

Supplemental Material S1. A list of syllables and sentences for production and perception experiments.

Syllables									
Tone	/ta/	/ti/	/tu/	/pa/	/pi/	/tʃu/	/a/	/i/	/u/
1	搭 (build)	低 (low)	督 (supervise)	八 (eight)	逼 (force)	猪 (pig)	啊 (oh)	一 (one)	屋 (house)
2	答 (answer)	敌 (enemy)	毒 (poison)	拔 (pull)	鼻 (nose)	竹 (bamboo)	啊 (eh)	遗 (pity)	无 (nothing)
3	打 (fight)	底 (bottom)	赌 (bet)	把 (handle)	笔 (pen)	主 (lord)	啊 (what)	已 (already)	五 (five)
4	大 (big)	地 (land)	肚 (belly)	爸 (father)	币 (coin)	祝 (wish)	啊 (ah)	易 (easy)	误 (error)
Sentences									
4 syllables	张薇开车。/? /tʃaŋ55 uei55 kʰai55 tʂʰə55/ (Zhang Wei drives the car./?)				5 syllables	高兵喝鸡汤。/? /kau55 piəŋ55 xə55 tɕi55 tʰaŋ55/ (Gao Bing drinks chicken soup./?)			
	王梅划船。/? /uaŋ35 mei35 xua35 tʂʰuan35/ (Wang Mei boats./?)					罗婷学轮滑。/? /luo35 tʰiəŋ35 ɕyɛ35 luən35 xua35/ (Luo Ting learns skating./?)			
	李敏点火。/? /li214 miən214 diən214 huo214/ (Li Min makes a fire./?)					李伟买雨伞。/? /li214 uei214 mai214 y214 san214/ (Li Wei buys an umbrella./?)			
	叶亮睡觉。/? /iɛ51 liɑŋ51 ʂuei51 tɕiau51/ (Ye Liang sleeps./?)					赵志看电视。/? /tʂau51 tʂɿ51 kʰan51 tiən51 ʂɿ51/ (Zhao Zhi watches TV./?)			
	李刚讲课。/? /li214 kaŋ55 tɕiaŋ214 kʰə51/ (Li Gang gives a lesson./?)					李刚交水费。/? /li214 kaŋ55 tɕiau55 ʂuei214 fei51/ (Li Gang pays water fee./?)			
6 syllables	张薇担心肖英。 /tʃaŋ55 uei55 tan55 ɕiən55 ɕiau iəŋ55/ (Zhang Wei worries about Xiao Ying./?)				7 syllables	高兵今天喝鸡汤。/? /kau55 piəŋ55 tɕiən55 tʰiən55 xə55 tɕi55 tʰaŋ55/ (Gao Bing drinks chicken soup today./?)			

	王梅怀疑刘宁。/? /uaŋ35 mei35 xuai35 i35 liou35 niəŋ35/ (Wang Mei suspects Liu Ning.)		罗婷明年学轮滑。/? /luo35 tʰiəŋ35 miəŋ35 nien35 ɤye35 luən35 xua35/ (Luo Ting will learn skating next year./?)
	李敏反感刘雨。/? /li214 miən214 fan214 kan214 liou35 y214/ (Li Min is disgusted with Liu Yu)		李伟五点买雨伞。/? /li214 uei214 u214 tien214 mai214 y214 san214/ (Li Wei buys an umbrella at 5 o'clock./?)
	叶亮害怕赵丽。/? /iɛ51 liɑŋ51 xai51 pʰa51 tɕau51 li51/ (Ye Liang is afraid of Zhang Li./?)		赵志半夜看电视。/? /tɕau51 tɕʰi51 pan51 ie51 kʰan51 tien51 ɕʰi51/ (Zhao Zhi watches TV at midnight./?)
	李刚讨厌吕梦。/? /li214 kaŋ55 tʰau214 iən51 ly214 mənɣ51/ (Li Gang hates Lü Meng./?)		李刚九号交水费。/? /li214 kaŋ55 tɕiəu214 xau51 tɕiəu55 ɕuei214 fei51/ (Li Gang pays water fee on ninth./?)
10 syllables	张薇担心肖英开车发晕。/? /tɕaŋ55 uei55 tan55 eiən55 eiəu55 iəŋ55 kʰai55 tɕʰə55 fa55 yən55/ (Zhang Wei worries about Xiao Ying having a carsickness./?)		
	王梅怀疑刘宁划船着迷。/? /uaŋ35 mei35 xuai35 i35 liou35 niəŋ35 xua35 tɕʰuan35 tɕau35 mi35/ (Wang Mei suspects Liu Ning of indulging in boating./?)		
	李敏反感刘雨点火取暖。/? /li214 miən214 fan214 kan214 liou35 y214 tien214 xuo214 tɕʰy214 nuan214/ (Li Min is disgusted with Liu Yu making a fire for warmth./?)		
	叶亮害怕赵丽睡觉做梦。/? /iɛ51 liɑŋ51 xai51 pʰa51 tɕau51 li51 ɕuei51 tɕiəu51 tsuo51 mənɣ51/ (Ye Liang is afraid of Zhang Li dreaming when sleeping./?)		
	李刚讨厌吕梦讲课紧张。/? /li214 kaŋ55 tʰau214 iən51 ly214 mənɣ51 tɕiəŋ214 kʰə51 tɕiən214 tɕaŋ55/ (Li Gang hates Lü Meng to be nervous when teaching./?)		