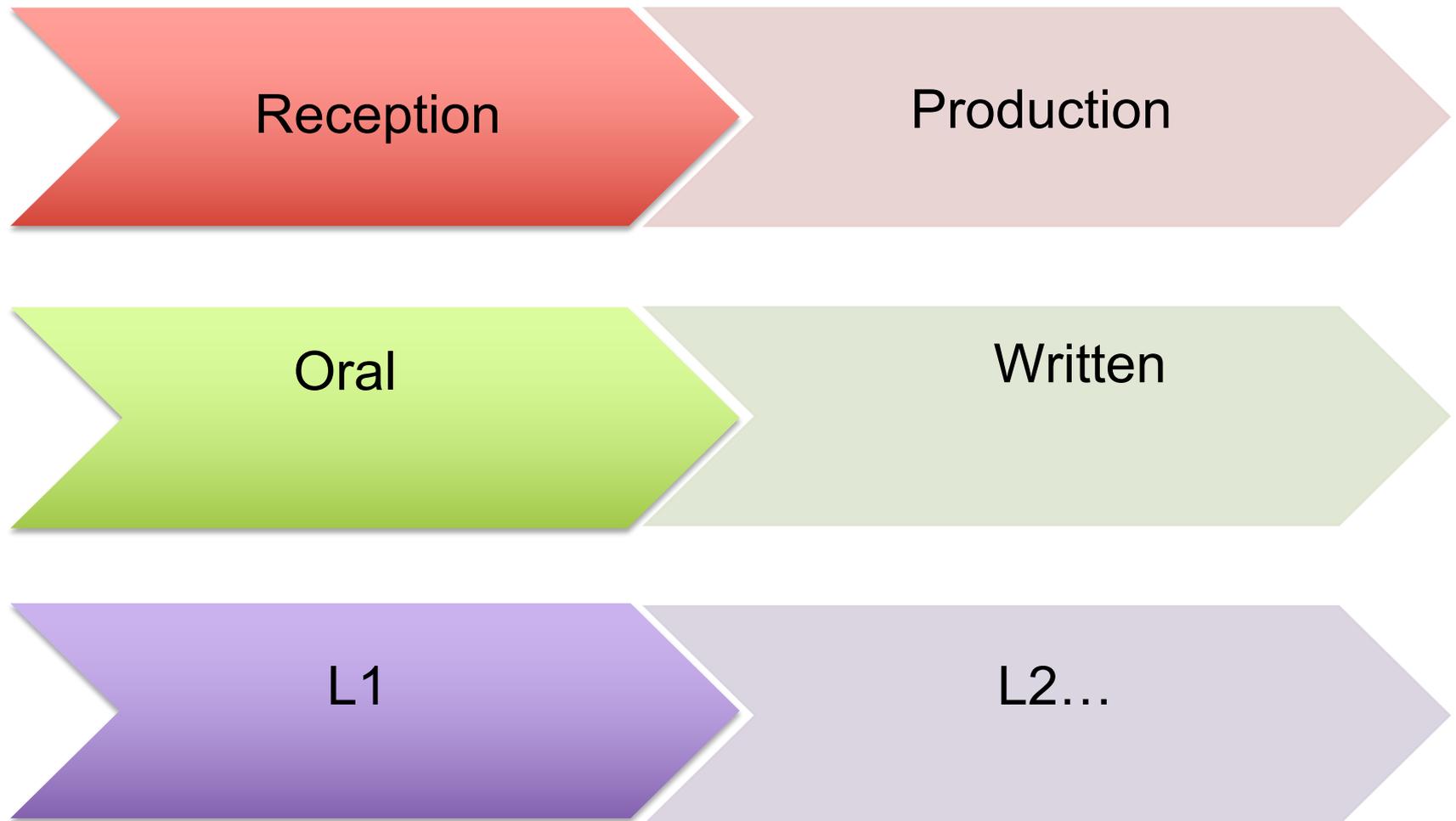
For Chinese Immersion Students: The Content Should:

- *Represent multiple perspectives and voices*
- *Include social and academic topics*
- *be contextualized and relevant in the real world*



Theoretical Continuum of Development:

What can students do in the language and how well can they do it?



