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Multilingual education/literacy

## Bilingual education in U.S.

- Early bilingual education programs focused on German-English (Ohio in 1839, St Louis in 1870s)
- by 1917 German in schools is discontinued backlash against German and other languages
- 1960s - bilingual Spanish-English schools established in Miami for Cubans
- 1968 - federal Bilingual Act provides federal funding for native-language instruction


## Proposition 227

- 1998 labeled the 'English for the Children' initiative or the Unz initiative, after Ron Unz, the entrepreneur who sponsored it
- Supported by One Nation, US English, English Only
- Passed 61/39\% and effectively ended 30 years of bilingual education programs in California (Arizona passed a similar law in 2000)



## Sound-meaning correlation

- Words in language involve an arbitrary match between sound and meaning
- Orthography or spelling is sometimes one-to-one: nag blond pat tap apt
- But in many writing systems (like English), symbols do not match well with actual sound: cough, comb, phlegm, seek, seal, piece, knife,


## Phonological awareness

- Must have tacit command of phonology of language -> knowledge of how sounds are pronounced in different contexts, even if written the same way
- beauty, tree, toad, beet, atone, button
- cops, pits, blocks, ribs, pads, frogs, bulls, pins

Spanish:

- caldo [d], conde [d], dia [d], crudo [б]
- saco [s], ese [s], dos [s], mismo [z], rasgo [z]


## Phonological awareness

- Ability to access and manipulate sounds in words
- Syllables, division of syllables into onsets and rimes, basic phonemes
- Onset: consonants that begin syllable: plank
- Rime: vowel + consonants that end syllable: plank
- $\rightarrow$ important skill for reading


## Other factors in reading

- Phonological memory - short-term memory for sounds
- Rapid automatized naming capability speed of retrieval and production of words
- Oral vocabulary knowledge


## Implications for education

- Sound-symbol connection means that oral competency is required in order to master reading
■ Early literacy should ideally be in first language
- Oral competence in second language is needed before literacy skills taught

Some criticisms of positive interdependence

- Profile effects - bilingual learners perform better on some tasks but worse than others compared to monolinguals
- Cummins has argued that positive interdependence is strongest for academic tasks, as they involve context reduction and high cognitive involvement
$\square$ But academic settings use extensive contextembedding and high cognitive involvement is found outside school


## Shared elements

- When languages are similar, does that help learning?
- Concrete structural elements $\rightarrow$ phonology
- Similar writing systems $\rightarrow$ yes, but do not help as much as shared structure


## Studies show...

- Turkish/Dutch in Netherlands
$\square$ Bilinguals show lower vocabulary scores, but good decoding skills
- Spanish/English in Miami
$\square$ Bilinguals showed low oral vocabulary and lower reading comprehension than monolinguals; good decoding
- $\rightarrow$ consistent across immersion contexts, and high socio-
economic groups also fared worse than monolinguals



## Decoding

- Why are decoding skills good in these groups of bilinguals?
- Share an alphabet
- Graphemic-phonemic mappings (sound-writing symbol) are finite
- Many phonological elements and graphemic elements are common across languages

Transfer - alphabet vs. non-alphabet

- Spanish-English bilinguals between $K$ and $2^{\text {nd }}$ grade outperformed English monolinguals on phoneme segmentation but Chinese-English bilinguals do not (Bialystok et al 2003)
- $\rightarrow$ sharing of alphabetical system helps
- but, languages are similar structurally, so isn't that a confound?


## Transfer - alphabet vs. non-

 alphabet- Holm \& Dodd (1996) tested mainland Chinese students exposed to pinyin (Chinese alphabetic writing system) versus Hong Kong students learning traditional Chinese logographic system
- Pinyin learners better at segmenting English words and naming nonwords
- Chinese ESL students who perform well on real words perform worse than English students on spelling nonsense words (Wang \& Geva 2003)

Transfer - different alphabetical writing?

- Urdu and Persian use Arabic writing, which has right-toleft directionality
- Bilinguals were strong readers if words followed regular sound-grapheme relations
- Low Urdu/High English competency correlated with better reading skills for irregular sound-grapheme relations
- $\rightarrow$ transfer effects stronger if shared alphabetic writing
- $\rightarrow$ bilinguals' performance best on regular soundgrapheme relations

- In general, literacy skills should be taught in the native language
- Transfer effects will occur if shared alphabetical system, and to a more limited extent with non-shared alphabets
- Oral competency is required prior to literacy for both first language, and is preferred for second language

