

Calculating Success

How Calculator Choice Shapes Student Learning Outcomes



Executive Summary

As online calculators have made inroads into U.S. schools, adoption decisions have often focused more on cost than on considerations related to teaching and learning. Commissioned by Texas Instruments, the EdWeek Research Center surveyed 690 high school teachers and secondary administrators in early 2025 to examine preferences, usage patterns, and policy awareness related to handheld and online calculators.

Findings reveal that handheld calculators remain dominant in classrooms, with 91% of teachers using them for instruction and most preferring them over online alternatives for both instruction and exam prep. **Educators report that their students are more likely to focus on math when using handheld calculators.** They also have concerns about the functionality of online calculators during exams. Nearly three-quarters of administrators plan to continue investing in handhelds over the next two years.

Although educators prefer handheld calculators, many are unaware that their students can use them on major standardized exams and have changed the tools they use in the classroom to align with the calculators embedded in exams.

The report concludes with a call for greater flexibility in and awareness of exam calculator policies to better reflect classroom practices and priorities related to teaching and learning.

91%
of teachers use **handheld calculators** for instruction.

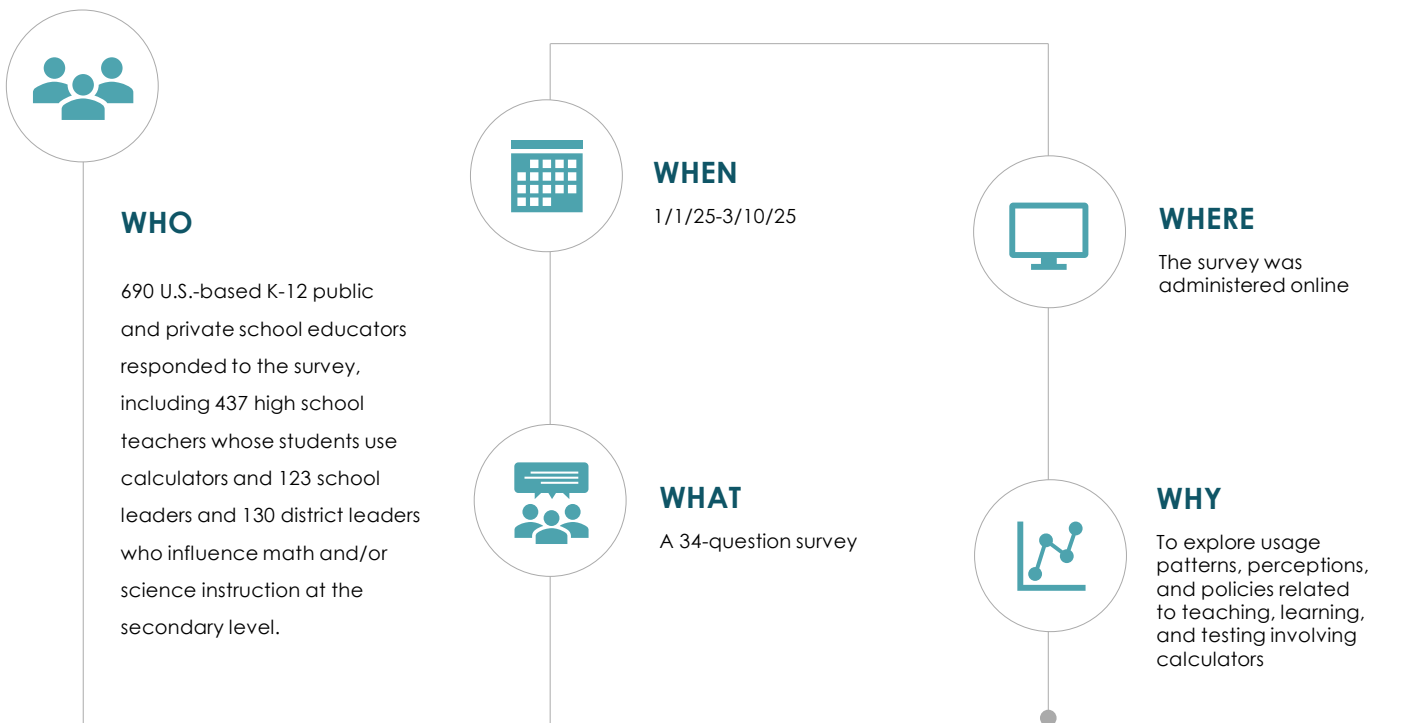
As standardized testing has moved online, so too have [calculators](#). Assessments that now embed online calculators include the SAT, the ACT, and multiple AP and state exams.

Justifications for introducing online calculators typically have focused on considerations of [cost](#): Unlike handheld calculators, online calculators are typically free to students and schools because assessment providers and publishers pay for maintenance and use. However, this may not last. One example is that this company’s [terms of service](#) may stop supporting the tools currently free to end users—or it may start charging for updated or

complementary products. Further, there is a cost attached to the devices and IT infrastructure required to access these online calculators.

