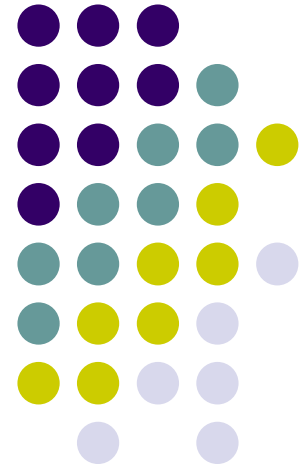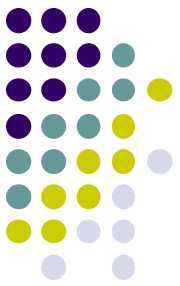# Using a Phonetic Alphabet, the Initial Teaching Alphabet (i.t.a.), to Remediate Reading Disabilities in First-Year College Students

Dr. Susan K. Moore
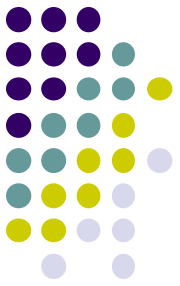
Purpose

To investigate a word study strategy for the acquisition of content vocabulary in 4 steps:

- 1. Segment words by syllables
- 2. Use a phonetic alphabet (i.t.a.) to transcribe spoken words to phonetic equivalents
- 3. Find the written word in electronic spell checkers (iPads or online dictionaries)
- 4. Access the meaning of words

Justification

Many first-year college students are unprepared for academic rigor

- Students lack content vocabulary knowledge
- Students struggle in reading comprehension
- Students' reading difficulties are not properly diagnosed
- Results in high drop-out rates leaving students with financial burden of student loans with little to show for it
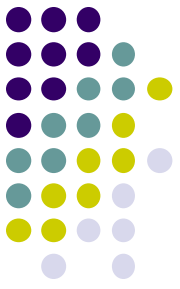
Research Questions

- Will the word study intervention result in students' increase in phonological knowledge?

- Will the word study intervention result in increased vocabulary and improved reading comprehension?
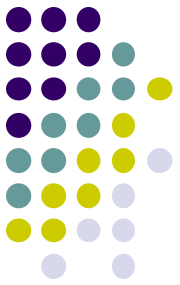
Hypotheses

- 1. The word study intervention will result in an increase in students' phonological knowledge.