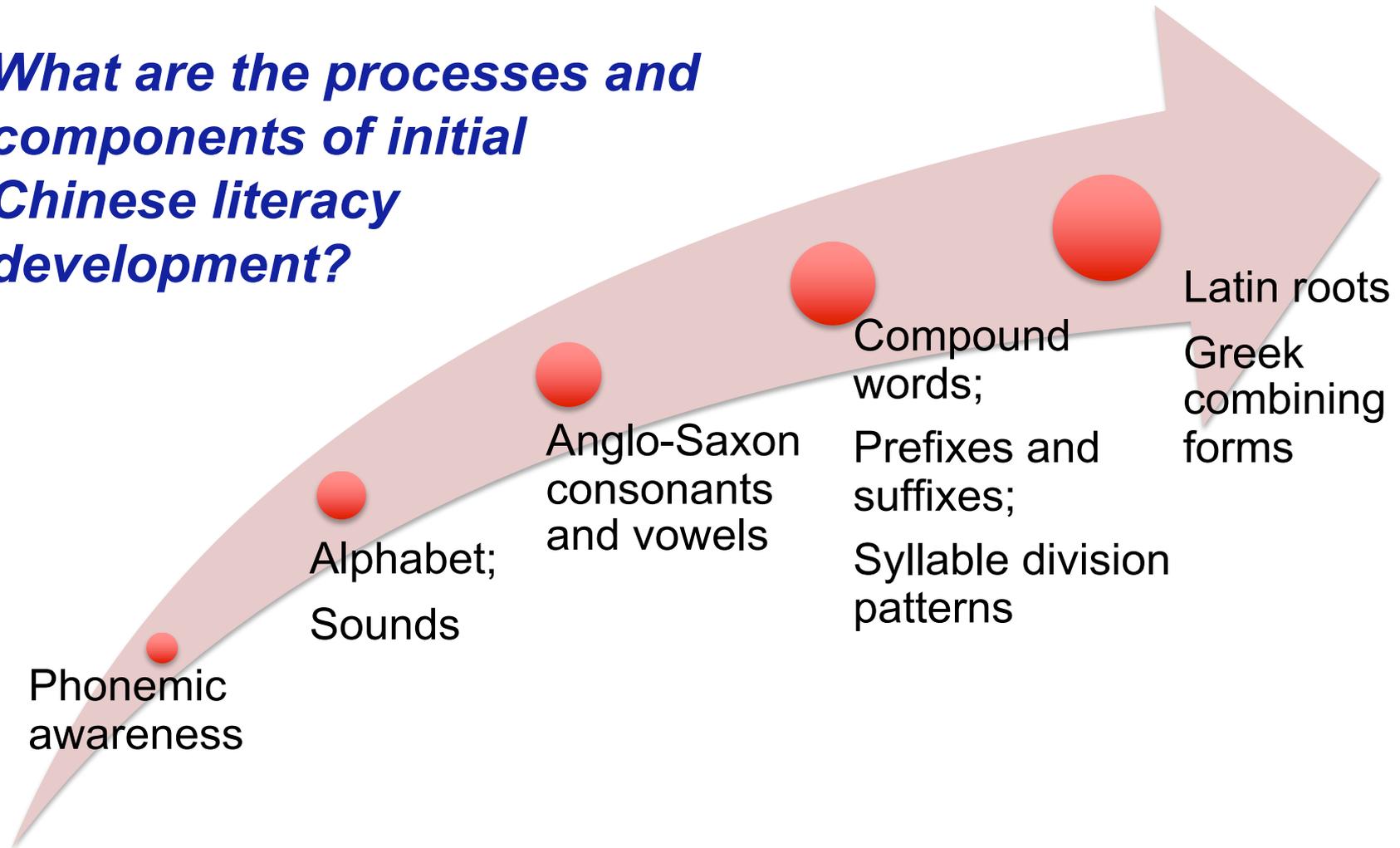


Conclusion

- When talking about developing students' biliteracy, we must consider the continua of ***Context, Media, Content, and Development***.
- Create opportunities and apply strategies to build bridges in curriculum, instruction, and assessment for our students to develop biliteracy.

