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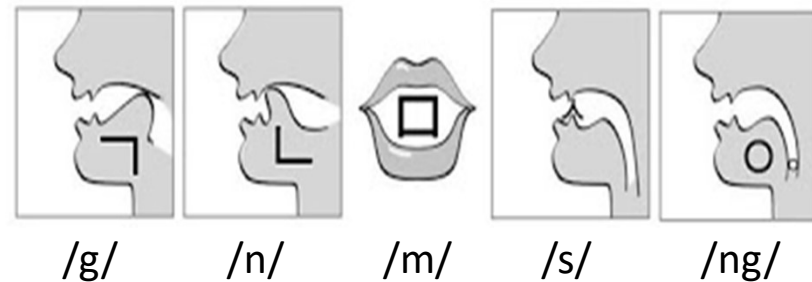
**Grapho-phonemic systematicity in Korean hangeul**

**Does it assist learning?**

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# Hangeul, the Korean writing system

- Artificially made in 1446
- King Sejong the Great & his scholars
- Consistent letter-sound relation
- Consonants = Visualized articulation



ㄱ /g/ guy

ㅋ /k/ key

ㆁ /k\*/ sky



ㄱ /g/    ㅋ /d/    ㆁ /b/    ㆁ /dg/

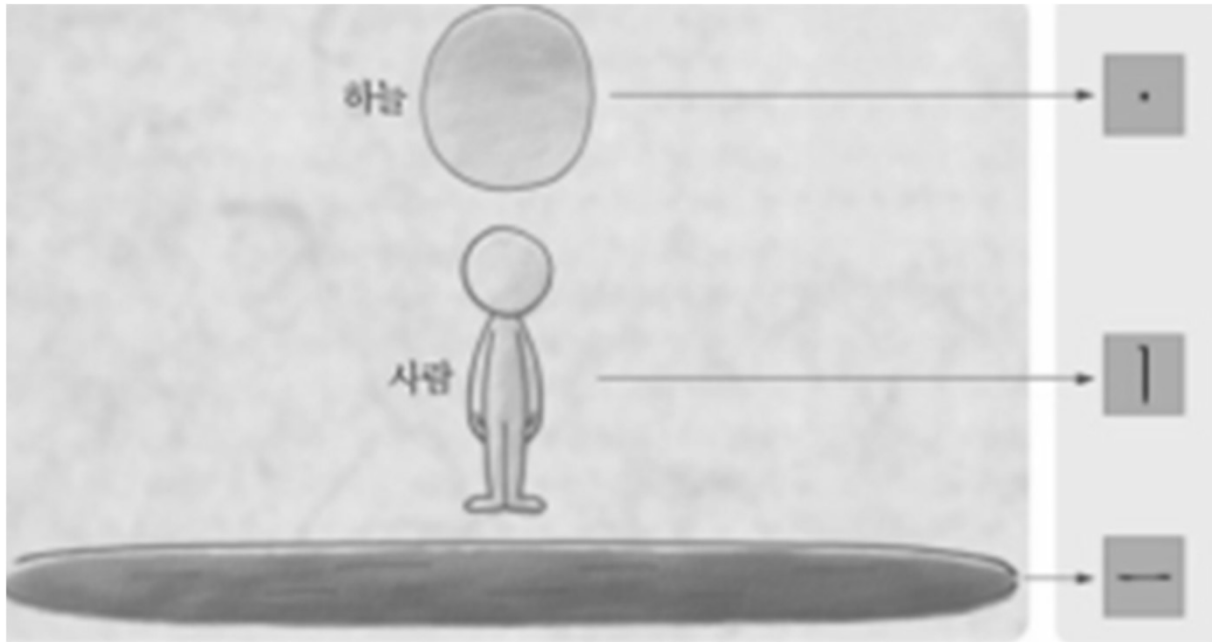
ㅋ /k/    ㆁ /t/    ㆁ /p/    ㆁ /ch/

ㆁ /k\*/    ㆁ /t\*/    ㆁ /p\*/    ㆁ /tch/

# Hangeul, the Korean writing system

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- Vowels based on a cultural reference point



# Research Questions

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“Even fools can learn in a week and the clever will learn for a half day.”