- 2. The word study intervention will result in increased vocabulary acquisition and improved reading comprehension.
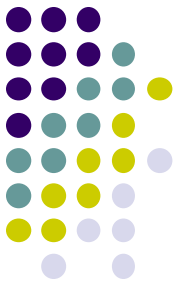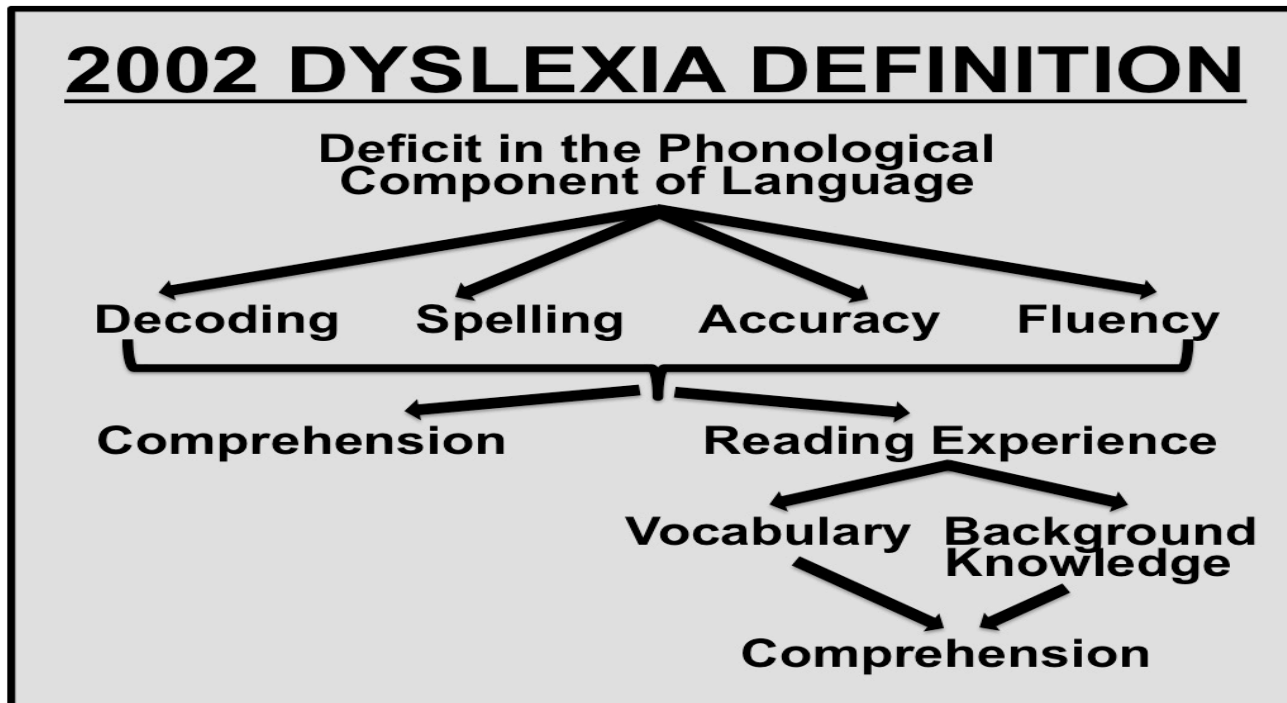
Key Terms

- **Phonological deficit**
- **Reading disabilities**
- **Content vocabulary**
- **Slash & Dash**
- **Good Phonetic Equivalent**

Literature Review

International Dyslexia Association (IDA) defines dyslexia:

2002 DYSLEXIA DEFINITION

Literature Review (cont.)

- **Ross, Kena, Rathbun, Kewai-Ramani, Zhang, Kristopovich, & Manning 2012**

  - High enrollment in developmental education
  - Large gaps in achievement and degree completion

- **Midwestern Higher Education Compact 2014**

  - Disparities in remedial enrollment in college developmental courses by ethnicity and income mirror K-12 achievement gaps
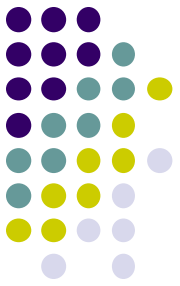
Literature Review (cont.)

- **Kitz & Nash, 1992**

 When teaching struggling adult learners, focus on:

  - phonological awareness (understanding that spoken words are composed of units i.e., syllables and phonemes---the smallest sound units within words—that can be manipulated

  - orthorgraphic understandings (alphabetic principle, spelling patterns, and meaning patterns/roots):

Kitz & Nash, cont.

Improvement in:
- Spelling
- Writing
- Reading rate
- Reading comprehension
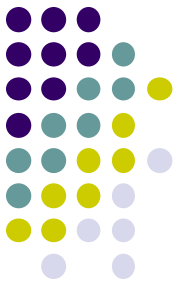
Research Design

- Single subject design

- Nine college freshmen placed in first-level academic developmental reading course

- Mid-western United States

Instruments

Pre and Post Tests:

- Auditory Analysis Test-Revised
- WRAT 4 Spelling
- Nelson Denny Vocabulary Test
- Nelson Denny Comprehension Test
- Content Vocabulary Test (instructor created)