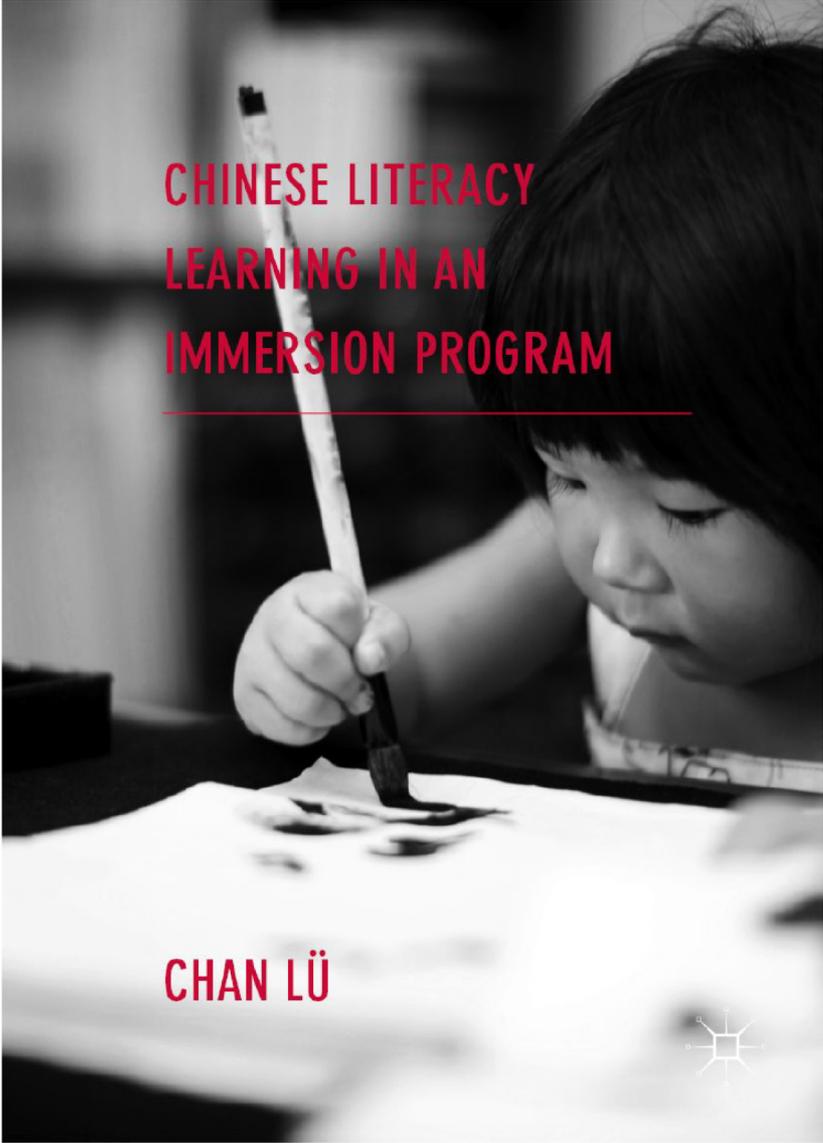
Processes and Components of Initial English Literacy Development

What are the processes and components of initial Chinese literacy development?



Academic vocabulary and reading comprehension in a Chinese immersion program

Dr. Chan Lü, Asian Languages and Literature,
University of Washington



CHINESE LITERACY
LEARNING IN AN
IMMERSION PROGRAM

CHAN LÜ



Literature on Mandarin Immersion

- > Current research primarily focus on achievements for this group of learners (e.g., Burkhauser et al., 2016; Xu, Padilla & Silva, 2015)
- > Appropriateness of using a standardized tests:
 - Normed on a different population (Met, 1991, p74)
 - Criterion-referenced assessments for general language proficiency vs. for content-specific knowledge (Lü, 2019)

Literature Review

- > More attention on the partner language (Fortune, 2012; Lü, 2016, 2019)
- > Academic literacy development - essential for immersion programs
- > Academic vocabulary plays an essential role in reading comprehension (Nagy & Townsend, 2012)

Literature Review

- > The relationship between academic vocabulary knowledge vs. general vocabulary and reading comprehension are not the same for language minority ELL learners (Kieffer & Box, 2013; Proctor et al., 2006)
- > Underdeveloped morphological awareness may be the source of reading comprehension difficulties among dysfluent word readers (Kieffer & Box, 2013).