As cost has taken center stage in the calculator debate, the impact on teaching and learning has received less attention. In 2025, Texas Instruments sought to explore these learning-focused considerations by commissioning the nonpartisan, nonprofit EdWeek Research Center to survey K-12 educators about their usage and experiences with handheld and online calculators. The remainder of this report focuses on the survey results.

ABOUT THE SURVEY



Handheld Calculators Remain Dominant

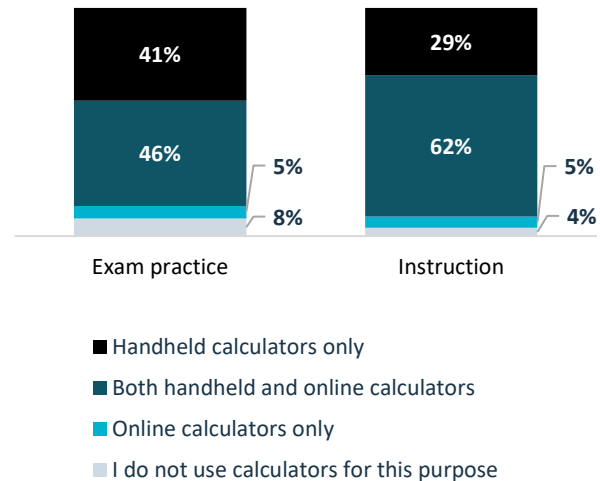
Roughly a decade after online calculators made their debut on major standardized exams, handheld calculators remain the norm in American high schools. **91% of high school teachers whose students use calculators in the classroom rely on handheld calculators for instruction—either alone or in combination with online calculators. 87% use them for exam practice.** (Figure 1)

Most teachers use a combination of handhelds and online calculators in the classroom. However, when teachers do make a choice between those two options, they are much more likely to select handhelds: only 5% rely exclusively on online calculators for exam practices or instruction. By contrast, 29% use handhelds exclusively for instruction. 41% use them exclusively for exam practice.

Currently ubiquitous, handheld calculators are not in danger of extinction. 73% of school and district leaders who influence secondary math and/or science instruction say they plan to invest in and/or make available handhelds over the next two years. By contrast, 46% say the same of online calculators. (Figure 2)

Fig. 1

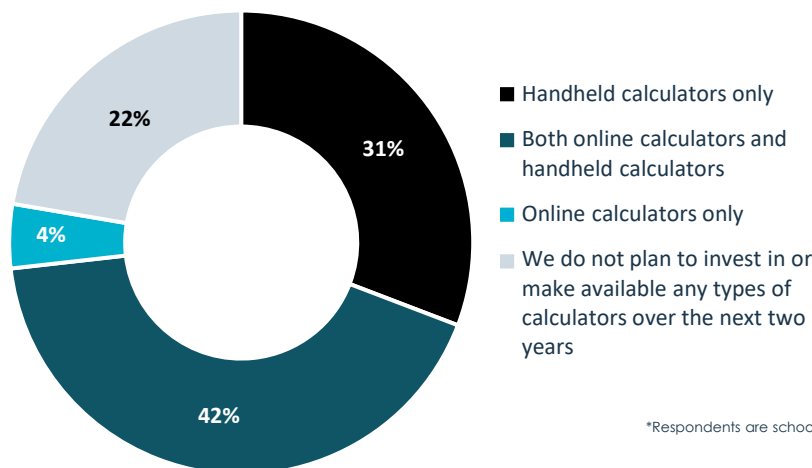
What type(s) of calculator(s) do you use with your students for the following purposes?*



*Respondents are high school teachers who use calculators with their students.

Fig. 2

What type of calculators—if any—do you plan to invest in/make available to students over the next two years?*



73%

of school and district leaders plan to invest in and/or make available handheld calculators

*Respondents are school and district leaders who influence secondary math and/or science instruction

Totals may not add up to 100 percent due to rounding.

