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ABSTRACT

So that comparisons of achievement test scores across campuses would be unaffected by variations in test preparation activities, the Austin Independent School District has set out to standardize all testwiseness instructions and practice testing across the school system. Appropriate preparation activity was defined as that which contributes to students' performance on the test near their true achievement levels, and which contributes more to their scores than would an equal amount of regular classroom instruction. The program concentrated on basic testwiseness skills, as advanced tactics often required more skill than the skill being measured by the test item. Research showed that test practice was beneficial if done once, near the time of the actual test. Skills taught to all students included: following directions, understanding item formats, understanding a test's terminology, symbols and procedures, using time wisely, checking answers, marking answers properly, knowing how to ask questions about the test, being physically ready to take the test, and thinking logically. The attached materials for preparing students (and teachers) for standardized tests include: Guidelines for Test Administrators, Packets for the Preparation of Students for Standardized Testing, All-Purpose Answer Sheet, and Explanation and Examples of Testwiseness Cues. (PN)

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Preparing Students for Standardized Testing: One District's Perspective

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In our school system with 80 schools, we found 80 approaches to preparing students for their annual standardized achievement test. So that comparisons of achievement test scores across campuses would be unaffected by variations in these test preparation activities, we set out to standardize all testwiseness instruction and practice testing across the school system. Naturally, our first step had to be to find out which activities were appropriate and which were not.

Our definition of an appropriate preparation activity became *one which contributes to students' performing on the test near their true achievement levels, and one which contributes more to their scores than would an equal amount of regular classroom instruction.* Obviously we wanted to avoid two pitfalls. First, we did not want to teach testwiseness tactics which would help the students outfigure test items without understanding what the item was intended to measure. Second; we did not want to detract from instructional time unless we were confident that it would be beneficial.

Based on the review of the literature that is presented in another of this symposium's papers (Jones and Ligon), we decided to concentrate on basic testwiseness rather than on advanced testwiseness skills. This meant that our students would be taught the mechanics, terminology, and general directions of the tests. In addition, techniques for proper use of time, re-checking answers, and eliminating obviously incorrect alternatives before guessing were acceptable. However, teaching students to look for grammatical consistencies, the longest and most carefully worded alternative, and key words such as always and never was ruled out.

Value of Individual Testwiseness Tactics

A question remained in our minds about the possible impact of such a decision. Finally, in the spring of 1982, we conducted a small study to see on how many items from the Iowa Tests of Basic Skills the chances of guessing correctly could be increased by using common testwiseness cues and tactics. Figure 1 summarizes the findings from this limited study.

Obviously, using the content of other test items and eliminating outrageous, illogical, or vague options are useful strategies. They also are acceptable to us because they rely on the student's using partial or available knowledge to determine the correct answer. What about the other eight tactics?

We had determined that these others are not appropriate for our teachers to teach to our students. The rationale for this decision now can be supported on several bases.

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Testwiseness Cue	Number of items	Number of	
		+	-
1. Using the content of other test items	25	25	0
2. Eliminating outrageous, illogical, or vague options	19	19	0
3. Choosing the noticeably longer option	13	7	6
4. Choosing the more carefully worded option	6	6	0
5. Eliminating options that imply each other	6	6	0
6. Choosing the option with the most specific details	5	5	0
7. Eliminating options with specific determiners	3	3	0
8. Looking for a resemblance between option and stem	2	2	0
9. Inferring the intent of the test maker	1	1	0
10. Looking for grammatical consistency between option and stem	0	0	0

Figure 1. TESTWISENESS CUES USEFUL ON THE ITBS. Number of exercises from the 100 reading comprehension items (Iowa Tests of Basic Skills, Form 7, Levels 9-12) on which compelling testwiseness cues occur. Column headed "+" signifies number of items on which the use of the cue would lead toward a correct response, either by pointing out the correct option or by eliminating an incorrect option. Column headed "-" signifies number of items on which the use of the cue would lead to an incorrect response.

See Attachment D for an explanation and examples of these testwiseness cues.