Literature Review

- > Morphological awareness: The recognition, understanding, and use of word parts that carry significance
- > Morphological decomposition and problem-solving
- > Decompose, identify, disambiguate, integrate, infer
- > Boost vocabulary knowledge, lexical inference skills and reading comprehension
- > E.g. nation -> national ->nationality
- > International -> internationalization (signals academic literacy growth)

Anglin, 1993; Carlisle, 1995; Li & Kirby, 2014; Zhang & Koda, 2012; Ke & Koda, 2017

Morphological awareness in Chinese

- > Chinese is a morphologically-rich
- > Chinese morphology is much more transparent than English morphology (Anderson & Li, 2005, p.85)
- > 70% of all words used in Modern Chinese are compound words (Institute of Language Teaching and Research, 1986)
- > The majority of words for second language learners are also two-character compound words (Xiao, Rayson & McEnery, 2009, pp. 13-14)

Morphological awareness in Chinese

电话 diànhuà electric speech

电视 diànshì electric vision

电影 diànyǐng electric shadow

电邮 diànyóu electronic mail

电池 diànchí electric pool

电车 电脑 电商 电台 电玩.....

Research Questions

- (1) Are morphological awareness and lexical inference skills predictive of vocabulary knowledge in Chinese?
- (2) Are morphological awareness, lexical inference skills and vocabulary knowledge predictive of children's ability to comprehend science texts in Chinese?

Participants

- > 3rd grade learners in a Mandarin immersion program (50-50, one-way)
- > N = 60
- > 26 female and 34 male students
- > Average age = 114 months (SD = 3.8 months)
 - 27 had 1 Chinese-speaking parent, and 3 had 2 Chinese-speaking parents
 - No advantage from heritage speakers over non-heritage counterparts; consistent with Xu et al, 2015 on standardized test scores in reading, writing and speaking and Lü, 2016 using curriculum-based measures.

Tasks

- > Morphological awareness tasks: measured children's ability to analyze and manipulate morphemes while reading two-syllable Chinese words.

Aspects

Derivational awareness

Compound awareness

Tasks

Morpheme identification

Morpheme discrimination

Compound construction

Examples

Morpheme identification task (N =20)

Does “玩具” come from “玩”

Morpheme discrimination task (N= 18) “*odd man out*”

花钱 花园 花草

Compound structure task (N =20)

用雪做成的房子叫什么?

雪房

房雪

Vocabulary knowledge measures

- > Breadth of vocabulary knowledge (N = 72)
 - Vocabulary checklist (Yes/No): 42 real two-character words + 10 pseudowords + 20 impossible pseudowords (Ku, 2001)
- > Depth of vocabulary knowledge (N=16)
 - Word association task (Read, 1998)

Examples

- An example for word association test
- 漂亮 (pretty)

Box 1	Box 2
(1)好看 (2) 風景 (3) 電影	(4)难受 (5) 聰明 (6) 書包
(1) Beautiful (2) Scenery (3) Film	(4) uncomfortable (5) Smart (6) Backpack

Text comprehension

- Four reading passages
- Average length of 153 characters
- Topics:
 - The life of ribbon snakes
 - The life of chimpanzees
 - The life of hummingbirds
 - The dances of honey bees.
- Local and global comprehension questions

Lexical inference

- Imbedded in the reading comprehension questions
- 18 questions in total
- 17 bi-morphemic words and 1 tri-morphemic words

