



Buyers' Worksheet



Here are questions you should ask in evaluating research claims about the effectiveness of educational software:

I. What is the product? (Basic information about the software.)

- a. Product name? _____
- b. Manufacturer? _____
- c. Subject area? _____
- d. How long on market? _____
- e. Can it be customized to fit curriculum and standards in your school?

- f. Vendor technical support included? _____
- g. Price (including any supplemental materials or other costs)? _____
- h. Alignment with your instructional approach and goals?

II. What evidence is there that the software impacts student achievement?

How many studies of the program have been conducted? (The results of a single study will not provide you with enough evidence to reliably judge the effectiveness of a program or intervention.)

For each study provide the following:

Study Findings:

- a. **What outcomes are measured?** (grade level, subject area, etc.) _____
- b. **How are outcomes measured?** (Special purpose test? General standardized test? High stakes state or local test?) _____
- c. **What are the reported results and how do they compare to studies of other similar products?** (Use effect sizes for comparisons across studies. Remember, changes in student performance that are reported as being “statistically significant” can still be small and meaningless in terms of the amount of change in student performance that actually occurred.)

What is the quality of the study? (If you are unable to find the answers to the following questions within the study or materials that you have, contact the software publisher or the study’s authors directly and request the information.)

- a. **How was the sample selected?** (Sample of convenience? Random sample?)

- b. **Who was studied (including students in the comparison group if one was used)?** (All students? Remedial or gifted students? Grade levels? Prior achievement or score on the test instrument? Were the schools like yours?)

- c. **Is there data for student performance before and after the study?** (Best if the “before” measures are for the individual students rather than previous classes.)

- d. **"Dosage": How much was the software used?** _____Minutes per day for _____ Days per semester____for _____Semesters
- e. **Was the software integrated within the broader school curriculum, instruction, and learning standards?**

Please send comments and suggestions. This site was created by the Center for Technology in Learning at SRI International under a task order from the Planning and Evaluation Service, U.S. Department of Education (DHHS Contract # 282-00-008-Task 3).



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- f. **Was a comparison group used?** (In order of preference and reliability from best to worst: 1. Randomized comparison group. 2. Well matched comparison group. 3. Historical performance of the classroom, school, or district. 4. National test norms. 5. No comparison group (includes designs that use a “before” measure as the comparison measure)).
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- g. **Sample size for each group being compared.** (More is better. For more reliable findings look for at least 30 in each group being compared.)
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- h. **How long did the study last?** (Longer is better. Results are more likely to be applicable if the study was conducted for an entire semester or school year. Newly introduced technology may inflate scores or underestimate impact if teachers and students haven't learned how to incorporate it with instruction.)
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- i. **What problems were there in conducting the study?** (E.g., attrition of students, missing data particularly for students who are likely to score poorly on tests, poor match between the students using the software and students in the comparison group.)
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- j. **Problems in attributing the changes in student performance to the use of the software.** (Are there other changes underway that are likely to affect results, such as the simultaneous implementation of other reforms that could influence student performance? Might the scores on the testing instrument be climbing across schools regardless of the use of the technology?)
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III. Do the findings apply to schools like mine? (The same product may work well in very different contexts- but the greater the difference the greater caution you need in ensuring that it will work well in your school.)

- a. **Are levels of access to computers similar to your school?**
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- b. **Are factors that often affect student performance similar?** (These include the number of students entering and leaving a school during the school year, parent education and income, student language background, and teacher quality and expertise including expertise in technology use.)
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- c. **Are levels of technical support similar, including training and resource materials?**
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IV. If the software still seems of interest:

- a. **Trust the studies, but verify.** Does the reported evidence match what you learned from discussions with colleagues and others who have used the software? If not, look more carefully into why the results differ. If you have any questions about how the study was designed, contact the software publisher or study's author directly.
- b. **Implementation can make all the difference.** Once you have selected and begun to use the software for instruction, monitor how it is being used and its effects (or lack of effects). Software doesn't improve achievement if it is not used. It may not increase (or may even reduce) test scores if its design and use are not aligned with broader curriculum and instruction in your school. Teacher expertise including teacher proficiency in the use of the technology is often associated with large differences in how effectively the technology use affects student learning.

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