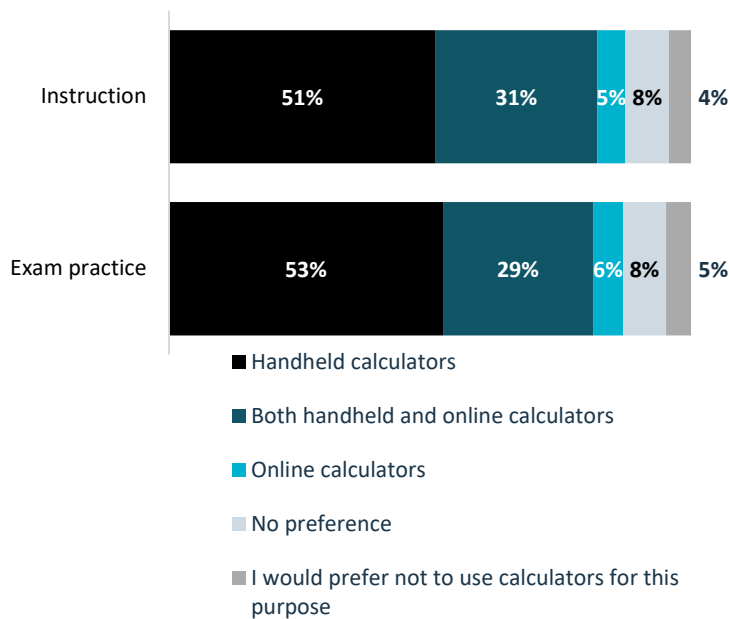
Teachers Prefer Handhelds

Why are handhelds so common? A major reason is that teachers prefer them. **Just over half say they would rather use handheld calculators exclusively for instruction and exam practice.** Roughly 5% say the same of online calculators. (Figure 3)

Administrators are aware of teachers' preferences: 76% say teachers in their districts and/or schools prefer handheld calculators. 13% say their teachers prefer online calculators. The remaining 10% report that their teachers do not have a preference.

Fig. 3

Given a choice, what type(s) of calculator(s) would you PREFER to use with your students for the following purposes?*



76% of administrators say teachers in their districts and/or schools prefer handheld calculators

*Respondents are high school teachers who use calculators with their students.

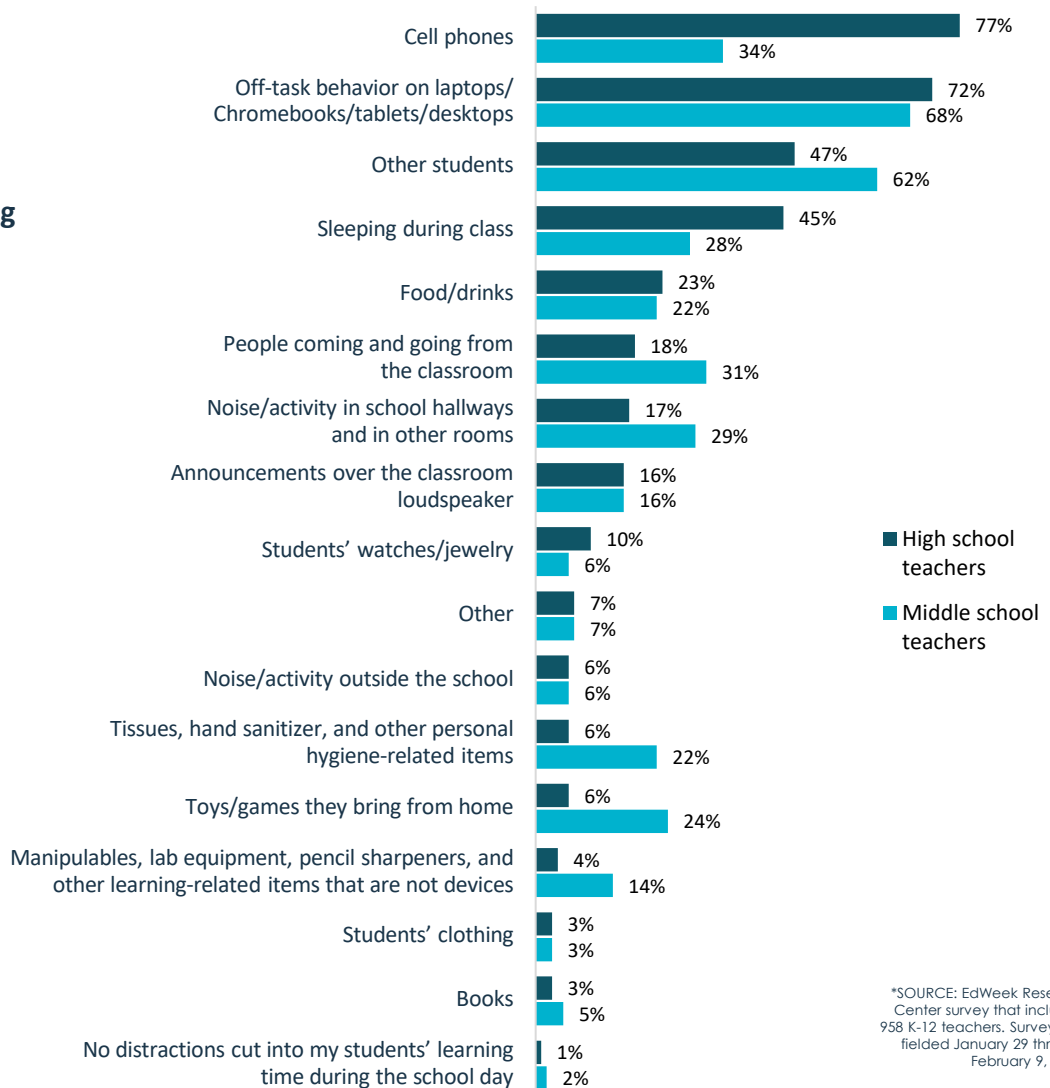
Totals may not add up to 100 percent due to rounding.