Q. Do naïve participants notice the intended systematicity?

Q. Can they utilize it for faster and better learning?

# Experiment

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Veridical letter-sound association  
Expected to be Faster & Easier



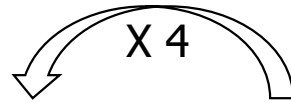
Fake letter-sound association

# Training

# Mini-Test

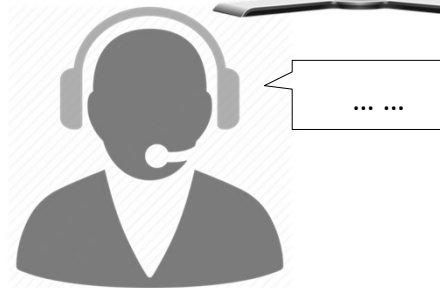
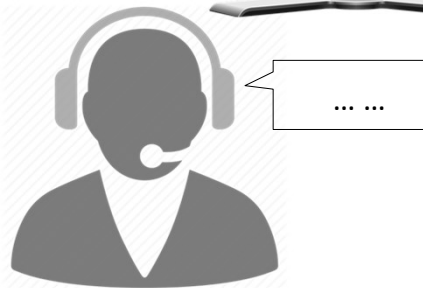
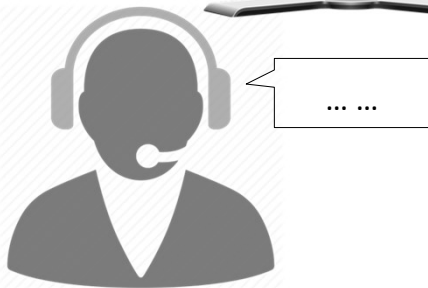
# Final-Test

Number of repetitions = easier learning



Reaction time = faster learning

70%  
→



Number of correct clicks = success of learning

# 1. Did the 'veridical group' learn better & faster?

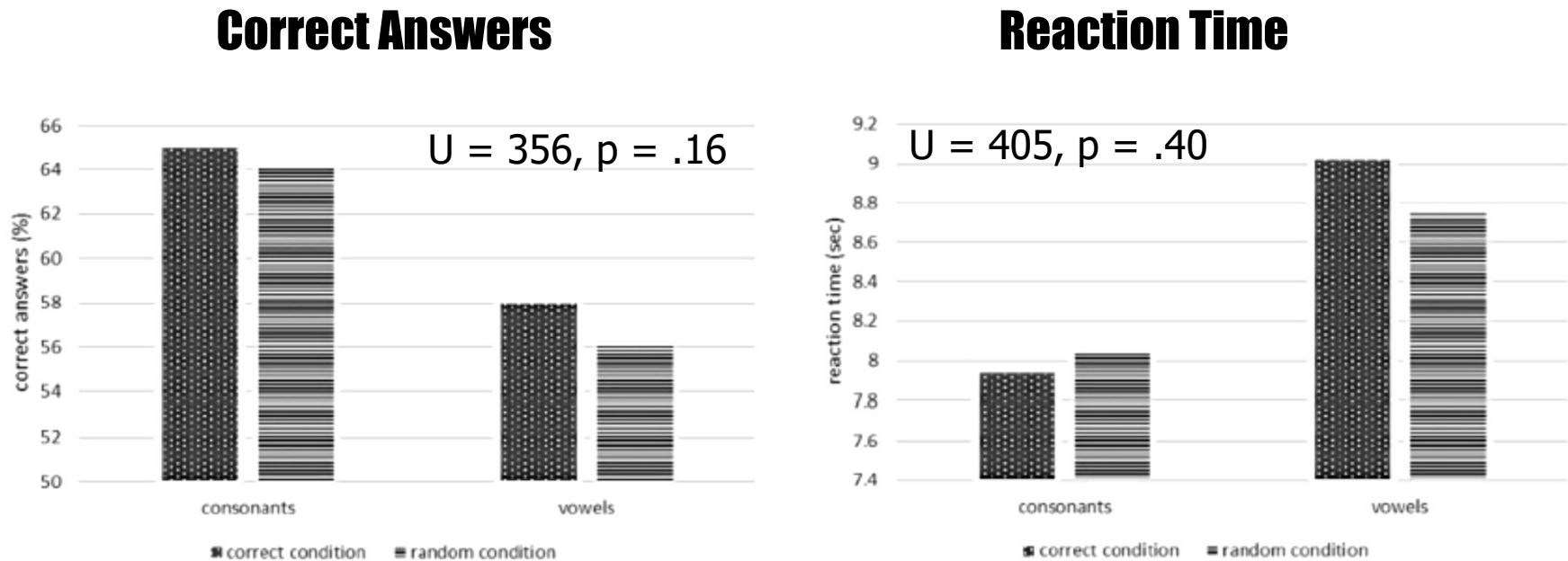


Fig 2.3.1. The percentage of correct answers (left) and reaction time (right). SD=16.20 (correct consonants); SD=16.44 (random consonants); SD=12.96 (correct vowels); SD=17.12 (random vowels)