Procedures

- Pre-tests
- Intervention (Slash & Dash): 8 weeks
  - *Two 45-minute sessions per week*
  - ***Four-step process:***
    1. Segment words by syllables
    2. Use a phonetic alphabet (i.t.a.) to transcribe spoken words to phonetic equivalents
    3. Find the written word in electronic spell checkers (iPads or online dictionaries)
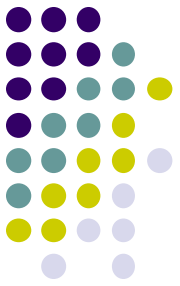   4. Access the meaning of words
- Post-tests
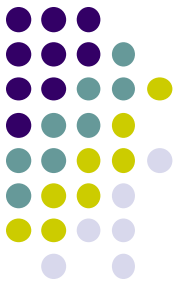
Validity

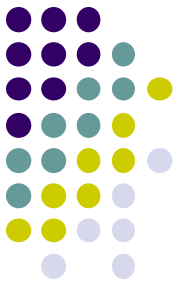- **Testing: Pre and Post tests**

Reliability

- **Norm referenced assessments**
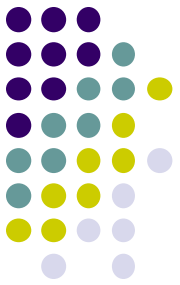
Statistical Techniques

- Summarize data by using:
  - T-tests

- Limitations:
  - No control group
  - Need to replicate study with control groups in several semesters

Results

- **Table 1   Results of the paired-sample t-test (n-7) for the Auditory Analysis Test-Revised (AAT)**

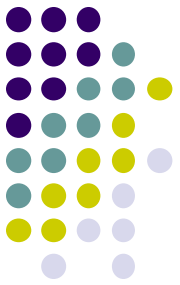|	Mean	Std. Deviation	Significance
AAT1 (pretest)	27.6	6.6	
AAT2 (post-test)	31.1	5.7	.054

Results

Table 2   Results of the paired-sample t-test (n=9) for Good Phonetic Equivalents (GFE) of misspellings on the WRAT spelling test.

	Mean	Std. Deviation	Significance
GFE1 (pre-test)	4.1	2.4	.001
GFE2(post-test)	5.8	2.9	

Results

Paired-Sample t-Test: Nelson-Denny Comprehension (n=8)

	Mean	s.d.	p. value
ND Comp Pre	32.8	21.5	.40
ND Comp Post	39.3	23.1	
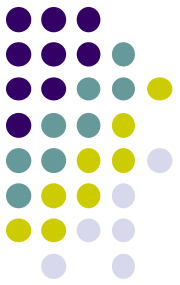
Results

- **Paired-Sample t-Test: Nelson-Denny Vocabulary (n=8)**

	Mean	s.d.	p. value
ND Vocab Pre	**25.8**	**14.7**	**.005**
ND Vocab Post	**37.8**	**14.9**	
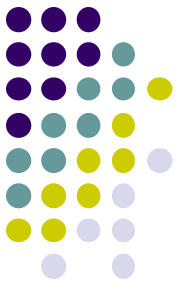
Results

- **Paired-Sample t-Test: Content Vocabulary Test (n = 9)**

|	Mean	s.d.	p. value
Content Vocab Pre test	12.0	3.1	.25
Content Vocab Post test	11.4	2.3	

Discussion

- Slash and Dash method increases phonological knowledge

- Study supports the findings that a focus on spelling by sound should be considered as an integral part of the curriculum for first-level academic developmental reading courses required by community colleges

- Further study is needed to explore the impact of spelling by meaning

- Results of this study need to presented through staff development to academic development departments in community colleges

Summary
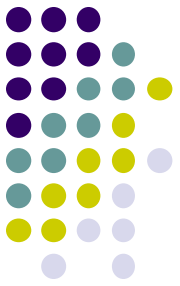
- This study is a call to action for changes in academic development curriculum, instruction, and assessment

- Spelling by sound and spelling by meaning should be included in daily instruction for appropriate courses

- This study shows promise in closing persisting achievement gaps for students of color, EL students, and economically disadvantaged students

References
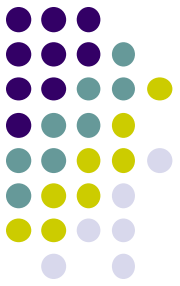
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