Why Educators Prefer Handhelds: Student Engagement

An EdWeek Research Center [survey](#) fielded in the winter of 2025 found that off-task behavior on Chromebooks, laptops, tablets, and desktops is the top source of classroom distraction for middle school students. At the high school level, teachers said it was the second most common source of distraction: Only cell phones sap more learning time. (Figure 4)

Fig. 4

What MAJOR sources of distraction cut into your students' learning time during the school day? Select all that apply.*



*SOURCE: EdWeek Research Center survey that included 958 K-12 teachers. Survey was fielded January 29 through February 9, 2025.

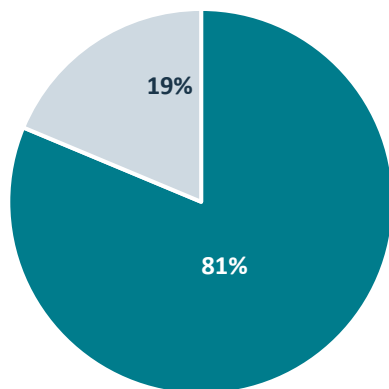
Students typically need to use devices with WiFi connectivity to access online calculators. Encouraging students to focus on math by eliminating online distractions is the top reason why 73% of school and district leaders say they plan to continue to invest in handheld calculators over the next two years. (Figure 5)

81% of teachers and administrators say that students are better able to focus on math when they are using a handheld calculator. (Figure 6)

“Handheld calculators are much better because they provide all the functions you need, but don’t give students the internet at their fingertips the way online calculators do,” a Nevada chemistry teacher whose students use calculators on a daily basis wrote in response to an open-ended survey question. “I think online calculators make students more likely to distract themselves on the internet.”

Fig. 6

Students using a handheld calculator are able to focus on math instruction more than students using an online calculator.*

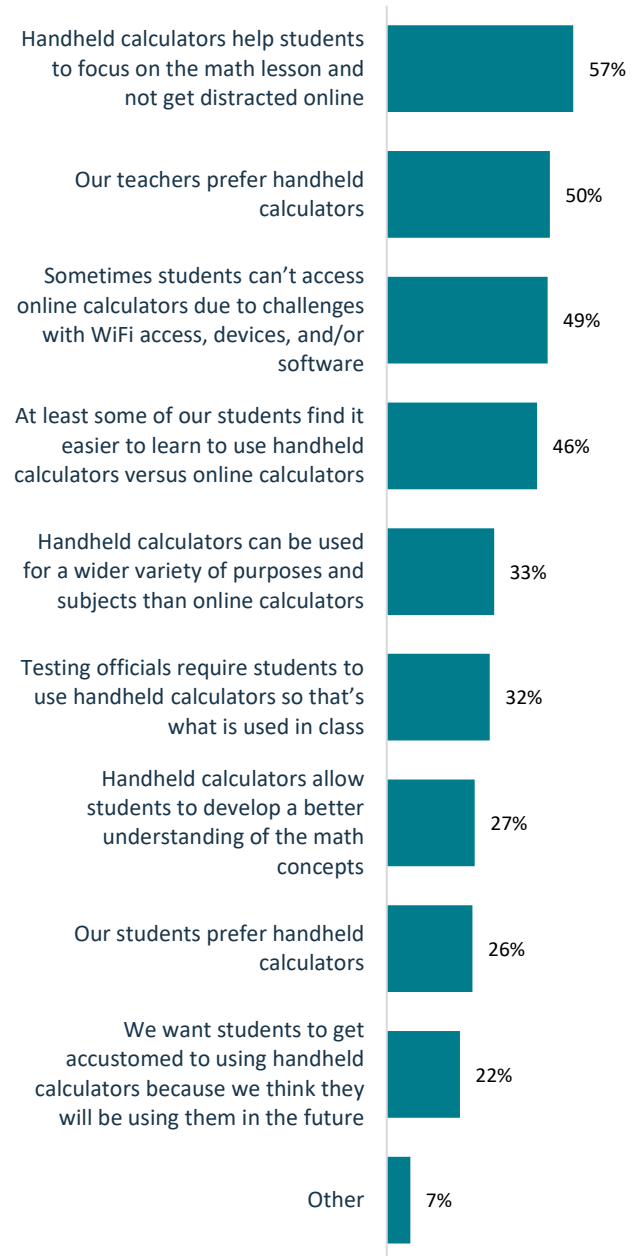


- Believes handheld calculators are better able than online calculators to help students focus on math
- Does not believe handheld calculators are better able than online calculators to help students focus on math

*Respondents are school and district leaders who influence secondary math and/or science instruction and high school teachers who use calculators with their students.

Fig. 5

Why do you plan to invest in/make available handheld calculators? Select all that apply.*



*Respondents are school and district leaders who influence secondary math and/or science instruction and indicated they planned to invest in handheld calculators over the next two years.

