

Decoding Science of Teaching Reading (STR) Test to “Make It Impossible” to Get Questions Wrong

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Abstract

The authors’ institution exceeded the Texas Science of Teaching Reading (STR) exam’s passing rate of 86.6% for the 2021-2022 academic year. The authors think this success was largely due to conducting an analysis of test questions and helping preservice teachers better prepare for the exam. The authors helped preservice teachers supplement the literacy knowledge they needed for their classrooms with test-taking strategies. Six strategies are presented to analyze the STR exam questions. These help preservice teachers analyze the exam questions by decoding the more common scenario-based ones which we categorized as these question types: 1) A teacher wants to do something; 2) Teachers’ strategy/activity shows they understand something; 3) Students do this...what’s the next step; 4) Why this activity; 5) Tiered vocabulary; 6) What does the assessment tell? The final strategy describes a method for organizing the constructed response analysis.

Keywords: *Science of Teaching Reading (STR), TExES #293, test-taking strategies, preservice teachers (PST)*

It might seem that an Educator Preparation Program (EPP) faculty member’s job to prepare preservice teachers for the Science of Teaching Reading (STR) exam would conclude once literacy courses are complete. Information about literacy learning activities, phonics, phonemic awareness, and other reading concepts has been transmitted, tested, practiced, and applied (Duke & Cartwright, 2021). Now the preservice teachers (PSTs) must show they recall and understand the information by passing state teaching exams and becoming certified teachers. If we want our PSTs to succeed and move into their professional world, we want to ensure they can take this test with confidence. This requires

us to consider how to approach this unique test. This article is based on a session at the Texas Association of Literacy Educators (TALE) 2023 conference, where we presented testing strategies that have been successful at our institution. We shared what has worked for us as we adapt to the new exam and seek paths forward that help PSTs.

The STR exam began in January 2021, adding to the list of required exams for new teachers to pass to begin their teaching careers. This exam is “designed to assess whether an examinee has the requisite knowledge and skills that an entry-level educator in this field in Texas public schools must possess” (Texas Education Agency,

2020). Additionally, they must pass their Early Childhood-Grade 6 or English Language Arts and Reading (ELAR) Grades 4-8 and Pedagogy exams. The STR exam is required for five certification areas.

Test Preparation? Is That Our Job?

Over the last year, we reviewed questions and patterns that are included in the exam. We wanted to find a way to reduce stress and cognitive overload (Kim et al., 2022) that comes

from reading the many scenario-based questions that make up the bulk of the STR exam. Faculty can feel confident that PSTs know their literacy research and content and are prepared to be strong literacy educators. However, where confidence might not be as high is test-taking ability. We wanted to make sure our PSTs knew the literacy content and how to take this unique standardized test. We found several patterns in the question structure and answer choices that will be discussed in greater detail.

Table 1

Strategies for Decoding Science of Teaching Reading (STR) Exam

Decoding Exam Questions Strategies	Summary of STR Sample Test Domain and Questions	How to Choose the Correct Answer
1 A teacher wants to do something	Domain II Q5: Which instructional strategies would support a student’s phonological awareness skill development? (TEA, 2020)	Use each answer choice to ask if the strategy helps the teacher accomplish what they want to do.
2 Teachers’ strategy/activity shows they understand something	Domain II Q10: Which statement shows the teachers’ knowledge of engaging students with a text decoding activity? (TEA, 2020)	Ask if each answer choice is an accurate descriptor of the teacher’s strategy.
3 Students do this...What’s the next step	Domain II Q13: Which teaching strategy would promote students’ word reading skills to the next level of word reading development? (TEA, 2020)	Use each answer choice to ask if the strategy accomplishes the teacher’s activity goal.
4 Why this activity	Domain II Q29: What’s the purpose of having children clap the syllables in a word? (TEA, 2020)	Ask, “Does this activity help children?” then read each answer choice.
5 Tiered vocabulary	Domain II Q15: Which group of words is categorized as specific vocabulary Tier? (TEA, 2020)	Ask which answer choice has words that are different parts of speech from the other choices or, which words are domain-specific, general academic terms, or are common use words.

