

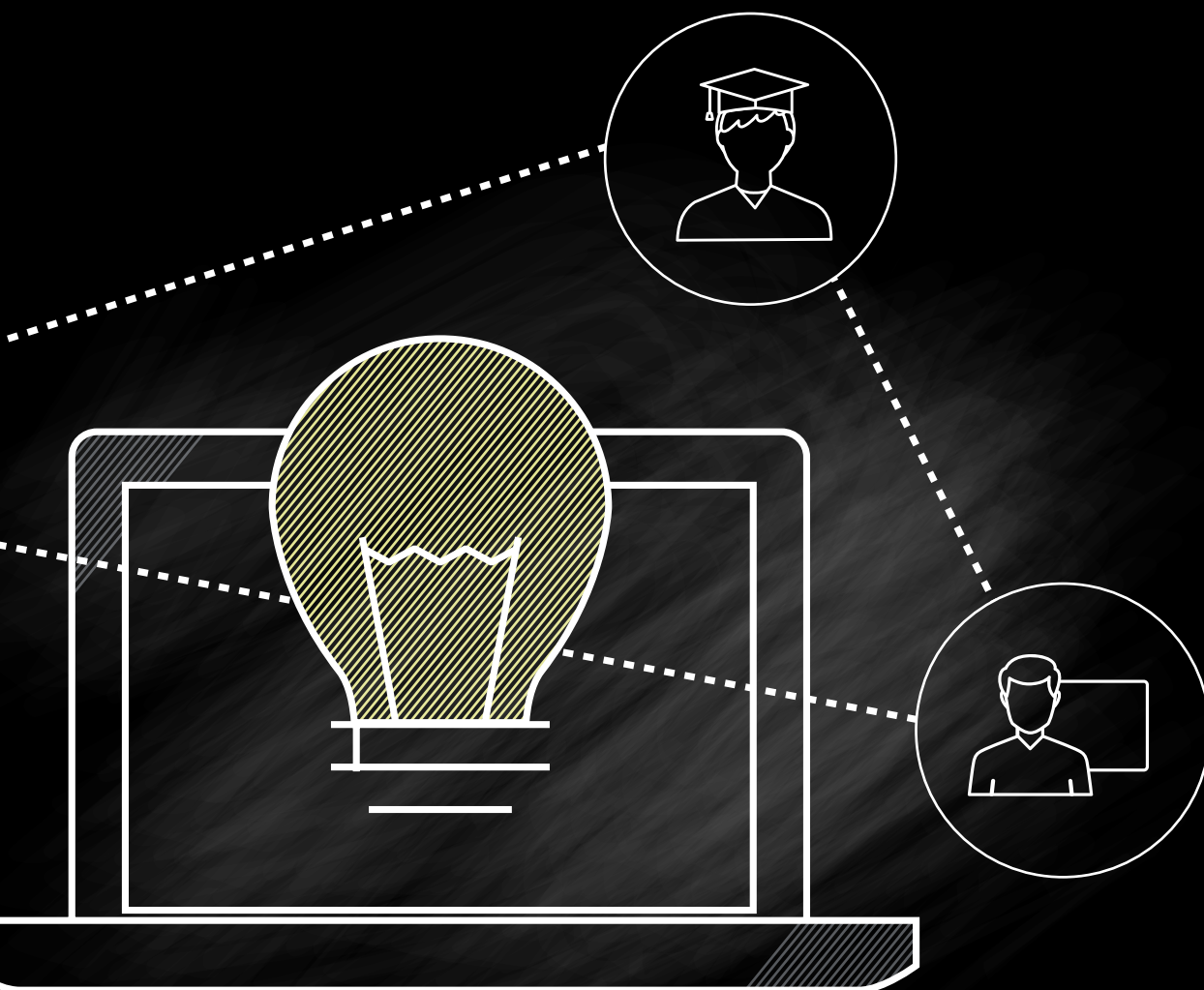


After the bell rings: expanding the classroom

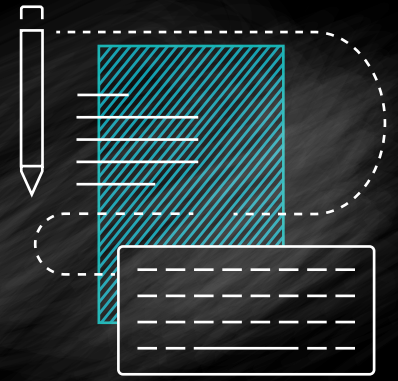
Emerging trends in digital education technology devices and materials