Why Educators Prefer Handhelds: Ease of Use During Exams

Survey results suggest that educators not only prefer handheld calculators for instruction—they associate them with higher student achievement on exams. **Three out of four survey respondents say their students perform better on digital assessments when permitted to use handheld calculators.**

(Figure 7)

“My students are much faster when entering calculations on a calculator vs. a computer because a handheld calculator is similar to their phone,” a Missouri math and CTE teacher wrote in response to an open-ended survey question. “As a result, timed tests are more difficult when students are not allowed a handheld calculator. I’ve also found that there is sometimes a lag with the online calculators, which leads to more student errors and higher student frustration with standardized tests.”

Digital calculators can also obscure or block exam content during use. 90% of survey respondents say their students have experienced this during testing. (Figure 8)

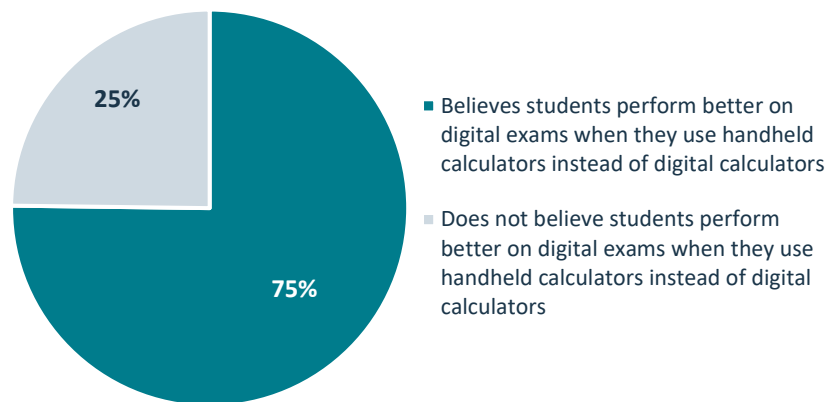
Teachers typically spend more time than administrators on proctoring exams. As a result, they may be more aware of the details of assessment. Nearly a quarter of the teachers who took the survey (as compared to less than 15% of school and district leaders) say online calculators often block exam content.

Teachers and administrators alike say this matters: **93% say that online calculators that obscure exam questions have at least a little bit of an impact on students’ final scores.**

One in three say that this type of glitch impacts scores a lot. (Figure 9)

Fig. 7

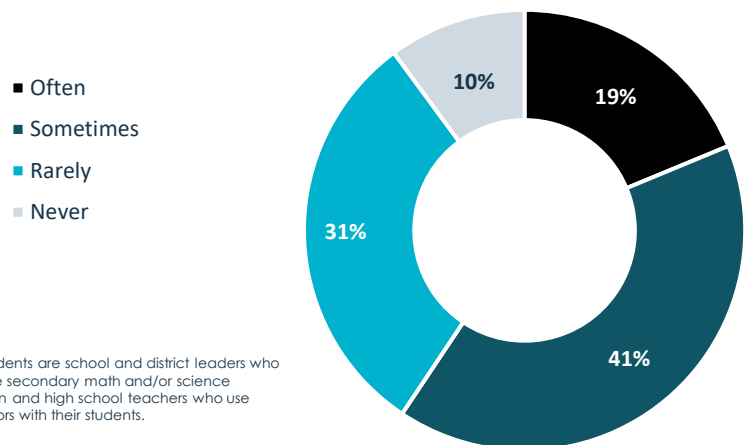
Students perform better on digital exams when they use handheld calculators instead of digital calculators.*



*Respondents are school and district leaders who influence secondary math and/or science instruction and high school teachers who use calculators with their students.

Fig. 8

How often does usage of an online calculator embedded in an assessment obscure the questions or block the exam, causing the students to be inconvenienced?*



*Respondents are school and district leaders who influence secondary math and/or science instruction and high school teachers who use calculators with their students.

Totals may not add up to 100 percent due to rounding.

In responding to open-ended questions, several teachers noted that, when an online calculator is the only option during an exam, some students will skip questions that they need a calculator to solve—or solve the question as best they can without a calculator, potentially lowering their scores.

An Oklahoma special education teacher said that online calculators are particularly challenging for students with attention-deficit/hyperactivity disorder (ADHD) and emotional disabilities (ED):

“With [special education] students, it is already difficult enough to get them to want to work out math problems, let alone try to use calculators. Most students claim to be able to use online or test-program built-in calculators, but in reality, they’re not as likely to utilize it as a tool because it is not ... within eye sight or reach, plus they test on iPads, so it blocks a good chunk of the screen, causing my [students] with ADHD or ED to get flustered and shut down. Therefore, they will likely guess.”

