Research Highlights on Learning Chinese Script

Overview

This summary presents several examples from the research on learning to read and write Chinese. These findings demonstrate that traditional and simplified scripts strengthen different pathways for Chinese language learning. Traditional script promotes skill in parsing semantic and phonetic information, while simplified script promotes visual skill.

Traditional Script Provides More Cues That Support Reading

Traditional characters have more visual cues than simplified characters. Several researchers have explained how this may help young children recognize traditional characters more easily.[1,2,3,4,5] In particular, instruction in traditional script facilitates more attention to the general principles of the language, namely **how phonetics and semantic radicals are combined** to create words.

Chen and Yuen compared reading-related skills among 2nd-grade (7-9yo) children in Hong Kong, Taiwan, and China (see *Table 1*):[2]

- When presented with a mixture of real words and non-words, all three groups showed equal accuracy in correctly categorizing real words. Learners of traditional script were more accurate (88-91%) than learners of simplified script (61-67%) in stating that the non-words were not real Chinese words.
- In another task, children learning traditional script perceived characters as being more similar based on how they sound, while children learning simplified script perceived characters as being more similar based on how they look.

Lin and McBride-Chang compared how mothers in China and Hong Kong helped their kindergarten children learn to write Chinese characters:[6]

- Mothers using simplified script put more emphasis on overall visual character structure.
- Mothers using traditional script utilized more strategies dividing characters into phonetic and semantic components.

A more in-depth study examined Hong Kong mothers' support strategies with their pre-school, kindergarten, and first-grade children.[7] Even after controlling for children's age and grade level:

- Rote memorization (copying characters and focusing on stroke order) and imagining a related object were negatively associated with reading skill.
- Highlighting the role of the semantic radical or similarities across characters was positively associated with reading skill.

These studies illustrate how having more information about the semantic and phonetic components in traditional script promotes greater attention to linguistic structure.

Simplified Script Requires Closer Attention to Fewer Visual Features

While having fewer strokes may make simplified script faster to write, the resulting reduction in visual information also demands more attention to detail when learning to read those characters. This is evident in the visual skills developed by young readers of simplified script.

McBride-Chang and colleagues compared the reading and visual skills of kindergarteners in Hong Kong and in China (see *Table 2*).[5]

- After controlling for reading ability, results showed that learners of simplified script demonstrated superior visual skills.
- This skill with visual-spatial relationships was significantly positively associated with Chinese reading ability.

This illustrates how learning to read simplified Chinese requires more attention to visual features.

Optimal Learning Sequence

Transitioning between scripts is asymmetric. Learning traditional before simplified demonstrates an advantage even before receiving explicit instruction in the second script.

Liu and Hsiao examined the reading and writing skills of native traditional learners from Hong Kong and native simplified learners from mainland China, all college-attending adults (see *Table 3*):[8]

- The two groups showed equal ability in reading the opposite script.
- Learners of traditional script copied 94% and wrote 66% of simplified characters accurately.
- Learners of simplified script copied 65% and wrote 20% of traditional characters accurately.

Implications

This research reveals an advantage for transitioning from traditional to simplified script, over the reverse. This is shown empirically with adults. For young children, traditional script offers the benefits of including more visual information that facilitates learning, while simplified script has less visual information and thus requires developing more subtle visual skills to process this information.

These benefits are further supported by findings that demonstrate the importance for children to learn the semantic and phonetic structure of the language, as traditional script particularly emphasizes due to following more regular patterns (*see examples*). This is consistent with other research on language learning which highlights the superiority of explicit, systematic instruction in the structure of the language, over incidental exposure and rote memorization.[9] Such knowledge of how to analyze the smaller units of a language is valuable for both Chinese scripts as well as for learning other languages, both picture-based and alphabet-based.

Appendix

Table 1: Comparison of 2nd-grade children's performance in tasks related to reading Chinese (excerpted from Chen & Yuen, 1991, Table 1).[2]

Task		Traditional		Simplified	
		Hong Kong (N = 72)	Taiwan (N = 73)	China (N = 67)	
Accuracy in deciding: Real or not real word?	Real word	94%	89%	86%	
	[Radical + radical] nonword	**91%**	**91%**	67%	*
	[Radical + phonetic] nonword	**89%**	**88%**	61%	*
Which is more similar to the target word?	Phonetically similar	**57%**	**63%**	41%	*
	Visually similar	43%	37%	**59%**	

** Statistically significant difference.*

Table 2: Comparison of kindergarteners' reading and visual skills at two different timepoints (excerpted from McBride-Chang, *et al.*, 2005, Table 1).[5]

	Traditional		Simplified	
	Hong Kong (N =101)		China (N = 95)	
	Time 1	Time 2	Time 1	Time 2
Chinese word reading	**45.17**	**54.73**	20.54	33.00
Visual closure	5.38	7.31	7.98	10.96
Visual discrimination	7.90	10.87	10.62	12.94
Visual-spatial relationships	9.84	12.17	9.67	12.41

Table 3: Comparison of college-attending adults' skills in reading and writing Chinese in their less-familiar script (excerpted from Liu & Hsiao, 2012, Table 1).[8]

Task	Traditional learners using simplified script (N = 24)	Simplified learners using traditional script (N = 24)	
Naming	96%	97%	
Copying	**94%**	65%	*
Dictation	**66%**	20%	*

** Statistically significant difference.*

References

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Traditional Characters Are Easier to Predict from Their Components

Traditional							Simplified						
食	+	我	=	餓			食	+	我	=	饿		
Food		Me		Hungry			Food		Me		Hungry		
金	+	咼	=	鍋			金	+	咼	=	锅		
Metal		(guō)		Pan (guō)			Metal		(guō)		Pan (guō)		
辶	+	咼	=	過			辶	+	咼	=	过		
Walk		(guō)		Cross (guò)			Walk		(guō)		Cross (guò)		
豆	+	頁	=	頭			豆	+	页	=	头		
(dòu)		[quantifier]		Unit (tóu)			(dòu)		[quantifier]		Unit (tóu)		
匸	+	品	=	區			匸	+	品	=	区		
Hide		3 men		Area			Hide		3 men		Area		
凡	+	虫	=	風			凡	+	虫	=	风		
(fán)		Insect		Wind (fēng)			(fán)		Insect		Wind (fēng)		
网	+	山	=	岡			网	+	山	=	冈		
Net		Mountain		Hilltop			Net		Mountain		Hilltop		

Simplified components are lost or change in irregular patterns.

Many-to-one mapping makes derivation harder.

Radicals Showing Shared Meanings Are More Consistent in Traditional Characters

Component	Traditional	Simplified	English	Component	Traditional	Simplified	English
言 Speech	這	这	this	食 Food	飯	饭	rice
	許	许	promise		餵	喂	to feed
	註	注	note		養	养	raise a pet
	護	护	protect		餚	肴	meal
	誇	夸	boast	隹 Bird	隻	只	# (of animals)
雨 Rain	電	电	thunder		雙	双	pair (of animals)
	雲	云	cloud		雞	鸡	chicken
車 Car	車	车	car	門 Door	門	门	door
	運	运	transport		開	开	open
聿 Pen	書	书	book		閉	闭	close
	筆	笔	pencil		關	关	close