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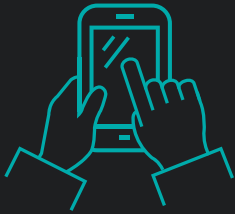
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About the survey



For the past decade, Deloitte's global Technology, Media & Telecommunications (TMT) practice has commissioned an in-depth survey, known as the Digital Democracy Survey, in order to develop an understanding of the attitudes and behaviors surrounding the rapidly transforming digital landscape.



This year, Deloitte's TMT practice commissioned its inaugural **Digital Education Survey**, to better understand how digital transformation is specifically impacting the education ecosystem, both inside and outside of the classroom.

- Education technology, as defined in this survey, includes devices and digital learning materials used in the context of learning.
- Digital learning materials include educational software or apps, games, videos, audio, research sources, eBooks, and simulations/virtual reality.

The Digital Education Survey analyzes 2,800+ responses from demographically-diverse teachers, parents, and students, each denoted throughout this report with the following icons:



PreK-12 classroom teachers in public or private schools



Parents of children under age 18, who, if they have school-aged children do not home-school their child



Children in kindergarten through grade 12

Each sample was sourced from online panels, including YouGov and approved partner-panel vendors. Samples were targeted to those known to be a teacher and to parents known to have children under age 18. All respondents were re-screened to meet study criteria and sample-balancing was minimally applied to bring the teacher and parent/child samples in-line with national norms.

A peek into today's classroom



For more than 100 years, K-12 education in the United States has taken place in a classroom roughly between 8 a.m.–3 p.m. With the advent of technology, that model has changed. Learning can now take place outside of the time and physical limitations of a typical school day.

Just as consumers' behavioral shifts drove the digital transformation of traditional media companies, it seems that the increasingly digital and tech-centric behaviors of students, teachers, and parents are expanding the way learning occurs. Understanding and positioning ahead of that behavioral shift will be critical in helping educational organizations succeed in the digital future.

Technology has impacted education by introducing new methods of learning, such as adaptive learning, flipped classroom models, and massive open online courses (MOOCs), but more shifts will occur as technology continues to evolve.

Before examining the challenges and opportunities resulting from this shift, let's take a peek at the wide range of education technology used in today's classrooms.

Textbooks' days are numbered.



75% of teachers believe that digital learning content will totally replace printed textbooks within the next 10 years.

Almost half of classrooms use a digital device everyday.

Laptops, desktops and tablets are the most common devices used in the classroom with more than half of teachers saying each is used at least weekly. **42%** of teachers say that at least one digital device is used everyday.



Which devices are used in the classroom in a typical week?



56%

Laptop
computer



54%

Desktop
computer



51%

Tablet



45%

Interactive
whiteboard



28%

Smart phone



23%

Chromebook



5%

Dedicated
eReaders



3%

Wearables

Despite everyday use, there is room for growth in school technology adoption.

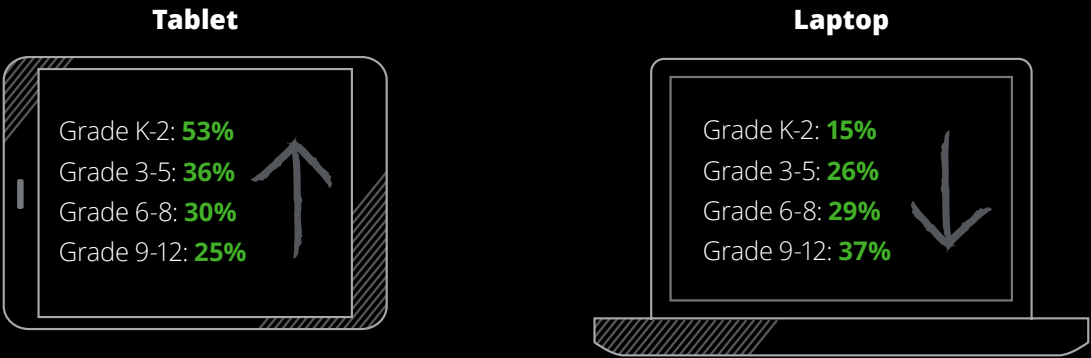
4 in 10 teachers say their school is “behind the curve” when it comes to technology adoption and implementation.