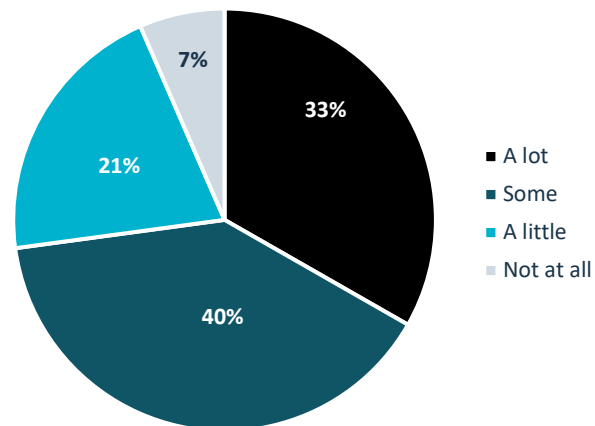
Regardless of the type of calculator they prefer for student use, **most teachers and administrators (94%) say their students perform better on exams when the type of calculator used for the assessment is the same type of calculator used for practice and instruction.** (Figure 10) Academic research [confirms](#) that students perform better on exams when calculator use is consistent across testing and instruction.

“**Students use handheld calculators for practice, it’s what they should use when testing,**” a Montana math teacher wrote in response to an open-ended survey question. “We would never expect the equipment to change between practice and game day in sports.”

An Illinois teacher wrote: “I recently gave a student a test using the other type of calculator in my room. When he returned the test, there were lots of errors and he wrote ‘calculator problem.’ I regave him a portion of the test with the calculator he typically used and [he] did so much better.”

Fig. 9

If an online calculator embedded in an assessment, obscures questions or blocks the exam during testing, how much do you think that impacts the students’ final score?*

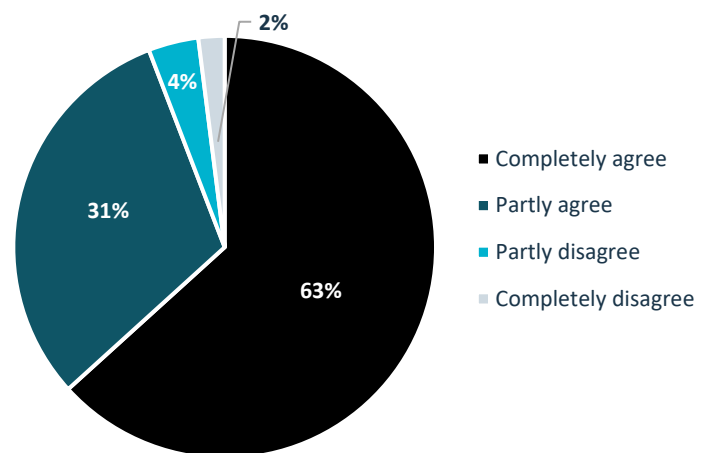


*Respondents are school and district leaders who influence secondary math and/or science instruction and high school teachers who use calculators with their students.

Totals may not add up to 100 percent due to rounding.

Fig. 10

Our students perform better on exams when the type of calculator (handheld versus online) is the same type of calculator used for practice and instruction.*



*Respondents are school and district leaders who influence secondary math and/or science instruction and high school teachers who use calculators with their students.

Policy and Practice Flexibility and Awareness

Because survey results suggest that handheld calculators are more widely used in schools, students may find themselves navigating unfamiliar tools on the day of an exam that includes an online calculator.

“Using a calculator [my students] were not specifically trained on provided added stress and anxiety to an already tense situation,” a district-level curriculum director in New York wrote in response to an open-ended survey question.

To avoid this type of situation, **nearly three out of four teachers who responded to the survey said they have changed the tools they use to represent graphing concepts in the classroom to align with the calculators embedded in exams taken by their students.**

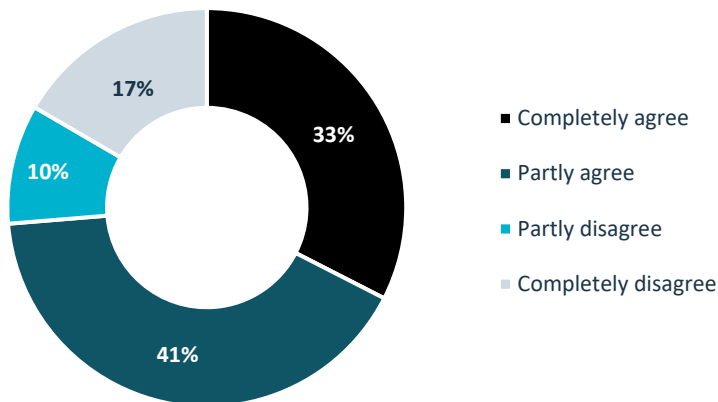
(Figure 11)

“Even though we feel that handhelds are a better option than online, students need to use online for the state assessments,” an assistant principal in Virginia wrote in response to an open-ended survey question. “Therefore, we prefer to have students use them and be comfortable using them online to best prepare them for the assessments.”

In a response to an open-ended question, a North Carolina math teacher expressed concerns about being unable to find an exact replica of the calculator tool embedded in the exams taken by students. “In class, we can’t embed the online calculator in the same manner that they do on the tests,” the teacher wrote. “We must split the screen or flip between tabs/screens. This often causes students to mistype information and increases the time needed to complete problems.”

