Knowledge and Skills for Teaching Reading

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The knowledge and skills base required for teaching reading well is extensive. This outline of a proposed curriculum for teacher education programs in reading covers knowledge of reading development, language structure, and strategies for instruction and assessment.

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The following is the proposed core curriculum for teacher candidates presented in *Teaching Reading is Rocket Science: What Expert Teachers of Reading Should Know and Be Able to Do*, published by the American Federation of Teachers. This curriculum can also serve as a roadmap for practicing teachers' professional development experiences.

The curriculum is divided into four parts.

1. The psychology of reading and reading development
2. Knowledge of language structure and its application
3. Practical skills of instruction in a comprehensive reading program
4. Assessment of classroom reading and writing skills

Part I. The psychology of reading and reading development

1. **Cognitive characteristics of proficient reading**
   1. Language proficiencies of good readers
   2. Eye movements and text scanning
   3. Active construction of meaning
   4. Flexibility and self-monitoring
2. **Cognitive characteristics of poor reading**
   1. Variable language difficulties of poor readers
   2. Phonological processing, reading speed, and comprehension – their manifestations and interrelationships
   3. Non-linguistic factors in reading difficulty
   4. Alternative hypotheses about reading difficulty, supported and unsupported
3. **Environmental and physiological factors in reading development**
   1. Socioeconomic and environmental factors in reading
   2. Neurological studies of good and poor reading
   3. Familial factors in dyslexia
4. **The development of reading, writing, and spelling**
   1. Emergent literacy
   2. Early alphabetic reading and writing
   3. Later alphabetic reading and writing
   4. Orthographic knowledge at the within-word level
   5. Orthographic knowledge at the syllable juncture level
   6. Orthographic knowledge at the morphemic, derivational level
   7. The role of fluency in reading development
   8. The relationships between phonology, decoding, fluency, and comprehension

Part II. Knowledge of language structure and its application

1. **Phonetics**
   1. Classes of consonant and vowel speech sounds (phonemes) and the inventory of the phonemes in English
   2. Similarities and differences among groups of phonemes, by place and manner of articulation
   3. Differences between the inventory of speech sounds (40-44) and the inventory of letters (26); how letters are used to represent speech sounds
   4. The basis for speech sound confusions that affect reading and spelling
2. **Phonology**
   1. Components of phonological processing (articulation, pronunciation, phoneme awareness, word memory, and word retrieval)
   2. Phoneme awareness
      1. Why it is difficult
      2. How it supports learning an alphabetic writing system
      3. How it develops
   3. Dialect and other language differences
3. **Morphology**
   1. Definition and identification of morphemes (the smallest units of meaning)
   2. Grammatical endings (inflections) and prefixes, suffixes, and roots (derivational morphemes)
   3. How English spelling represents morphemes
   4. The network of word relationships
4. **Orthography**
   1. Predictability and pattern in English spelling
   2. Historical roots and layers of orthographic representation
   3. Major spellings for each of the consonant and vowel phonemes of English
   4. Spelling conventions for syllable types
   5. Sequence of orthographic knowledge development
5. **Semantics**
   1. Depth, breadth, and specificity in knowledge of meaning
   2. Definition, connotation, denotation, semantic overlap
   3. Idiomatic and figurative language
   4. How new words are created
   5. Ways of knowing a word: antonyms, synonyms, analogies, associative linkages, classes, properties, and examples of concepts
6. **Syntax and text structure**
   1. Basic phrase structure
   2. Four types of sentences
   3. Sentence manipulations: expansion, rearrangement, paraphrase, negation, formation of interrogative and imperative
   4. Visual and diagrammatic ways to represent sentence structure
   5. Genres and their distinguishing features
   6. Reference and cohesive devices in text
   7. Graphic and three-dimensional representation of paragraph and text structure

Part III. Practical skills of instruction in a comprehensive reading program

1. **Consensus findings of research**
   1. Recognize and implement components of successful, valid early intervention programs
   2. Cite and support components of validated remedial and tutorial programs
   3. Refer to validated components of middle school reading programs in designing instruction
   4. Employ proven principles of teaching reading in the content areas
2. **Concepts of print, letter recognition, phoneme awareness**
   1. Select programs and lessons appropriate for students' instructional levels
   2. Give corrective feedback and design lessons based on students' needs, including their phonological and orthographic development
   3. Teach phonological and letter identification skills explicitly, sequentially, and systematically
   4. Link phonological skill development to reading, writing, and meaningful use of language
3. **Decoding, word attack**
   1. Use active, constructive approaches to teach word concepts
   2. Select programs and lessons appropriate for students' instructional levels
   3. Give corrective feedback and design lessons based on students' needs, including their phonological and orthographic development
   4. Teach decoding skills explicitly, sequentially, and systematically: sound-symbol association; sound-by-sound blending; reading onsets, rimes, syllables, morphemes; sight word recognition
   5. Select and use decodable text for reading practice in the early stages
   6. Link practice in word attack to reading, writing, and meaningful use of language
4. **Spelling**
   1. Match spelling instruction to students' developmental levels of word knowledge
   2. Follow a scope and sequence based on language organization and how students learn it
   3. Use multisensory techniques for sight word learning
   4. Teach active discovery of generalizations, rules, and patterns
   5. Practice spelling in writing and proofreading
5. **Fluency**
   1. Use repeated readings, alternate and choral reading, and self-timing strategies to provide practice
   2. Identify reading materials for students' independent reading levels
   3. Promote daily reading of varied text, in school and outside of school
6. **Vocabulary development**
   1. Teach words together that are related in structure and/or meaning
   2. Select and/or design word study for intermediate and high school students organized around common morphological roots and derived word forms
   3. Teach word meanings before, during, and after reading
   4. Use context clues, semantic mapping and comparison, analogies, synonyms, antonyms, visual imagery, and other associations to teach meaning
7. **Reading comprehension**
   1. Model "think aloud" strategies during reading
   2. Vary questions and ask open-ended questions that promote discussion
   3. Emphasize key strategies including questioning, predicting, summarizing, clarifying, and associating the unknown with what is known
   4. Use graphic or three-dimensional modeling of text structure
   5. Model and encourage flexible use of strategies, including self-monitoring
8. **Composition**
   1. Create a community of authors in the classroom
   2. Create frequent opportunities for writing meaningful assignments beyond journal writing
   3. Directly teach handwriting, spelling, punctuation and grammar in systematic increments to promote automatic transcription skills
   4. Directly teach composition strategies through modeling and shared authorship
   5. Guide children through the stages of the writing process; publish and display children's completed work

Part IV. Assessment of classroom reading and writing skills

1. Understand validity, reliability, and normative comparisons in test design and selection
2. Identify varied purposes and forms of assessment (e.g., group comparison, measurement of progress, program evaluation, informing classroom instruction, individual diagnostic assessment)
3. Interpret grade equivalents, percentile ranks, normal curve equivalents, and standard scores
4. Administer several kinds of valid instruments
   1. graded word lists for word recognition
   2. phoneme awareness and phonic word attack inventories
   3. a qualitative spelling inventory
   4. measures of fluency and accuracy of oral and silent reading
   5. a structured writing sample
   6. inventories of graded paragraphs for comprehension
5. Interpret student responses in comparison to benchmark cognitive and linguistic skills appropriate for age and grade
6. Use information for instructional planning and classroom grouping. Use several kinds of assessment to measure change over time

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