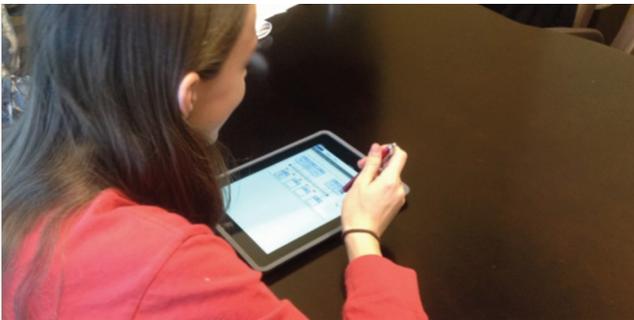




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# Evaluating Question Interactions for Tablet Assessments

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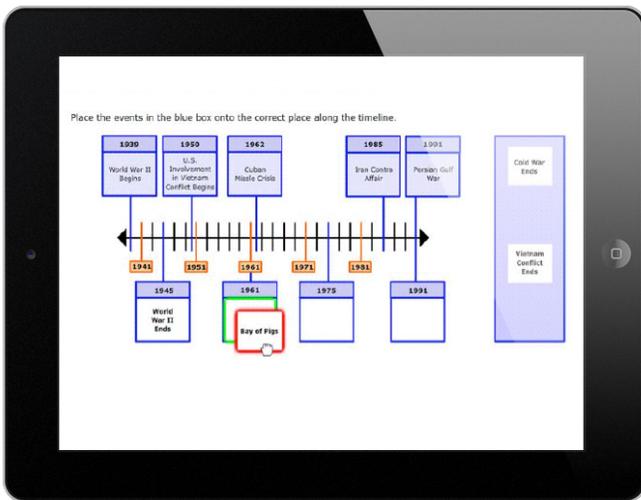
At Pearson, we're committed to supporting student assessment on tablet devices in ways that optimize student experience and enhance measurement. In doing so it is important to consider the specific assessment goals, the uses of the test scores, and issues of fairness when students will be using different types of computers and tablets to take tests. The following recommendations are based on a series of research studies conducted by Pearson researchers to evaluate the usability of tablet devices as tools for assessment. Read the complete white paper from our November 2012 study [on the research hub at Pearson.com](#).

## How a Question is Asked

**In these studies, Pearson researchers sat down with students and asked them to take some sample test questions on tablets.**

Students' interactions with test questions on tablets differ from their interactions with test questions on computer. On a tablet, students use their finger to interact directly with the screen to select or move objects and position the cursor, whereas they use a mouse to accomplish these same tasks on a computer.

A number of question types were included in the studies in anticipation that some question types might be an intuitive fit for a touch-screen tablet interface, while others might lend themselves to the use of peripherals (such as styluses) in order to improve the precision of student input. In the first study, questions were formatted and displayed exactly as they would be for a test taken on computer and no modifications or adaptations were made for tablet interactions.



The following question types were included in the study:

- Multiple-choice
- Drag-and-drop
- Hot spot
- Bar graph
- Point/line graph

## Student Experience

Students were generally successful in selecting a response to the familiar multiple-choice question. They also said they liked the ability to interact directly with drag-and-drop and hot spot questions by using their finger and not having to use a mouse as an intermediary to express their intent. However, students in the first study experienced some challenges in these interactions when objects they were trying to select or manipulate were smaller than their finger or were spaced too closely together.

In graphing question types precision was of even greater importance for students as their finger might have obscured the exact placement of the point or bar on a chart. As a result, some students in the first study expended additional effort to move their points or bars to the correct locations.

## Possible Solutions

Since the precision of a finger is always less than that of a mouse, assessment designers should consider the range of computer and tablet technology to which tests will be delivered. Any button, control, drag-able or tap-able object, text element, or detailed image should be evaluated for size considerations relative to both mouse and finger precision. Content development specifications should reflect considerations for tablet as well as computer delivery. For a full list of design considerations, see the white paper available [on the research hub at Pearson.com](#).

In a second study, some modifications were made to how the questions were formatted and students were additionally allowed the use of a stylus to aid in precision. Some students used the stylus with ease and preferred the added element of precision that they perceived from using it. Others had difficulty manipulating the stylus (pressing too hard, dragging the stylus as they lifted it from the screen, etc.) and felt they had more control by using their finger. However, because of the formatting modifications, students in the second study did not report significant challenges in using their finger to answer the questions.

This further supports that revisions to question and graphic specifications should be considered to make them tablet friendly.



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