Assessing Student Interest in Computer Science

QUESTION

How can I determine my students' level of interest in computer science?

TOOL DESCRIPTION

This tool serves as a resource for education leaders to assess and describe student interest in computer science.

WHY DO YOU NEED TO KNOW THIS?

When determining a computer science education strategy for your school or district, it is important to consider student interest in computing. A student questionnaire is one of many tools you may use to inform decision-making related to computer science. A short questionnaire will allow you to collect basic information from students, so you can assess and describe student interest in computer science in your school or district.

HOW DOES THIS TOOL HELP?

This tool includes a questionnaire to assess student interest in computer science. A questionnaire allows leaders to systematically gather basic, descriptive data from students. Use the questionnaire as-is, or select the measures that may be the most informative about the students in your school or district.

There are many possible uses of questionnaire data about student interest in computer science. Data collected directly from students may inform decisions about budgets and a school computer science program strategy, help develop school-wide support for computer science, and provide rationale for requesting external support, such as from business partners or parents or support providers.

TOOL CONTENT

A Sample Student Questionnaire

A student interest questionnaire for middle school or high school students is provided in the appendix (the questionnaire was programmed in Survey Monkey). The measures in the questionnaire (or collection of items that are aggregated into a scale to measure a variable, like intrinsic motivation, or self-efficacy) are also provided as a separate document if you prefer to select those most relevant to what you want to learn. You can use the questionnaire measures as you see fit, in whatever format is most appropriate for your school or district. Free, popular online options for questionnaires include Google Forms and Survey Monkey. Check with your district to see if other options are available.

These items are from instruments developed and used by [Outlier Research & Evaluation](#) at [CEMSE (Center for Elementary Mathematics and Science Education)](#) at The University of Chicago. Outlier has used these items to learn about student interest in multiple computer science and STEM research projects. The measures have undergone a variety of reliability (i.e., the degree to which a set of items produces the same results on repeated administrations) and validation testing (i.e., how well a set of items measure what they are supposed to measure).

Note that in some schools and districts, approval may be required prior to administering a questionnaire to students. Be sure to check with local administrators to determine if this applies in your school or district.

Analyzing and Using Results

Once you administer the questionnaire or select items from the questionnaire, decide how to summarize and communicate the findings.

If you are interested in looking at differences in how students responded to items across particular student characteristics (e.g., grade level, prior experience, gender), keep in mind that any differences you find may not be statistically significant, but due to chance. Also, remember that there are likely multiple explanations for why different groups of students may respond to items in different ways.

What if students express little interest in computer science?

While a questionnaire is a useful tool for assessing student interest in computer science, some students may initially demonstrate little interest in it simply because they have no exposure to or experience with the subject or because they don't understand what computer science is, and is not. If this is true for your student population, consider opportunities that will introduce them to the subject of computer science and activities that occur in computer science.

Appendix: The Student Questionnaire and Individual Items

Access the complete [Student Interest Questionnaire](#)

Access [individual questionnaire items](#)