



# Adult Performance on Set for Variability and Phonological Awareness

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## Introduction

- English is a complex language to learn, especially with so many irregularities in letter-sound relationships. In this study, we tested English-speaking participants on their skills in phonological awareness (PA) and set for variability (SfV).
- The SfV task tests participants in their ability to identify words from their mispronunciations. In other words, can the participant produce a word's correct pronunciation after hearing it pronounced the wrong way?
- This task has been shown to be related to other measures of children's reading (Steacy et al., 2019; Tunmer & Chapman, 2012) and adults' spelling (Rigobon et al., submitted).
- Phonological awareness (one's ability to manipulate sounds within a word) has also been shown to be important in reading ability. Adults' PA can be tested by saying a word out loud, changing one of the letters, and asking the adult to say the new word aloud.
- Decoded pronunciation**- sounding a word out letter by letter based on regular letter-sound correspondence .
- Mismatched pronunciation** – replacing one or more sounds in the correct pronunciation with sounds that would not correspond to the correct spelling of the mispronounced word

## Current Study

### Research Question

Is the correlation between decoded SfV and PA performance stronger than the correlation between mismatched SfV and PA performance?

### Hypothesis

Using an experimental design, we predict that performance on the PA task will be more strongly correlated with performance on the decoded SfV task than with performance on the mismatched SfV task.

## Methods

- In the set for variability task, participants heard mispronunciations of 80 words, including 40 mismatched and 40 decoded pronunciations.
- In this study, we tested 204 college students and about 3-5 tester randomly assigned to each college students.
- We collected data from 204 college students via Zoom.
- Participants were tested on their phonological awareness with 20 words adapted from the CTOPP-2 (Wagner et al., 2013).

### PA task for adults

You will be asked to say a word and then asked to replace a sound in that word with another sound to create a new word. For example, in the word *bike*, if I replace the /b/ sound with /l/ then I get like. Let's try some.

Score each item with a 1 for correct and 0 for an incorrect response

	Correct	Score
Say <i>bead</i> , (pause and wait for response) now say /n/ instead of /d/. What is the new word that is created?.....	bean	___
If correct: That's right! Let's try the next one. If incorrect: That's not quite right. Replacing the /d/ sound in bead with /n/ gives us bean.		
Say <i>like</i> , now say /v/ instead of /k/. What is the new word that is created?.....	live	___
If correct: That's right! Let's try the next one. If incorrect: That's not quite right. Replacing the /k/ sound in like with /v/ gives us live.		
Say <i>brown</i> , now say /k/ instead of /b/.....	crown	___
If correct: That's right! Let's try the next one. If incorrect: That's not quite right. Replacing the /b/ sound in brown with /k/ gives us crown.		
Say <i>class</i> , now say /sh/ instead of /s/.....	clash	___
If correct: That's right! If incorrect: That's not quite right. Replacing the /s/ sound in class with /sh/ gives us clash.		

## Result&Discussion

- Based on the 204 participants
- correlation between PA and decoded SfV performance total scores = 0.41 (significant at  $p < .001$ )
- correlation between PA and mismatched SfV performance total scores = 0.26 (significant at  $p < .001$ )
- $z = 1.56$  insignificant at  $p = .12$
- These results show that the correlations are not significantly different, so the hypothesis about PA having different relationships with decoded vs mismatched SFV would only be partially supported.

## Limitations

- The data was only taken from a small portion of college students attending FSU, so the results cannot be generalized to other adult readers yet.

## References

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