


A Tutorial for Spelling Assessment

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Financial
I receive a salary from Central Michigan University.

Nonfinancial
I am a founding member of the Structured Word Inquiry Research Vanguard (SWIRV), a group of researchers interested in SWI as an innovative approach to literacy instruction and intervention.

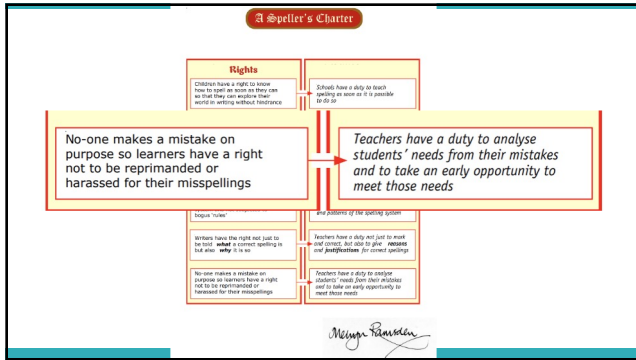


Disclosures

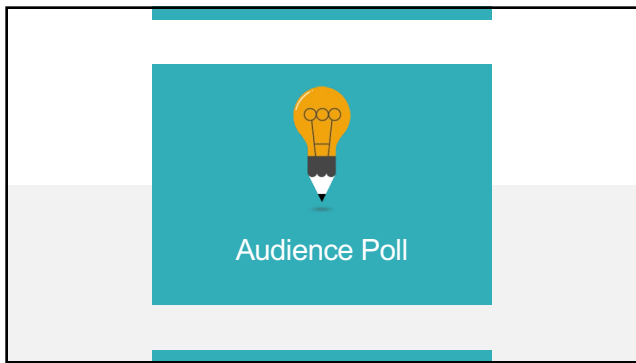
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| Learning Outcomes | Agenda |
|---|--|
| <p>01 Analyze a student's spelling</p> <p>02 Classify the types of errors made</p> <p>03 Formulate goals to remediate errors</p> | <p>01 Discuss linguistic underpinnings of spelling</p> <p>02 Practice identifying spelling errors</p> <p>03 Write goals that target linguistic concerns</p> |

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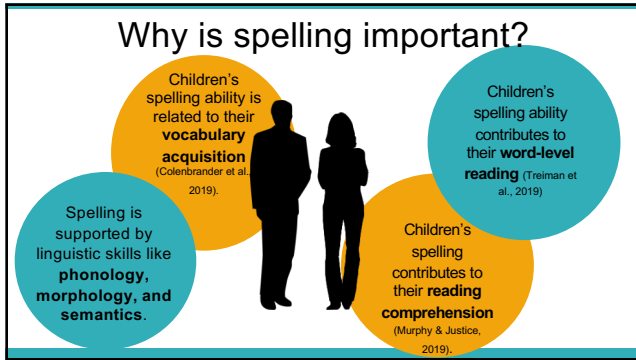
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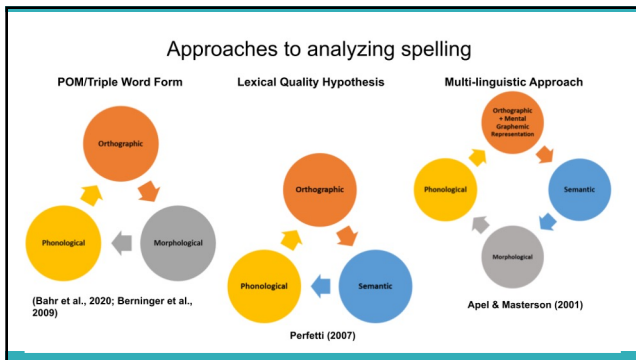
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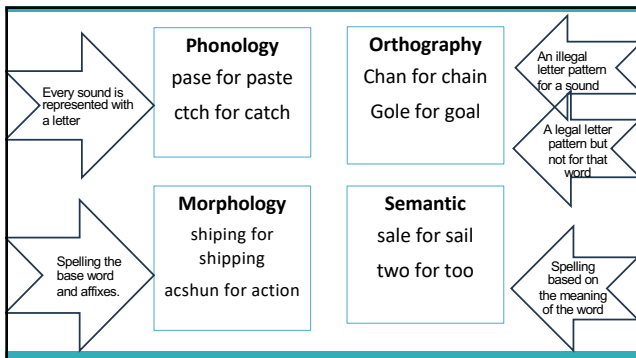
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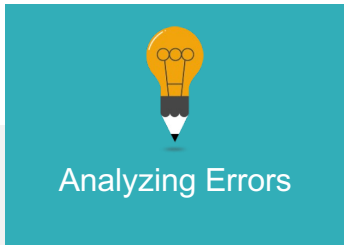
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Why should SLPs care about spelling?