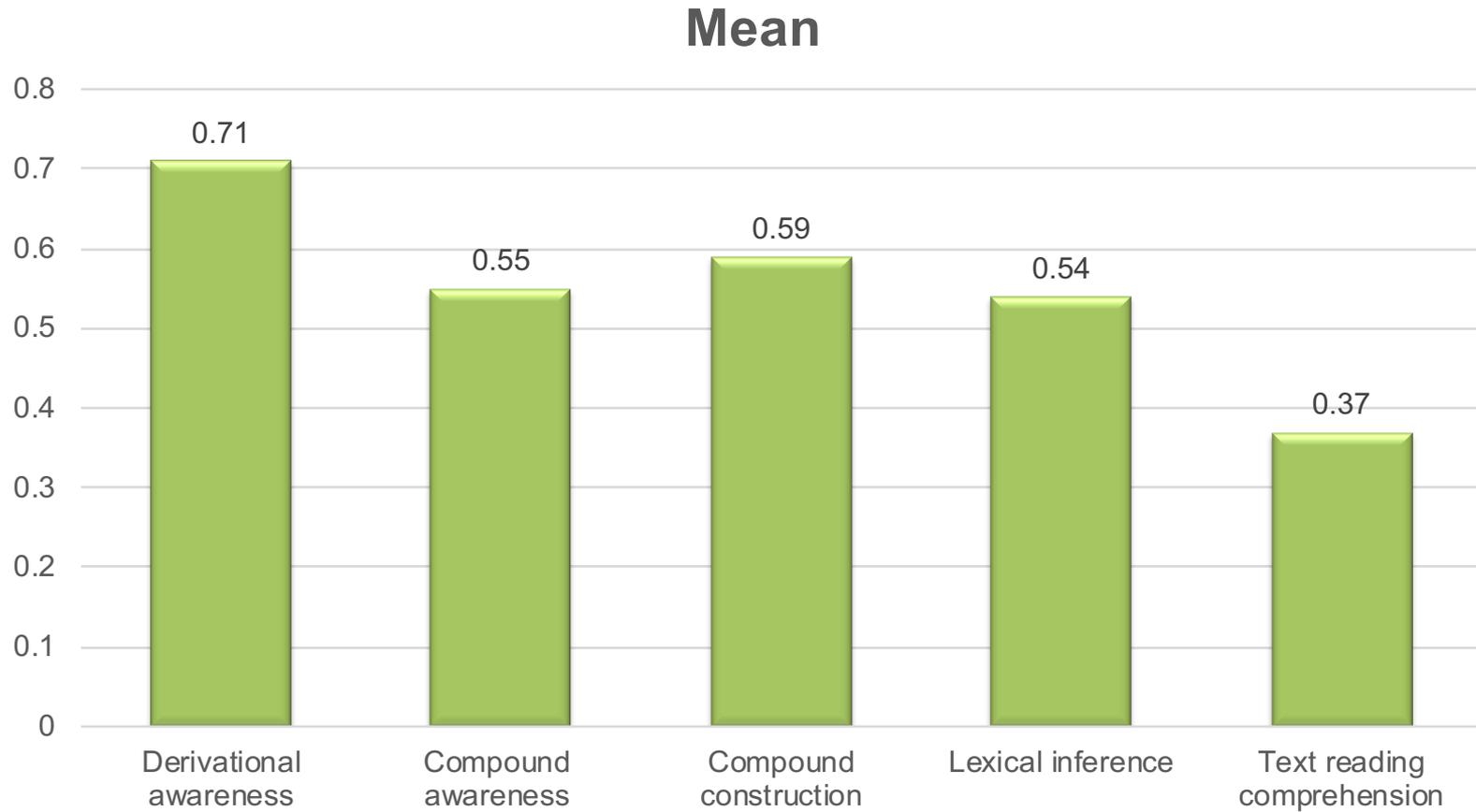
Lexical inference

Target word/sentence
蜂鳥是世界上 <u>體型</u> 最小的鳥類， A humming bird is the smallest bird in the world
Informative context
牠的大小和蜜蜂差不多。 Its size is similar to that of a honey bee.

Results (vocabulary knowledge)

	Min	Max	Mean	SD
Symbol digit	16	64	37.53	8.03
Vocabulary size (z-score)	-5.98	0.96	0	1
Vocabulary depth (max 4)	1.13	3.73	2.75	0.58

Results (MA and reading tasks)



Results - correlation

	1	2	3	4	5	6	7
1. Symbol digit	-						
2. Vocabulary knowledge size	.21	-					
3. Vocabulary knowledge depth	.16	.09	-				
4. Derivational awareness	.15	.15	.11	-			
5. Compound awareness	.25	.37**	.38**	.41**	-		
6. Lexical inference	.20	.13	.47***	.36**	.58***	-	
7. Text comprehension	.13	.17	.53***	.34**	.44***	.56***	-

Results (summary of regression analysis)

- Lexical inference skills *fully* mediated the relationship between compound awareness and vocabulary knowledge depth
- Vocabulary depth contributed significantly to text comprehension (but not vocabulary size)
- Morphological awareness and lexical inference skills jointly contributed to the prediction of text comprehension in Chinese.