## 2. Did the 'veridical group' learn more easily?

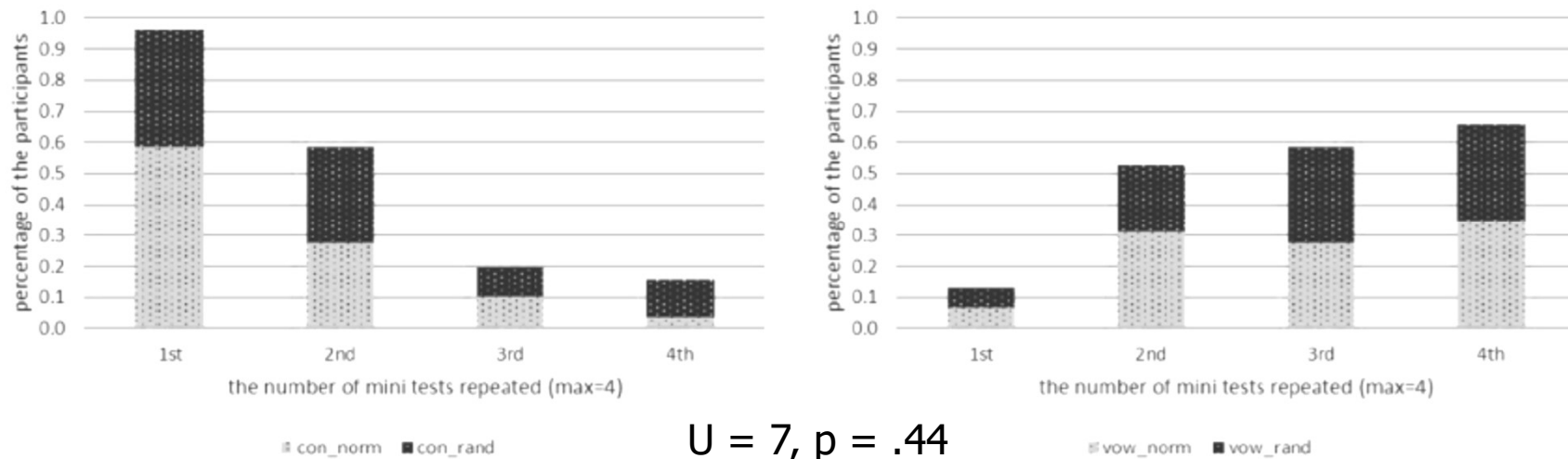


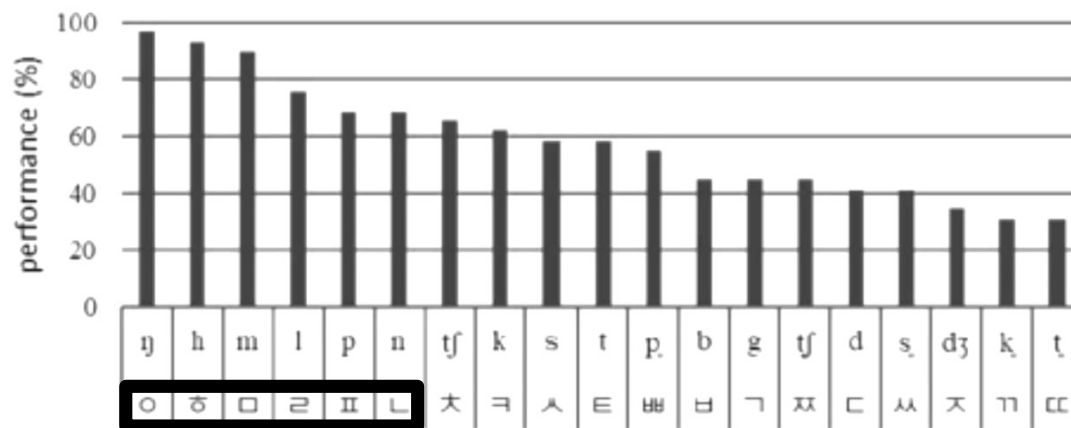
Fig 2.3.2. The number of the tests the participants repeated for consonants (left) and vowels (right): Many participants passed the first test when learning consonants but had to repeat multiple times for vowels.