- McCarthy et al. (2012)
 - o Total spelling errors
 - DLD + DYS = DYS > DLD = TL
 - o Phonological errors
 - DLD + DYS = DYS > DLD = TL
 - o **Orthographic errors**
 - DLD + DYS = DYS > DLD > TL
 - o Mental graphemic representation errors
 - DLD + DYS = DYS < DLD = TL
 - o Semantic errors
 - DLD + DYS = DYS > DLD = TL

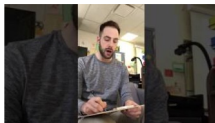
Children with developmental language disorder (DLD) and/or dyslexia do not spell as well as their typically developing peers
(Broc et al., 2021).

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Teacher gives a spelling test



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Sam's Spelling

| | |
|------------|-----------------|
| - /elf | - /pays |
| - /nick | - /tearful |
| - /lung | - /cylinder |
| - /march | - /Schiff |
| - /son | - /English |
| - /honey | - /sum |
| - /press | - /disciplinary |
| - /bridge | - /layer |
| - /sound | - /kitchen |
| - /bottle | - /saw |
| - /bake | - /carbon |
| - /Coem | - /carbon |
| - /post | - /net |
| - /city | - /Mammal |
| - /slip | - /cylinder |
| - /bushes | |
| - /sawed | |
| - /baked | |
| - /stepped | |
| - /switch | |
| - /bottle | |
| - /stayed | |
| - /baking | |
| - /stayed | |
| - /staying | |

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Chris's Spelling

| | |
|------------|---------------|
| - /car | - /poison |
| - /tearful | - /tearful |
| - /nick | - /continue |
| - /lung | - /sawed |
| - /bottle | - /milk |
| - /honey | - /sawed |
| - /press | - /discipline |
| - /bridge | - /layer |
| - /sound | - /carbon |
| - /bottle | - /carbon |
| - /bake | - /carbon |
| - /Coem | - /carbon |
| - /post | - /carbon |
| - /city | - /carbon |
| - /slip | - /carbon |
| - /bushes | - /carbon |
| - /sawed | - /carbon |
| - /baked | - /carbon |
| - /stepped | - /carbon |
| - /switch | - /carbon |
| - /bottle | - /carbon |
| - /stayed | - /carbon |
| - /baking | - /carbon |
| - /stayed | - /carbon |
| - /staying | - /carbon |

Total Raw Score: 22

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Sam's Phonemic Errors

And, Chris did not exhibit any phonemic errors.

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bole
Coem
pos
cot

lover
extinction
spier
file

ere
ton
stered
Prisner

poash
reapale
contenu
skellien
mugishin

42.5% of words

Most are legal letter patterns - just incorrectly applied

Sam's Errors

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sturd

poizon

skellien
mugishin
discrision
lover

sciler
bala
come
plase
cott

22.5% of words

Mostly legal letter patterns incorrectly applied

Graphic

17

cigs
stapet
baddp
discrision
extinction
eruptin
community

biting
rifer
shping
reapale
mugishin
locashon

Most errors are in identifying bases and knowing how to attach suffixes to bases

32.5% of words

Sam's Morphological Errors

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Chris's Morphological Errors

Most errors are in identifying bases and knowing how to attach suffixes

25% of words

Handwritten words with boxes highlighting errors: clys, stoced, babys, Sturd, Shupis, Discib shon, urupshin, mijishin, extentin, arguement.

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It's important to know how to build the words!