Fig. 11

I have changed the tools I use to represent graphing concepts in the classroom to align with the calculators embedded in the exams my students take*



“Even though we feel that **handhelds are a better option than online**, students need to use online for the state assessments.”

—ASSISTANT PRINCIPAL IN VIRGINIA

*Respondents are high school teachers who use calculators with their students.

Totals may not add up to 100 percent due to rounding.

In response to an open-ended survey question, an Idaho teacher wrote: “I teach a CTE Electronics course in which students take a capstone test developed by the state. In the past a simple, online calculator was provided that all students complained was not what was needed. This year, in revising the exam, we asked for handheld calculators to be allowed and a list of allowable calculators was developed.”

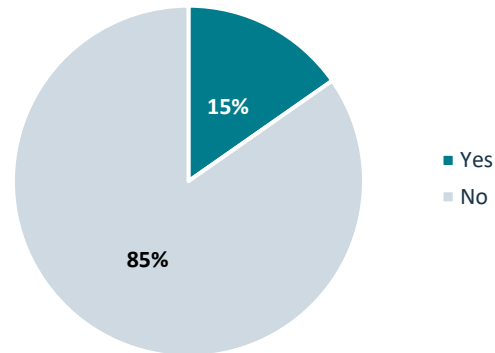
This teacher, however, is in the minority: Just 15% of survey respondents say they have advocated for their calculator of choice on tests. (Figure 12) Awareness is the main reason: When asked why they had not asked assessment providers if their students could use their preferred calculators, educators were most likely to say it was because it had never occurred to them, or that they did not realize they could make this request. (Figure 13)

“I was not aware that an instructor and/or school/district could request a calculating device deemed most appropriate to that assessment,” a Wisconsin special education teacher wrote in response to an open-ended survey question. “My hunch is most in education are not aware of this capability as well.”

Educators should feel empowered to voice their opinions about the tools they prefer for instruction to start conversation around the tools that should be available during assessments.

Fig. 12

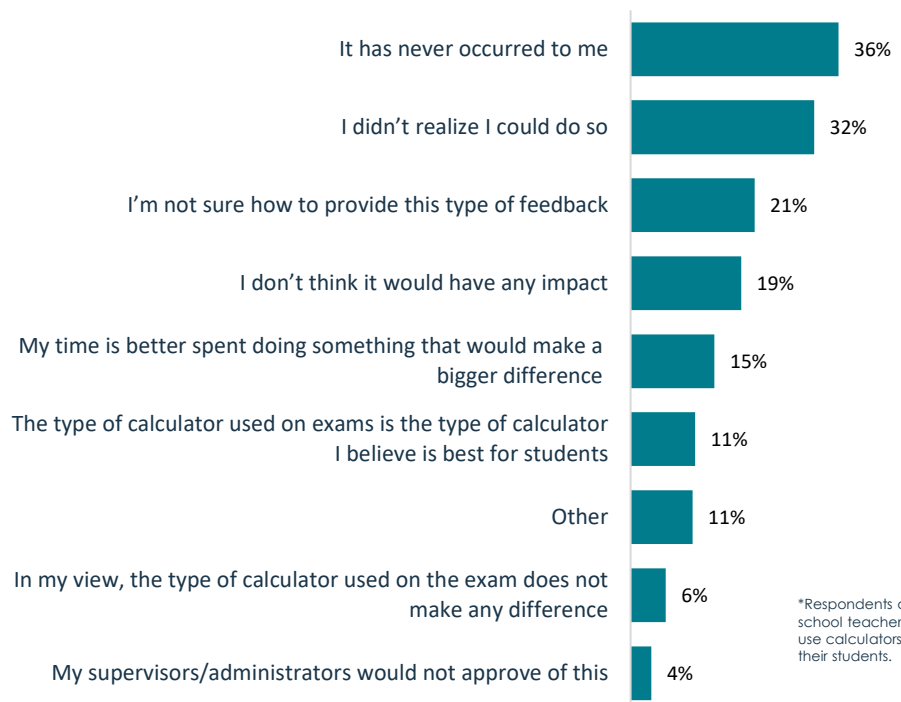
Have you ever asked assessment providers if they are willing to provide access during student exams to the type(s) of calculator(s) you believe are best for your students?*



*Respondents are high school teachers who use calculators with their students.

Fig. 13

Why haven't you asked assessment providers if they are willing to provide access to the type(s) of calculator(s) you believe are best for your students to use during exams? Select all that apply.*



*Respondents are high school teachers who use calculators with their students.

Some educators may also misunderstand calculator policies.