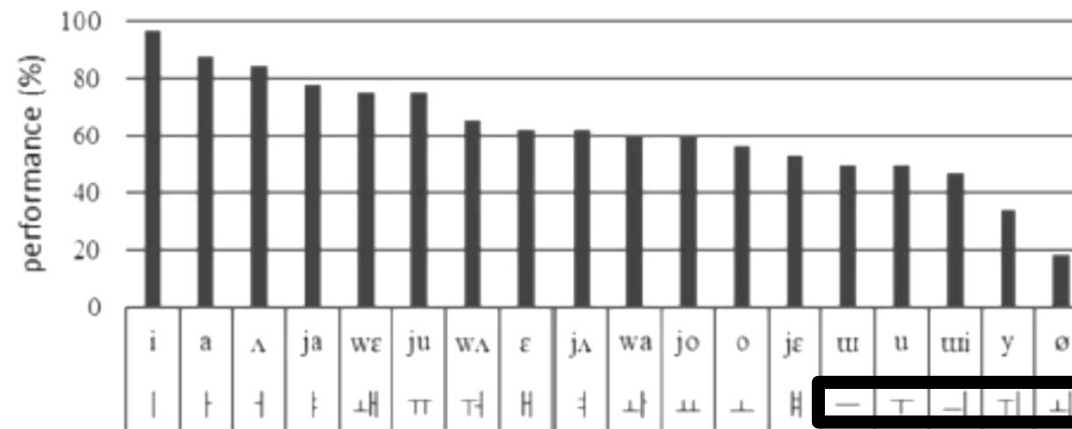
### 3. Unexpected Findings

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1. Learning consonants is easier than vowels ( $U = 2, p = .04$ )
2. Nasals are the easiest to learn.



### 3. Vowels without jaw-opening are difficult to learn.



#### 4. Chinese may struggle in learning a new phonograph.

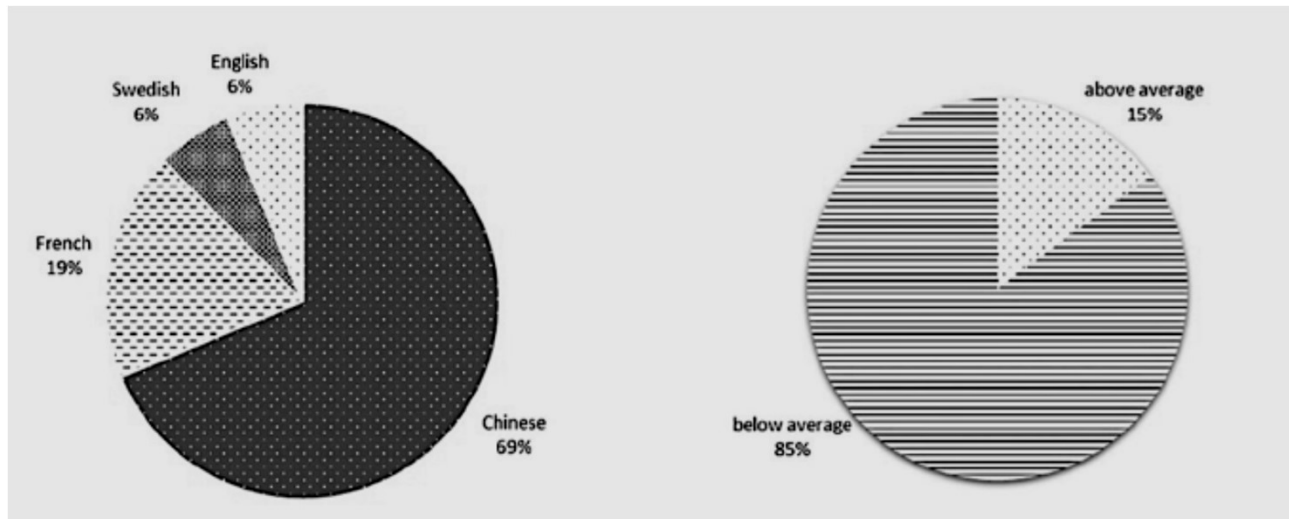


Fig 2.3.5. The distribution of the first languages of the performers who scored below average (left); and the scores within Chinese participants (right)

# Any tips for further directions?

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