

## **Cross-linguistic Influence on Intonation Acquisition: A Study on the Production of L2 Mandarin and L3 English Intonations by Uyghur Speakers**

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### **A. Uyghur, Mandarin and English**

#### ***Basic introduction of Uyghur***

- the native language of Uyghur speakers
- a member of the Turkic branch of the Altaic language family
- a non-tonal language with predictable lexical stress

#### ***Comparison of prosodic systems***

Language	Prominence				Prosodic structures					Source
	Lexical		Postlexical		Lexical		Postlexical			
	tone	stress	head	edge	syll	foot	AP	ip	IP	
Uyghur		✓		✓	✓		✓	✓	✓	Major & Mayer (2019)
Mandarin	✓	✓	(✓)		✓	✓		✓	✓	Jun (2005)
English		✓	✓		✓	✓		✓	✓	Jun (2005)

*Note.* There is a lack of consensus regarding the postlexical pitch accent in Mandarin, although certain studies have suggested a stress-driven pitch accent (Jun, 2005).

### **B. Theoretical framework**

#### ***L2 Intonation Learning theory (LILt)***

- Four dimensions for cross-linguistic comparison of intonation: (1) systemic: the inventory of pitch events such as pitch accent and boundary tones; (2) frequency: the frequency of phonological intonation pattern; (3) realizational: the phonetic implementation such as F0 range and mean F0; and (4) semantic: how the distribution of elements is associated with intonational meaning.
- The influence from L1 takes the form of assimilation or polarization in L2 production, and the cross-linguistic influence may occur in any dimension (Mennen, 2015, 2022).

#### ***In the current study***

- LILt is applicable in L3 intonation.



## Supplementary Materials

### C. More details of research design

#### *Language background of Uyghur participants*

Language	Age of learning	Years of study	Percentage of use (with families)	Percentage of use (on campus)
Uyghur	0	22 (20-24)	68.50%	32.25%
Chinese	7 (4-10)	14 (12-18)	27.50%	57.05%
English	16 (15-18)	5 (3-6)	5.00%	10.70%

#### *Materials*

Language	Sentence No.	Sentence				
Uyghur	S1	نادام	ئاخشام	كىنو	كۆردى	
		na:dem	axfam	kino	kør-di	
	Nadam	last night	movie	watch-PST		
	'Nadam watched movie last night'					
	S2	ئايگۇل	ئەمدى	لەغمەن	ئەتتى	
		ajgyl	emdi	lermen	et-ti	
	Aygul	just	meal	cook-PST		
	'Aygul just made ramen'					
S3	ئالىم	بۈگۈن	ئايلاق	يۇيدى		
	alim	bygyn	ajaq	ju-di		
Alim	today	shoes	wash-PST			
'Alim washed shoes today'						
S4	پولات	بۇلتۇر	لۇغەت	ئالدى		
	polat	bultur	luret	al-di		
Polat	last year	dictionary	buy-PST			
'Polat bought a dictionary last year'						
Language	Sentence No.	Tones	Sentence			
Mandarin	S1	T1	张斌	今天	参观	公司
			Zhang1Bin1	jin1tian1	can1guan1	gong1si1
	Zhang Bin	today	visit	company		
	'Zhang Bin visited the company today'					
	S2	T2	吴梅	明年	研习	哲学
			Wu2Mei2	ming2nian2	yan2xi2	zhe2xue2
	Wu Mei	next year	learn	philosophy		
	'Wu Mei will learn philosophy next year'					
S3	T3	李敏	五点	整理	讲稿	
		Li3Min3	wu3dian3	zheng3li3	jiang3gao3	
Li Min	5 o'clock	prepare	speech draft			
'Li Min prepared speech draft at 5 o'clock'						
S4	T4	赵丽	半夜	制作	道具	
		Zhao4Li4	ban4ye4	zhi4zuo4	dao4ju4	
Zhao Li	midnight	make	props			
'Zhao Li made props at midnight'						
Language	Sentence No.	Stress	Sentence			
English	S1	Initial	Lara	finished	papers	yesterday
	S2	Initial	Mary	cancelled	orders	lately
	S3	Final	Lamar	received	awards	tonight
	S4	Final	Celine	repaired	guitar	today

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