Handwritten words: mijishin, urupshin, discib shon, extentin.

- magic + ian → magician
- erupt + ion → eruption
- de + script + ion → description
- de + scribe → describe
- ex + tense/ + ion → extension
- ex + tend → extend

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Semantic Errors

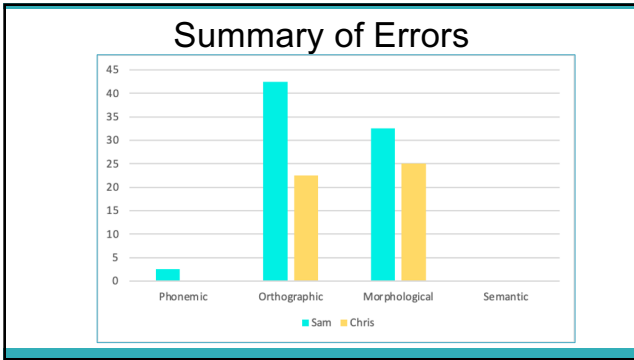
Neither Sam or Chris exhibited any semantic confusions.

0% of words

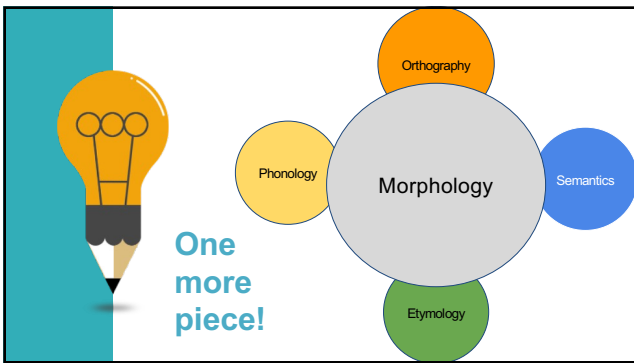
Word selection to assessment matters – make sure you include homophones.

Pause/Paws
Toon/Tune

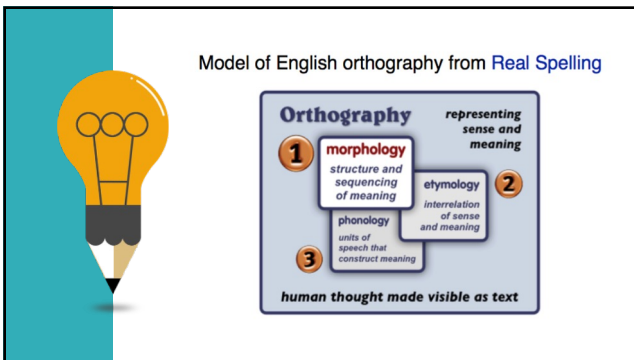
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etymology is the key that unlocks both knowledge and a love of language

Why Etymology Matters

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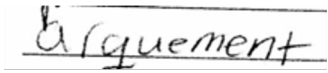
What etymology matters for analyzing spelling
When we study etymology, we learn...

| | | | |
|---|--|--|--|
| How to explain a particular graphemic representation of a sound | <i>/f/</i> is represented by <ph> in words of Greek origin | How connected words are | valor, evaluation, convalescence are related through Latin <i>valere</i> |
| How to make cross-curricular connections | <equ> in equator, equilateral, equitable | How English is part of a shared family of languages. | How a meaning of word can change over time. |
| | | Latin <i>con-</i> and Spanish <i>con-</i> are in English words | awful; nice |


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The base of "argument" is <argu> and the <e> is only there to prevent the word from ending in <u> because there is an orthographic convention in English that words cannot end in <u>.