1. These tactics rely on cues which are not specific to the skill being measured.
2. Often the skill required to apply the tactic correctly is more difficult than the skill being measured by the item.
3. Several factors lower the chances that these strategies would actually help on a meaningful number of items.
 - a. The student would have to choose correctly from among several tactics on some items.
 - b. Pure guessing would provide correct answers in one out of four or five instances.
 - c. On about half the items, the average student will actually know the answer.
4. Except for reading comprehension, science, social studies, and a few other areas, the testwiseness tactics will be less useful. Areas such as math, spelling, punctuation, capitalization, etc. are less vulnerable to the effective use of these testwiseness strategies.

Test Practice

Giving standardized tests for practice was an issue which seemed unresolved in the research. The research showed that test practice was beneficial if done once, near the time of the actual test. However, the research was conducted using IQ tests, not achievement tests. Our compromise on this issue took several forms. Using instructional time for administering full-length achievement tests for practice seemed a poor use of that valuable time. Therefore, we encouraged teachers to make their own tests more like standardized tests. A multiple-choice format, a separate answer sheet (grade 3 and above), and set time limits were recommended. To facilitate this, an all-purpose answer sheet was developed and provided.

Our Perspective

To summarize our school district's perspective:

1. Preparing students for standardized tests is important.
2. Ensuring that this preparation is similar across all our schools is also important.
3. Basic testwiseness skills should be taught to all students. These skills include the following.
 - a. Following directions
 - b. Understanding item formats
 - c. Understanding a test's terminology, symbols, and procedures
 - d. Using time wisely
 - e. Checking answers
 - f. Marking answers properly
 - g. Knowing how to ask questions about the test
 - h. Being physically ready to take a test--

- . getting a good night's sleep
 - . eating breakfast
 - . being at school on time
- i. Thinking logically
4. Advanced testwiseness skills should be taught only if they
- a. Actually contribute to students' chances of making scores which are closer to their true scores, and
 - b. Contribute more to students' scores than would an equal amount of regular classroom instruction.

The only advanced testwiseness skills which meet these two criteria are

- a. Using the content of other test items, and
 - b. Eliminating outrageous, illogical, or vague choices before selecting from among the remaining choices.
5. Students need to and deserve to know what the tests are, why they are taking them, and why they are important.
6. Test practice is recommended. However to avoid detracting from instructional time, teachers should be encouraged to make their regular tests in the format and with the procedures of a standardized test.
7. The classroom teacher is the key person in standardizing these preparation procedures. Therefore, materials must be prepared and provided to all teachers prior to testing.

Our Materials for Preparing Students (and Teachers) for Standardized Testing

These materials have all been locally developed to be consistent with our perspective on the appropriate methods for preparing students for standardized testing. Much of the materials, including the practice tests, are also designed to help prepare teachers for their role.

Attachment A: Guidelines for Test Administrators

- . Grades K-8
- . (Grades 9-12 included in Attachment B)

Attachment B: Packets for the Preparation of Students for Standardized Testing

- . Kindergarten
- . Grades 1 and 2
- . Grades 3-8
- . Grades 9-12

Attachments A-C may be requested by writing the authors.

Attachment C: All-Purpose Answer Sheet

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EXPLANATION AND EXAMPLES OF TESTWISENESS CUES

1. Using the content of other test items

The content of nearby test items, especially the stems, may provide clues that help choose or eliminate options. For example, suppose the first question is

Why did Jim think at first that the object in the sky was an airplane?

Suppose the next question is

Why did Jim change his mind about the object?

- a. Because it had wings and a motor.
- b. Because it suddenly changed direction and disappeared.
- c. Because the airplane landed safely.
- d. Because when he first saw it, it was crawling on the ground.

From the content of the two questions alone it is clear that the object was not an airplane and that Jim first saw it in the sky. Therefore options a and d can be eliminated by the testwise student, and option c is unlikely to be correct.

2. Eliminating outrageous, illogical, or vague options.

Any such item can be eliminated from consideration. For example,

To what country did the hijackers take the plane?

- a. New York
- b. Algeria
- c. Lithuania
- d. Tibet

Even if the testwise student does not know the answer and has never heard of Algeria, Lithuania, or Tibet, he could easily eliminate option a, because New York is not a country.

Why did Jim decide that the object was not an airplane?

- a. Because it had wings and a motor.
- b. Because it suddenly changed direction and disappeared.
- c. Because the airplane landed safely.
- d. Because when he first saw it, it was crawling on the ground.