6	What does the assessment tell?	Domain II Q12: Which assessment strategy would address students' reading fluency difficulties that also affect comprehension? (TEA, 2020)	Read each answer choice asking, "Does [answer A, B, C, D] help address the student's assessed need?"
7	Decoding constructed response	Constructed-Response Question: Analyze the provided information, then identify students' reading skills and describe instructional strategies that would address students' needs.	Use instruction bullet points as separate paragraphs to write. Then use the content in the bullet points as a checklist.

Decoding Exam Questions Strategies

A Teacher Wants to Do Something

One of the most common scenario-based question types, *a teacher wants to do something*, tells an examinee a teacher from a particular grade level wants to prepare a lesson, conduct an assessment, or do an instructional activity that will help students learn a particular skill, such as identifying or isolating initial sounds. Additional information might be given, such as whether the students are English Language Learner (ELL) students or what skills they have previously mastered. The examinee's task is now to identify what lesson or activity answer choice will best meet the thing the teacher wants to do.

What happens next is important for the examinee. They need to have a consistent pattern for how they answer scenario-based questions. We have a format that simplifies how they can analyze the text of the scenario and choose correct answer choices. For each answer choice, ask: *Does answer choice A help the teacher introduce "isolating or identify initial sound[s]" for ELL students, or whatever else the scenario presents?* (TEA, 2020). The examinee should use the answer choices as sentence stems and then add the sentence that the teacher wants to do, then answer "maybe" or "no." For example: "Does selecting stimulus words for the lesson that have sounds common to both English and the ELLs' home language help 'isolate/or identify initial sound[s] in spoken words for ELL students?" (TEA, 2020). The examinee may answer maybe. Then the examinee would

continue with the other answer options. The examinee will see after all options are read that the first choice is the only "maybe" option and then select it as the correct answer as summarized in Table 1.

Teachers' Strategy/Activity Shows They Understand Something

The next strategy is *a teacher wants to do something* but is organized differently in the scenario. In the scenario provided in the TEA sample test (2020), a grade-level teacher demonstrates a skill related to reading or writing. It is important to take note of what the students do well, such as using decodable words as a tool to promote letter-sound correspondence in writing activities (Ecalte et al., 2021; Wang et al., 2019). The examinee will use that information to answer the questions. The final part of the question then asks how the scenario demonstrates that the teacher understands a literacy instruction concept. For example, in the question, the examinee would ask, "Does incorporating 'the content of a text' into an 'interactive writing lesson' develop the role of early print concepts when learning to write? No" (TEA, 2020). The examinee will ask and respond to the question for each answer choice.

Students Do This...What's the Next Step

A less frequent question type that fits in the format of matching answer choices to the scenarios previously described is called *students do this...what's the next step*. In this scenario, a student or group of students demonstrates that they can do a particular skill. The examinees ask

themselves what activity the teacher should do to help them to the next step in the continuum of reading skills. In the example from the sample questions (TEA, 2020), the students have progressed to the full-alphabetic phase of word reading development (Tanasy & Ali, 2019). The question is about how to develop “word reading or recognition, accuracy, and automaticity” (TEA, 2020). The examinee asks if having students practice the listed skills would promote “accuracy and automaticity” (TEA, 2020); if “maybe,” then the examinee would review the remainder of the answer choices as summarized in Table 1.

Why This Activity

This type of question asks what a teacher’s purpose is for doing a certain activity. Some examinees might use their language knowledge to answer this question instead of utilizing answer options that fit keywords in the scenario. Most of the teachers’ purposes for doing certain classroom activities are to meet the learning objectives of children. In that case, examinees should find an answer including keywords matching the children’s learning objectives. The example from the practice test (TEA, 2020) asks why a teacher uses circle time activities to teach the concept of learning syllables, so the keywords are “learning syllables” instead of “learning names.” The correct answer is C, using “phonological sensitivity” to match with “learning syllables,” rather than “recognize, write, or connect with names” (see Table 1).

