

# Probing Student Understanding With Alternative Questioning Strategies

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Common research tasks ask students to identify a correct answer and justify their answer choice. We propose expanding the array of research tasks to access different knowledge that students might have. By asking students to discuss answers they may not have chosen naturally, we can investigate students' abilities to explain something that is already established or to disprove an incorrect response. The results of these research tasks also provide us with information about how students' responses vary across the different tasks. We discuss three underused question types, their possible benefits and some preliminary results from an electric circuits pretest utilizing these new question types. We find that the answer students most commonly choose as correct is the same choice most commonly eliminated as incorrect. Also, students given the correct answer can provide valuable reasoning to explain it, but they do not spontaneously identify it as the correct answer.

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