Implication

- Common Core State Standards (CCSS, NGA Center & CCSSO, 2010) does not emphasize the “metalinguistic” approach (Ebbers, 2012)
- Emphasize salient and relevant features of the language and its writing system
- Academic vocabulary

Implication

- Vocabulary instruction(Stahl & Nagy, 2006, p. 75)
 - Planned and opportunistic
- Integrating language and content (Swain,1996)
 - More fundamental planning is needed
 - Language and content integration does not happen automatically and situations have to be contrived

Seattle's Journey in Mandarin Dual Language Immersion

Michele Aoki, PhD

International Education Administrator

Seattle Public Schools, WA

Mandarin Dual Language Immersion (DLI) Launched in Seattle:

- Fall 2008 at Beacon Hill International Elementary School
- Fall 2014 at Dearborn Park International Elementary School
- Fall 2014 at Mercer International Middle School
- Fall 2017 First cohort entered High School
- As of Spring 2018:
 - Grades K-5 at Beacon Hill; K-4 at Dearborn Park
 - Grades 6-8 at Mercer International Middle School
 - Grades 9-10 at a variety of high schools in the region

On the Path to Proficiency

- Over multiple years of proficiency testing* at 3rd, 5th, and 8th grade benchmarks, Reading in Chinese was always the lowest skill
- We determined that to expand their Reading proficiency, students need to read more broadly and more often
- *Seattle uses the Standards-based Measurement of Proficiency (STAMP) from Avant Assessment

Challenge of Teaching Literacy in a Chinese DLI Program

- In DLI the focus is on **teaching content** (e.g., Math and Science) so teachers prioritize that
- In a 50:50 time model, **never enough time** in the partner language to teach content and language (and literacy)
- Teaching literacy in a **character-based language** (like Chinese) requires a different approach than teaching literacy in a language with a shared alphabet (like Spanish)
- At **middle school**, content instruction shifts from Math and Science to Social Studies
- Students need **strong literacy skills** to engage with the content, but they need to **enjoy** communicating and learning in Chinese in order to stay motivated to continue

Chinese Literacy Project launched in 2016

- Following workshops in 2015 with Dr. Mimi Met, sponsored by the Confucius Institute of the State of Washington (CIWA), we decided to launch the [CIWA Chinese Literacy Project](#)
- Goal: to create a set of resources and curriculum frameworks that will benefit Seattle's Mandarin Dual Language Immersion Programs, but also be shared across Washington state and the United States
- What type of professional development would help us reach our goal?

State-wide professional development on Chinese literacy development

- **Chinese Language Teachers Association – Washington (CLTA-WA)** – strong professional organization of Chinese teachers at all levels
- **STARTALK Teacher Programs** – federally funded grant to prepare Chinese teachers to be certified to teach in K-12 public schools
- **Confucius Institute of the State of Washington** – funds much professional development for Chinese teachers and collaborates with CLTA-WA
- **University of Washington Asian L&L** – partners with CIWA and K-12 to offer workshops for teachers

Goals of Professional Development about Literacy

- Increase teachers' knowledge and understanding of literacy issues in Chinese
- Involve teachers in piloting various products (Level Chinese, Joy Reader, Mandarin Matrix, etc.)
- Develop a learning community of teachers engaged in literacy work
- Develop Chinese teachers as leaders among their peers

Example: Chinese Literacy Workshop Series

<http://confucius.washington.edu/event/chinese-literacy-lecture-series/>

October 21, 2017 at the University of Washington

An Integrated Approach to Language Teaching and Assessment by Dr. Keiko Koda, Carnegie Mellon University

Chinese as Second Language — Critical Reading and Writing by Dr. Wenling Li, Trident University International