Tiered Vocabulary

Some examinees may feel nervous if they do not remember the Tiered Vocabulary definitions. Tier One words are commonly used terms, Tier Two words are general academic terms, and Tier Three words are discipline-specific terms. For the exam, they must use those definitions to examine their answer choices. Examinees must identify which group of words is different from the other three choices. The correct answer is C in two ways. They are verbs as well as general academic words, also called Tier Two words.

The Tier One words in choice B are commonly used words. The Tier Three words in choice D and A are discipline-specific words (see Table 1).

What Does the Assessment Tell

Another frequent question type concerns assessment. Examinees may feel overwhelmed when they read long descriptions of scenarios. To alleviate this stress, they should reduce the long descriptions to key terms or sentences. The key sentence, for example, refers to the student’s fluency and comprehension difficulties. The examinee then reads as a question: “Does [choice A, B, C, D] address the key sentence?” This student’s reading behaviors are related to “oral reading fluency” skills, and this type of skill is mentioned in the C answer choice. The other answer choices do not address directly the students’ oral reading skill needs.

Decoding the Constructed Response

The constructed response question asks examinees to analyze provided information, identify students’ reading skills, and describe instructional strategies that address students’ needs. The instructions are a lengthy page of several bullet points. This amount of text and detail can sometimes be too much for some examinees to want to read carefully. We have developed a strategy to help examinees quickly see the important directions, take steps to stay organized, and correctly identify student needs in the scenario.

First, it is important to reduce the number of ideas that may be competing for attention in response. PSTs need to read the instructions and follow them carefully. This can be difficult when they look at the entire page of instructions and other information. Examinees may be tempted to skim over the bulleted instructions. In addition, the online version of the test requires moving back and forth from the writing section and the instructions and moving about visually from instruction bullet points. This can lead to

stress and decreased performance due to overload complexity through the inclusion of too much material to keep in mind (Kim et al, 2022). Having a method to organize the response before taking the test may relieve examinees' concerns, thus freeing time to think through the problem. Second, organize the response in paragraphs. Use each bullet point as a paragraph and only write about the information in each bullet at a time. Third, use the information in each bullet point as a guide for general terms to use. Then use the general terms as a launching point to elaborate on those concepts.

The simple organization of each paragraph by the bullet is to:

- 1) Identify a foundational reading skill, and cite evidence from the exhibits to support the identified issue.
- 2) Describe a strategy or activity to help with foundational reading skills.
- 3) Identify a reading comprehension skill, and cite evidence from the exhibits to support the identified issue.
- 4) Describe a strategy or activity to help the student with reading comprehension.
- 5) Explain why the strategies or activities are effective and how they are appropriate for that child's grade level TEKS.

Preservice teachers should practice this strategy. The instructor can analyze their responses and provide feedback so they have practiced the strategy and have been given help with any problems they might have. Doing this strategy once or twice has produced great changes in how PSTs write and feel about their responses (see Table 1).

Conclusion

These test-taking strategies allow examinees to use the knowledge they gained from their EPP. It helps PSTs understand how to take this

scenario-based exam systematically, reduce testing anxiety, and complete the exam more efficiently. These strategies also have the potential to help faculty members better understand the exam design. Decoding exam questions and creating test-taking strategies help faculty be an integral part of PSTs' success (Caravolas et al., 2019). These strategies allowed us to help our PSTs feel better prepared for their exams. We encourage everyone to develop their local testing strategies that help their students and then share them with others. Continuing to build strong literacy content knowledge in concert with testing strategies helps PSTs feel confident that they are prepared to pass their exams and more importantly, to be successful educators.

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