Reading First Teachers’ Use of Instructional Time and Its Relation to Reading Achievement

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Overview

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2. Literature Review
3. Method
4. Results
5. Conclusions
6. Future Research
Research Questions

- How do teachers spend language arts instructional time in K-3 Reading First?
- Does this instructional time relate to student achievement?
- Are there differences in the way teachers spend instructional time in high and low scoring classrooms on criterion-referenced tests?
Literature Review

- Three Bodies of Research
  - Teacher Effectiveness Research
    - Process-product research (Flanders, 1970; Good and Grouws 1977; Rosenshine, 1971).
  - Reading Research
    - National Reading Panel-meta-analysis
    - Suggestions for future research included the need to actually observe classroom instruction and examine instructional time in different areas of reading instruction.

- Research on Instructional Time
  - Early theories on academic learning (Carroll, 1963) and an increase in the quality of instruction (Bloom, 1974) will help students learn best. Fisher and Berliner’s work (1985) expanded these theories.
Method

Participants

- **K-3 Teachers, 129**
  - 123 female, 6 male
  - 90.7% White, 5.4% Hispanic, 3.1% American Indian

- **K-3 Students, 5395**
  - 48.3% female, 50.9% male, .8% not reported
  - 43.2% White, 3.4% African American, 41.6% Hispanic, 1.4% Asian, 6.4% American Indian, 4.0% Pacific Islander
Method

Observational Instrument

- Instructional Content Emphasis- Revised (ICE-R2)
  - Adapted from Edmonds and Briggs (2003)

- Development of the ICE-R2
  - Team of 6-8 researchers--expertise in reading, teaching, primary-grade instruction.
  - Iterative process of developing instrument, pilot testing in classrooms, revising, pilot testing again, revising, etc.
  - Nine-month process to complete the instrument.
11 Dimensions and Subcategories within Those Dimensions:

- Concepts of Print (1 subcategory)
- Phonological Awareness (7 subcategories)
- Alphabetic Knowledge (2 subcategories)
- Word Study/Phonics (4 subcategories)
- Spelling (1 subcategory)
- Oral Language Development (2 subcategories)
- Fluency (3 subcategories)
- Text Reading (7 subcategories)
- Comprehension (6 subcategories)
- Writing (7 subcategories)
- Other Instruction (0 subcategories)
- **Example of subcategories include:**
  - **Comprehension**
    - Vocabulary instruction
    - Building/activating prior knowledge
    - Teaching the meaning of text
    - Teaching listening comprehension
    - Teaching comprehension strategies
    - Other
  - **Descriptors for each subcategory were also provided on the observation instrument.**
For Questions 2 and 3,

Utah State Language Arts Criterion-Referenced Test

Skills measured: oral language, vocabulary, phonics and spelling, comprehension, and writing.

1st Grade: two additional standards--concepts of print and phonological and phonemic awareness.

CRT tests used at grades 1, 2 and 3 for this study.
Procedure

- Observations conducted during a six-week period in Spring.
- Stratified random sample of one-half of the regular classroom teachers.
- Sample included teachers at each grade level and from each of the 18 schools in the Reading First project.
- Observations were 180-minute time block--reading and language arts.
Descriptive Results

- How do teachers use their instructional time in reading/language arts?
- Series of pie charts according to grade level.
- Individual five components of reading are further broken down into subcategories.
Kindergarten

- Concepts of Print (0.6%)
- Phonological Awareness (8.4%)
- Alphabetic Knowledge (2.5%)
- Word Study/Phonics (30.3%)
- Spelling (0.6%)
- Oral Language Development (1.8%)
- Fluency (3.0%)
- Text Reading (12.1%)
- Comprehension (23.0%)
- Writing (17.7%)
First Grade

- Concepts of Print (0.2%)
- Phonological Awareness (2.6%)
- Alphabetic Knowledge (1.1%)
- Word Study/Phonics (22.8%)
- Spelling (5.9%)
- Oral Language Development (0.2%)
- Fluency (8.6%)
- Text Reading (16.7%)
- Comprehension (23.0%)
- Writing (19.0%)
Grade 3

Third Grade

- Concepts of Print (0.1%)
- Phonological Awareness (0.2%)
- Alphabetic Knowledge (0.7%)
- Word Study/Phonics (12.3%)
- Spelling (7.2%)
- Oral Language Development (0.0%)
- Fluency (8.2%)
- Text Reading (16.3%)
- Comprehension (35.5%)
- Writing (19.4%)
Phonological Awareness
Kindergarten

Phonological Awareness - Kindergarten

- Rhyming and alliteration (10.4%)
- Comparison tasks/oddity tasks (37.2%)
- Oral segmenting of sentences (0.0%)
- Oral blending or segmenting of syllables (4.6%)
- Oral blending or segmenting of onset/rime (13.0%)
- Oral blending or segmenting of individual phonemes (26.1%)
- Phonemic manipulation (8.6%)
Phonological Awareness
Grade 1

Phonological Awareness - First Grade

- Rhyming and alliteration (7.6%)
- Comparison tasks/oddity tasks (23.6%)
- Oral segmenting of sentences (0.0%)
- Oral blending or segmenting of syllables (9.1%)
- Oral blending or segmenting of onset/rime (0.0%)
- Oral blending or segmenting of individual phonemes (41.5%)