Argu + ment

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The <gh> in <flight> comes to us from Middle English scribes.

flite

The used to be pronounced. We see the link in words like <crumb> <crumble> and <thumb> <thimble>

Coem

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(Info from Etymonline.com)

caught >

past tense and past participle of **catch** (v.), attested from 14c., predominant after c. 1800, replacing earlier *catched*. A rare instance of an English strong verb with a French origin. This might have been by influence of Middle English *lacchen* (see **latch** (v.)), which also then meant "to catch" and was more or less a synonym of *catch* (as their noun forms remain), and which then had past tense forms *lahte, lauhite, laught*. The influence would have happened before *latch* switched to its modern weak conjugation.

cot

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Error analysis leads us to better intervention

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How to intervene

Structured Word Inquiry
(Bowers & Kirby, 2010)

Allows interventionists to

- ❖ Teach in an integrated fashion
- ❖ Look at language as a whole
- ❖ Work with students who exhibit different types of errors

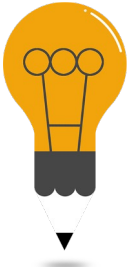
Consider the linguistic underpinnings of spelling

Consider how the components of language are integrated

Consider diverse profiles of student needs

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How important is integration?



Bahr, Silliman, & Berninger (2020)

Investigated student's misspellings and found that **accurate spelling develops through an increased understanding** not just of orthography, but of the interrelationship between grapheme/phoneme correspondences and morphology

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What impact does integration have?




Devonshire et. al. (2013)

Found that when students were provided a **six-week** intervention that enabled them to **investigate the morphology and etymology** of words as they relate to grapheme-phoneme correspondences in a meaningful context, students were **outperforming** their peers who were in the control group on...

- measures of morphologically complex words,
- a standardized reading test, and
- a standardized spelling test

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More evidence of impact of integration

Murphy & Diehm (2020)

Found positive results on reading and spelling after a **six-week intervention** which taught students how **morphology** is interrelated with **phonology** and **etymology** in English orthography


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Debunking Myths about Spelling



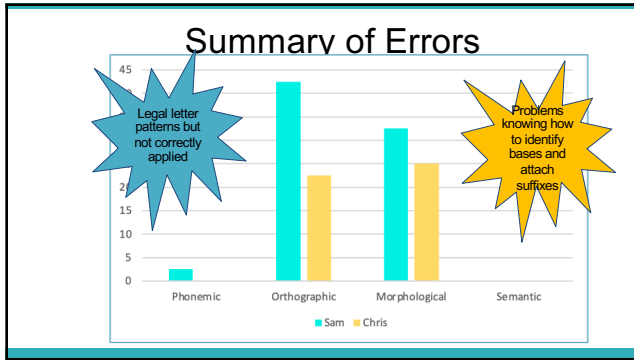
| | |
|--|--|
| <p>English spelling is a letter-to-sound system</p> | <p>A word's spelling is determined by grapheme/phoneme correspondences within the context of morphology and etymology.</p> |
| <p>Spelling is about writing what you hear</p> | <p>Morphology and phonology share leading roles and orthography favors consistent spelling of morphemes over consistency in phonemes.</p> |
| <p>English spellings don't make sense.</p> | <p>Spellings preserve the history of the word. The etymology can explain most "irregularities."</p> |

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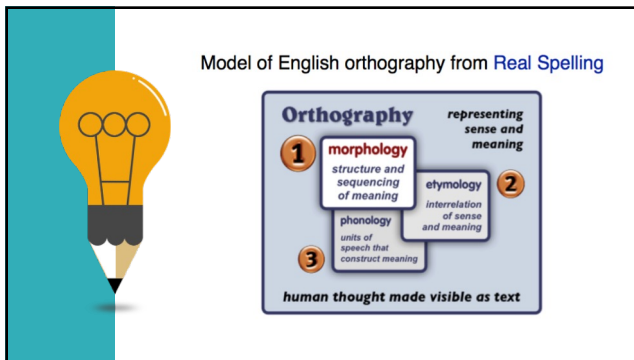


Writing Goals

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Sample Goals

To improve spelling of single morpheme words, the student will:

- identify any uncommon graphemes and investigate the reason for those graphemes (e.g., <gh> <mb> <ph>)
- choose the correct grapheme/phoneme correspondences (e.g., etymological marker, language influence)

To improve spelling multi-morphemic words, the student will

- identify the bases and affixes present in a word and apply suffixing conventions (e.g., extension, cries, shipping) (e.g., ex + tense/ + ion, cry/i + es, ship(p) + ing)
- Before a vowel suffix, drop the final <e>; toggle the <y> to <i>; double the final consonant in a CVC word

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Thank you

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