

WHAT EDUCATORS WANT FROM DIGITAL INSTRUCTIONAL TOOLS 2.0

Committed to improving educational outcomes for all students, particularly low-income and minority students, the Bill & Melinda Gates Foundation supports innovative ways for teachers to personalize learning — to tailor their instruction to individual students' needs, interests, and skills. For teachers to implement this approach most efficiently and effectively, it is essential that they have access to high-quality digital tools.

What tools do teachers need to design successful personalized approaches to learning? How are they using the tools they have? The Gates Foundation believes that no one can answer these questions better than teachers themselves. So in August and September of 2015, the foundation surveyed more than 3,100 K-12 teachers in five areas: How today's classrooms are configured and led; how teachers use digital tools, how teachers perceive the effectiveness of digital tools; how confident teachers are in the availability and adequacy of digital tools; and how the adoption of technology may be influenced by school environment and teacher choice.

This latest report in the foundation's "Teachers Know Best" series aims to help developers of digital products be more responsive to educators' needs. The first report revealed gaps across subjects and grade levels in the availability, usage, and perceived effectiveness of digital tools. This report adds to our understanding of these issues and finds a significant increase since 2013 in the percentage of teachers who say that digital and non-digital resources are available and sufficient to teach subject standards. But teachers still have limited information about tools and are restricted in choosing tools for their own classrooms.

Among the key findings:

- Fully two-thirds of teachers (67 percent) now think that digital and non-digital resources are available and sufficient to help students master subject standards, compared to 55 percent of teachers who said this two years ago. Gaps remain, however, in the availability and sufficiency of tools in specific subjects and grade levels.
- Most teachers still report working in classrooms in which students generally learn the same content, at the same pace, and in the same way. Over half of classroom time is devoted to whole-group instruction, although most teachers also group students of similar abilities for differentiated instruction, changing groups regularly.
- Teachers are not technophobes. By an overwhelming majority, they believe in the promise of digital tools, but they don't always agree on the role that technology plays in the classroom or how to support it. Almost all teachers — 93 percent — now regularly use digital tools for instruction. But they are almost evenly split in how they use education technology, with roughly equal numbers saying it plays a primary role, a secondary role, or no role at all.
- While more teachers now say that the digital tools they use are effective, that effectiveness also depends on the tools' particular role. Teachers gave their highest ranking to the tools' ability to vary the method of instruction. They gave their next highest marks to the tools' ability to foster independent practice of specific skills, followed by their ability to tailor learning experiences to meet student needs, and, finally, by their effectiveness in delivering instruction directly to students. Only a third thought they are most effective for remediation. Half of all teachers believe that digital tools have the potential to effectively diagnose student learning needs.
- Few teachers (18 percent) choose most of the education technology they use, even though they are largely responsible for incorporating it into instruction. When they do select their digital tools, most follow the recommendations of those they trust most — other teachers and school leaders. Far fewer rely on education-specific online resources.
- Access to broadband and devices remains a critical barrier to the adoption of technology. Nearly half of teachers (42 percent) say their students lack sufficient access to technology outside of school. And more than a third say their schools lack adequate funding for technology. A particular challenge, they say, is

one-to-one devices. Less than one in five teachers who use mobile devices, tablets, laptops, or computers say they have one-to-one devices for their students.

Based on these and other findings, “Teachers Know Best” makes some recommendations for product developers, school leaders, teachers, and funders. Among them:

- Product developers should work to fill perceived gaps in the marketplace in part by addressing what teachers say they need for digital tools to work well with specific subjects, grade levels, and standards. They should make their feedback processes more transparent, working with teachers to resolve problems with digital tools and to make needed improvements.
- District leaders must find ways to address the digital divide. They must consider equity in deployment of devices since teachers will be less likely to embrace digital tools if they think lower income students will be left out. District leaders must also better understand how teachers will use the tools the district is considering, and they must give teachers greater input in decisions about what tools they use in their classroom.

- Information sources like Graphite and EdSurge are helpful for educators to learn not just about the availability and efficacy of digital tools but also about the strategies that align those tools with the most effective instructional practices.¹
- Funders can play a key role in pushing the field to focus on quality and sufficiency of digital content and tools, by promoting common approaches to measuring efficacy and catalyzing development in areas of unmet needs.

Through this and continuing research, the Gates Foundation hopes to elevate the voices of teachers and to spark conversations among developers, teachers and school leaders, and others in the education field. The full “Teachers Know Best” report and its companion website, TeachersKnowBest.org, feature more detailed data from the survey, along with resources for developers and interviews with teachers.

¹The Bill & Melinda Gates Foundation has made investments in both of these online resources.