Phonemic manipulation (18.2%)
Phonics
Grade 1

Word Study/Phonics - First Grade

- Letter/Sound at letter level through oral recitation and/or manipulatives (59.0%)
- Letter/Sound relationships at onset/rime level through reading, spelling, and manipulatives (9.2%)
- Irregular words (22.1%)
- Word study through writing activities (9.7%)
Phonics
Grade 3

Word Study/Phonics - Third Grade

- Letter/Sound at letter level through oral recitation and/or manipulatives (42.5%)
- Letter/Sound relationships at onset/rime level through reading, spelling, and manipulatives (23.2%)
- Irregular words (13.5%)
- Word study through writing activities (20.8%)
Fluency
Grade 2

Fluency - Second Grade

- Letter or Sound (0.2%)
- Word or Phrase (29.7%)
- Sentence or Text (70.1%)
Fluency
Grade 3

Fluency - Third Grade

- Sentence or Text: 78.7%
- Word or Phrase: 21.3%
- Letter or Sound: 0.0%
Comprehension
Grade 1

Comprehension - First Grade

- Vocabulary (18.3%)
- Prior Knowledge (before reading) (14.2%)
- Reading comprehension (during or after reading) (49.7%)
- Listening Comprehension (13.3%)
- Comprehension strategy instruction/use (4.5%)
- Other (0.0%)
Comprehension
Grade 3

Comprehension - Third Grade

- Vocabulary (21.4%)
- Prior Knowledge (before reading) (9.0%)
- Reading comprehension (during or after reading) (52.5%)
- Listening Comprehension (2.7%)
- Comprehension strategy instruction/use (13.6%)
- Other (0.8%)
Non-Instructional Time

- Interested in how teachers spent time when not instructing.
- Non-instructional event summaries examined—category possibilities recorded as they emerged.
  - The process continued as summaries examined and re-examined.
  - Analysis resulted in 12 sub-dimensions of non-instructional time.
  - Percentage of time in each dimension calculated.
Non-instructional Time

- Preparation or Clean-Up for Activities: 30.6%
- Transition Between Activities: 19.6%
- Assessment or Testing: 12.9%
- School-Wide Business: 9.9%
- Teacher Monitoring/Conferencing: 6.7%
- Physical or Personal Needs: 5.0%
- Handing-In/Passing-Back Papers: 3.5%
- Discipline/Behavior: 3.4%
- Non-instructional Games, Movies, Coloring: 2.8%
- Peer Instruction: 2.2%
- Other: 1.9%
- No Clear Indication: 1.5%

Non-instructional Time Percentages:

- Preparation or Clean-Up for Activities: 30.6%
- Transition Between Activities: 19.6%
- Assessment or Testing: 12.9%
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- Other: 1.9%
- No Clear Indication: 1.5%
Correlational Results

- Does instructional time in reading/language arts relate to student achievement?
## Correlations-CRTs and Instructional Time

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*p < .05. **p < .01.*
Correlational Results

- Are there differences in the way teachers spend instructional time in high and low scoring classrooms on CRTs?
## Differences in Instructional Time—High vs. Low Scoring Classrooms

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*p < .05. **p < .01.
Conclusions

1) Descriptive data indicate that teachers are paying attention to and spending most of their instructional time on phonics/word study, comprehension (including vocabulary) and writing, with text reading being close to these.

The amount of time spent on each differs according to grade level, with more time being spent on comprehension and writing as students progress from K through third-grade and less time spent on phonics/word study.
Conclusions

2). Descriptive data provide more information about just what teachers do when they are teaching the big five.

Phonemic Awareness

K teachers spend most of their instructional time (1/3) time teaching comparison/oddity tasks (e.g. which beginning sound is different—sun, bat, Sam).

Gr. 1 teachers spend over 40% time teaching segmenting and blending individual phonemes.
Conclusions

Phonics

First-grade teachers spend almost 60% of their time teaching students to manipulate words at the phoneme level.

Third-grade teachers spend 42% of their time teaching students to manipulate words at the phoneme level, and 23% manipulating words at the onset-rime level.
Conclusions

- Fluency
  - Second-grade and third-grade teachers spent the majority of their time teaching fluency at the passage level.
Conclusions

- **Comprehension**
  - At grade 1, half of the instructional time is spent on during and after reading activities, almost 20% of time spent on vocabulary, very little time spent on strategy instruction.
  - At grade 3, about same amount of time spent on during and after reading activities, 22% on vocabulary, about a bit more time (14%) on strategy instruction.
Conclusions

- How do teachers’ instructional time relate to student achievement?
  - Text Reading (+ correlation)-modeling and guided *practice* in fluency
  - Writing (+ correlation)
  - Spelling (- correlation)
    - Spelling was coded as traditional memorization activities like copying words 5 times.
      - Focus on memorization may result in negative correlation
Conclusion

Are there differences in the way teachers spend instructional time in high and low scoring classrooms on CRTs?

Answer: For the most part, no.
Further Analyses

It may be that certain dimensions and subcategories of the ICE-R2 could differentiate high from low achieving classrooms.

e.g. Is more time spent on analyzing words at the phoneme level associated with higher student achievement? but this is likely to relate to quality as well.
Future Research

- Examine how Reading First teachers compare to other Title I teachers or teachers without professional development in reading.

- What is the role of teacher knowledge and expertise in teachers’ use of instructional time?

- How is *instructional quality* (instead of instructional time) in teaching the five dimensions related to CRT achievement?