Example: Chinese Reading with Level Chinese

<http://confucius.washington.edu/event/chinese-reading-with-level-chinese/>

August 18, 2017 at Beacon Hill International School,
Seattle Public Schools

Introduction to the CIWA Literacy Project

How to use the Specific Leveled Objectives in
Level Chinese effectively

Getting started with Level Chinese for new teachers

A closer look at the data and plans for next year

Workshop on Chinese Literacy



Enthusiastic Chinese teachers after Literacy Workshop August 2017

Example: Beauty of Hanzi

<http://confucius.washington.edu/event/the-beauty-of-hanzi/>

November 4, 2017 at the University of Washington

**Understand how Hanzi (Chinese Characters)
came into being**

Experience its beauty in terms of pronunciation,
formation, and meaning

Example: Getting to Know Mandarin Matrix

<http://confucius.washington.edu/event/getting-to-know-mandarin-matrix/>

April 24, 2018 at the University of Washington

Workshop with Eric Chipman

Familiarize teachers, administrators, families, and community members with the innovative products being developed by Mandarin Matrix, in conjunction with their partners at the Confucius Institute of the University of Utah and Utah's Mandarin Dual Language Immersion (DLI) programs.

Example: Chinese Linguistics for Language Teachers

<http://confucius.washington.edu/event/uw-summer-course-chinese-linguistics-for-language-teachers/>

July 19-August 17, 2018 at the University of Washington

**UW Summer Course:
Chinese Linguistics for Language Teachers**
By Dr. Chan Lu

Lay the groundwork for a solid understanding of how the Chinese language and its writing system functions.

Example: Language and Literacy in Dual Language Immersion

<http://confucius.washington.edu/event/language-and-literacy-learning-through-dual-language-immersion/>

November 2, 2018 at the University of Washington

Language and Literacy in Dual Language Immersion by Dr. Chan Lu

How oral language competences in the two languages contribute to children's literacy skills within and across languages, and how facets of children's language-specific skills contribute to their literacy learning differently.

Chinese Early Language and Immersion Network: CELIN at Asia Society



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<http://asiasociety.org/china-learning-initiatives/chinese-early-language-and-immersion-network>

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- 11 CELIN Briefs have been published
- Bilingual in English and Chinese

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Developing Initial Literacy in Chinese

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Introduction

One of the biggest challenges of learning Chinese at any level of the K-16 spectrum is the challenge of literacy development, learning to read and write. This is especially true when students are first introduced to Chinese orthography, its character-based writing system. This Brief outlines the issues that programs need to consider as students begin to develop literacy in Chinese. It also explains what it means that Chinese is a character-based language, describes differences between simplified and traditional characters, discusses when and why to teach and use hanyu pinyin (or pinyin in this Brief, a system that uses the Roman alphabet to help learners sound out characters in Mandarin), and makes recommendations regarding ways to facilitate students' initial literacy development. As students continue to develop Chinese oral proficiency and literacy, the teaching of reading and writing in the Chinese orthographic system requires a different set of skills, which will be addressed in another CELIN Brief.

Chinese as a Character-Based Language

The written Chinese language does not employ an alphabet. An alphabet is a system that uses letters or other symbols to represent the sounds and words (form and meaning) of a language. Children learning to read a language such as English spend time in early elementary school learning how letters represent the sounds of the language and how they

combine to form printed words. Chinese, on the other hand, employs what are commonly termed "characters," written symbols that are not "spelled out," as are letters in alphabets. Chinese characters often contain both sound and meaning cues in their overall makeup; however, these cues hint at rather than clearly identify pronunciation and meaning, and learners have to take an extra step to decode them. Over many millennia, tens of thousands of characters have evolved, though many have either fallen into disuse or are used in highly specialized fields such as classical Chinese literature, medicine, history, and philosophy. For native readers of modern Chinese, it is estimated that between 2,000 to 3,000 characters are needed to accomplish most reading functions on a daily basis (Dong, 2014). Chinese children learn 3,500 characters from first to ninth grade, spending hours each day writing and rewriting characters until they are committed to memory. While individual Chinese characters by themselves can be words, most words in Chinese are made up of two characters in combination, such as in the words "huo+shan" 火山 (fire+mountain=volcano) or "da+ren" 大人 (big+person=adult). Therefore, a learner's vocabulary size is much larger than the number of characters learned.

The Basics of Chinese Character Structure

Chinese characters are not composed of randomly drawn elements, but instead reflect a highly evolved system of component parts that recur in various rule-governed configurations. The following terms describe components of Chinese character composition:

Find this and other CELIN Briefs Online:

<https://asiasociety.org/china-learning-initiatives/celin-briefs-chinese-language-learning-and-teaching>

谢谢！ Thank you!

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