Options a and c are illogical and can be ruled out.

What object did Ben Franklin use to discover electricity?

- a. His kite
- b. His watch
- c. His lantern
- d. His rubber duckie

Option d is clearly outrageous and the testwise student would eliminate it from consideration.

Why does the sun appear to rise in the east and set in the west?

- a. The earth moves eastward as it orbits the sun.
- b. The ions in the stratosphere refract light toward the west.
- c. It is an optical illusion.
- d. The earth rotates from west to east.

Option c, while more or less true, is obviously too vague to pass as a scientific explanation, and can be ruled out even if the student does not know the correct answer.

3. Choosing the noticeably longer options.

If a student can eliminate one or two options on an exercise, the longest remaining option is often a good bet. For example,

The Declaration of Independence asserted that

- a. the people should not pay taxes.
- b. all men are created equal and have certain natural rights.
- c. all men have a right to say what they think.
- d. slavery is morally wrong.

Suppose the student recognizes options c and d as notions from later periods of history. Option b would be a better guess than option a, because it is longer.

4. Choosing the more carefully worded option.

Often a test maker will word the correct option more carefully than the others.

Why is this place called the "River Walk"?

- a. The walkway is cool and pretty.
- b. The walkway is beside and across a river.
- c. The walkway winds like a river.
- d. The walkway is often wet.

The testwise student would be drawn to option b. The phrase "beside and across a river" shows the test maker is taking care to be precise.

5. Eliminating options that imply each other.

If option x implies option y then the correct answer cannot be option x alone. For example,

Sam's weekly allowance was

- a. one dollar.
- b. two dollars.
- c. more than three dollars.
- d. four dollars.

Option d implies option c. Therefore, option d cannot be correct, because if it were, then the exercise would have two correct answers.

6. Choosing the option with the most specific details.

In taking care to be correct, test makers sometimes make the correct option more detailed than the others.

Where did the doctor put the bandage?

- a. On Jim's right hand.
- b. On Jim's foot.
- c. Over Jim's eye.
- d. On Jim's shoulder.

Since Jim probably has two of each of the body parts mentioned, option a is more attractive than the others because it is more specific. In the absence of knowledge, option a is the best guess.

7. Eliminating options with specific determiners.

Certain words, such as "always" and "never" frequently signal incorrect options.

What is the moral to this story?

- a. People need to see well to drive safely.
- b. Never drive a car using only one hand.
- c. Always observe the speed limit.
- d. It is unsafe to drive when drunk.

In the absence of knowledge the testwise student would rule out options b and c. Exceptions to such rules are too easy to imagine.

8. Looking for a resemblance between option and stem.

Options that contain words repeating or associated with words in the stem are more likely to be correct than options without such resemblances.

Which of these statements about poison sumac is true?

- a. Its leaves are smooth and grow in clusters of four.
- b. It is harmful if touched or eaten.
- c. Given in small doses, it is useful in preventing rheumatic fever.
- d. It contains many of the same chemicals found in cod liver oil.

In the absence of knowledge, the testwise student could not really rule out any of these options. However, the association between "poison" and "harmful" makes b the most attractive option.

The national organization chiefly concerned with rifles and other guns is called

- a. the National Rifle Association.
- b. the New York Gun Club.
- c. the Sierra Club.
- d. the Ku Klux Klan.

The repetition of the words "national" and "rifle" signal option a as the best guess.

9. Inferring the intent of test maker.

After taking a few standardized tests, students often realize that certain sections, such as the reading passages, are rarely controversial and usually try to teach as well as test knowledge. This can sometimes provide clues to the correct answer.

What was the author's purpose in writing this story?

- a. To scare you.
- b. To make you sick.
- c. To teach you something.
- d. To make you doubt your best friend's word.

Options a, b, and d are too destructive or controversial to be correct. Option c is the only one that is in keeping with the general intent of most tests.

10. Looking for grammatical consistency between option and stem.

If an option is grammatically inconsistent with the stem, it cannot be defended as the correct answer and may be ruled out.

An anteater is also called an

- a. aardvark.
- b. emu.
- c. pteradactyl.
- d. anaconda.

Even if the student has never heard of any of these animals, option c is obviously not correct, since it begins with a consonant.