More than 40% of respondents said they did not know whether students could use handheld calculators during SAT, PSAT, AP or ACT exams. More than 1 in 5 did not know if students could bring handhelds into annual, mandatory statewide assessments. (Figure 14)

Among respondents who indicated they did know whether students could use handheld calculators during testing, substantial minorities wrongly believed that students could only use the calculators embedded in the exams: According to their providers' websites, students are permitted to use handheld calculators on the SAT, Advanced Placement (AP), PSAT and ACT exams. A caveat is that no calculators of any type are permitted on some sections of some exams. (Figure 15)

Fig. 14

Percentage of survey respondents who say they do not know whether students are permitted to use handheld calculators for the following types of math and/or science exams*

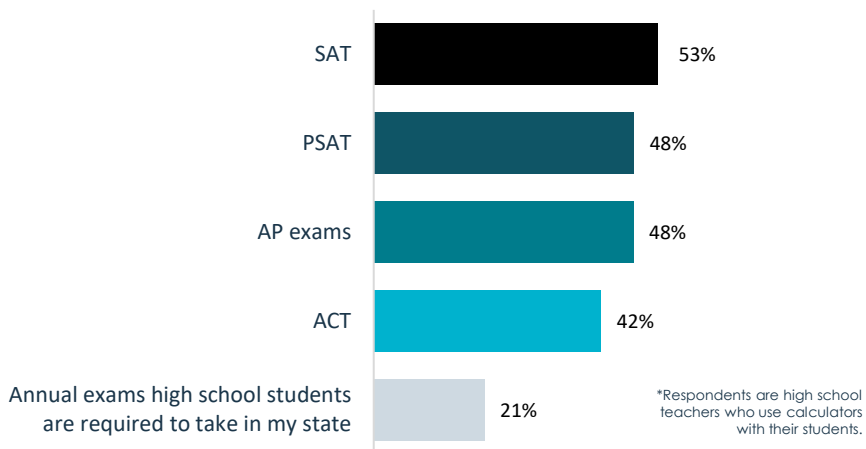
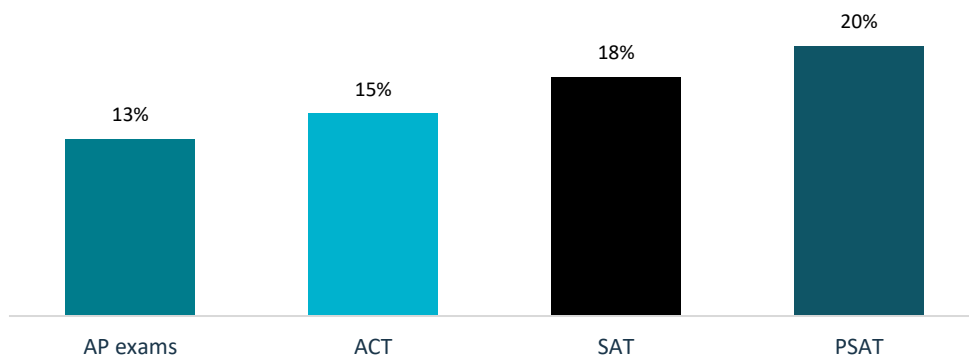


Fig. 15

Percentage of survey respondents who erroneously believe that students cannot not use handheld calculators on the following exams*



*Respondents are school and district leaders who influence secondary math and/or science instruction and high school teachers who use calculators with their students. Respondents who selected "I don't know" are not included in this chart. On some sections of some exams, no calculator use of any type is permitted.

Conclusion and Implications

As assessment companies have moved toward embedding digital calculators in standardized exams, handheld calculators have continued to dominate the classroom. Most high school teachers who use calculators prefer these devices, precisely because they do not require students to access internet-enabled devices—and all their incumbent distractions.

Most also express concerns that the calculators embedded in exams can impact students' final scores by blocking or obscuring test questions during use. As a result, most school and district leaders who influence secondary math and science report that they plan to continue to invest in handheld calculators over the next two years.

These findings have several implications for educators and assessment providers.

Providers should be aware that handheld calculators are still the default tool in many classrooms. This means that a certain share of test takers will lack substantial experience using online calculators. While this may seem like a minor challenge, the vast majority of educators believe that student test performance is better when the tool used during testing is the same as the tool used during instruction and practice.

For this reason, exam policies should be flexible, allowing students to choose the type of calculator (handheld or online) that best meets their needs, and more clearly communicate that the embedded online calculator is an option, not a requirement for use.

Further, this flexibility will likely translate into additional instructional flexibility for teachers, allowing them to **use the tool they believe best meets their students' learning needs rather than altering their approach to accommodate a one-size-fits-all solution related to test prep.**

School and district leaders should also consider letting assessment providers know which tools their educators and students prefer to use on exams and why. Most have never done so. Mainly, it's because they lack awareness that they can. In addition, a substantial portion of educators appears to be unfamiliar with existing calculator usage policies. As a result, they may not realize that their students already have the ability, in many cases, to use their tools of choice come testing day.

In the end, in the words of a district leader in Idaho who responded to an open-ended survey question, flexibility is the key: "Calculators should be viewed as tools and the best tool should be available for the specified job."

Calculators

should be **viewed as tools** and the best tool **should be available** for the specified job.

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