learning to read

- first base: automatic word recognition (grades 1-4):
  - under 50-70 WPM: cannot comprehend easy texts

- Q: What factors matter?
  - verbal memory (e.g., sentences): $r = .5$
  - SES: $r = .5$ to $.6$

- Q: What pre-reading skills matter?
  - [Think about: How do these interact with SES?]
  - letter knowledge/ID: $r = .5$ w/ reading @ end 1st grade
  - phonemic awareness: $r = .4$
  - print concepts*: $r = .5$
great debate over pre-reading: whole language vs. phonics

- 2006: Googled 35,000+ hits!
- what is fundamental?
  - phonics: decoding orthography; alphabetic sound-letter associations; rules for pronunciation
  - whole language: word meaning; text comprehension; literacy activities; integrating meaningful reading activities into curriculum
- stereotypical classroom activities:
  - drilling sounds & repetitive training vs. reading books
whole language vs. phonics: research

• Phonics training helps later reading:
  • letter knowledge predicts 1st grade reading ($r = .5$)
  • BUT many studies show no special improvement
    • except better phonics skills, and
    • only in 1st grade (one study: worse 5th grd comprehension!)
  • many rules are wrong! (ex: 2 vowels walking; 1st talking)
• WL: exposure to books predicts early reading
  • more reading & phoneme awareness in 1st grade
• Comparing: slight 1st-grd advan in phonics
  • much research badly confounded
best of both worlds?

- phonics:
  - word decomposition helps 1st-2nd grade word decoding & recognition
  - only as much time as needed
  - NOT drilling and rules
  - focused games w/ feedback and adjustment to child’s level of letter-knowledge and orthographic mappings

- whole language:
  - importance of vocabulary: learned from context
  - motivation to read (free choice of appropriate texts)
  - remember end goal is COMPREHENSION, not scores!
So why did phonics “win,” until 2000?

- CA NAEP scores ‘92-’94: very low
- looking for blame:
  - adoption of literature-based basal curricula (‘80s)
  - 1987-’97: from 650,000 to 1.4 million LEP students
- 1980s: severe budget cuts; 1990s fallout:
  - ‘94 teachers: 39% Ed majors (vs. 69% nationwide); 29% advanced degrees (vs. 41%)
  - ‘96 Ed spending: 17% lower per capita than Nat’l ave; $750 less per pupil
- 93% of classes larger than 25 (vs. 41% nationally)
The Phonics Tag-Team

- catalyst: Grossen’s report “30 Years of NICHD funded research” (inaccurate; financially motivated)
- NICHD publicized 1 study (not published or peer-reviewed; not finished by ‘95–’96 media blitz
- republican & right-Christian lobbies pushed phonics
  - Why? According to fundamentalist Christians: “God [made] an orderly universe”: focus on rules; obedience to authority
    - traditional basal readers: religious content
    - whole language emphasizes analysis, comprehension, choice of reading…antithesis of fundamentalism
- part of education platform for GHWB & GWB
Best practices for reading disabilities: Steering education towards sensible practices

• defining reading disabilities: Goswami’s questionable assumptions:

• IQ and LD: define by IQ-difference, or by poor reading progress relative to quality of instruction? (Fletcher)

• dyslexia is label for extreme of continuum of reading ability relative to grade/instruction (Fletcher)

• magnocellular; cerebellar?

• what other brain regions?
brain areas in reading...

- inferior medial frontal, tempo-parietal, ventral-posterior temporal
- early risk: letter-sound, phonolog. awareness, lang. production abilities
- intense multi-month program: standard scores rose from ~10th% to ~50th%
- activation changes in same cortical areas
- typical SpEd programs: no change
- need intense massed practice, adjusts to child’s growing abilities
- multi-tiered