Device preferences vary by age.

Though tablets and laptops are the two most preferred devices among all students, preference for tablets declines as students get older, while laptop preference grows.



If you had to pick only one device to help you learn at school, which device would it be?

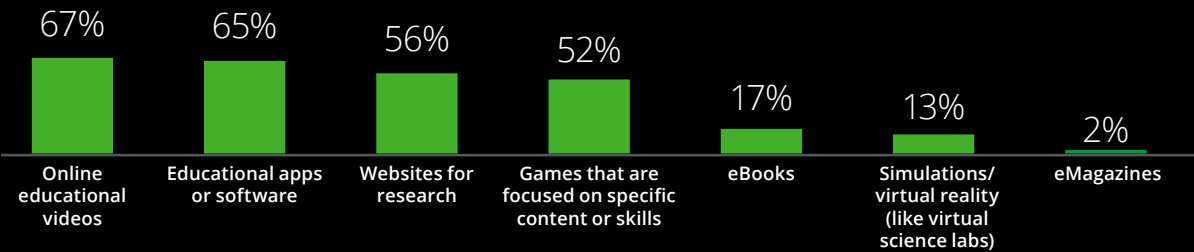


Multimedia learning materials rule.

Videos, apps, websites, and games are the most commonly used digital learning materials, with usage of games and apps more prevalent in PreK–5th grade classrooms.



Which digital learning materials do you use in your classroom in a typical week?



Among total teachers (%)	Teach PreK-2	Teach 3-5	Teach 6-8	Teach 9-12
Educational apps or software	66%	73%	66%	57%
Games that are focused on specific content or skills	63%	66%	51%	35%

After the bell rings: expanding the classroom



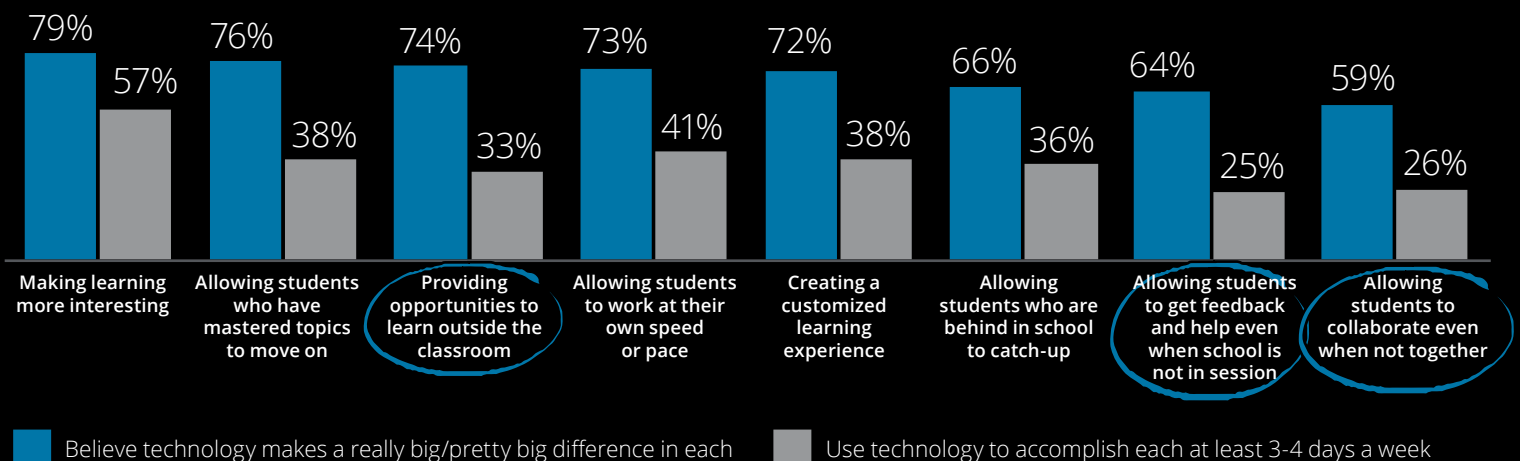
While education technology has seen growth in the classroom, our survey finds a prime opportunity for education technology to connect in-classroom curriculum to enhanced learning outside the classroom. The widespread availability and adoption of electronic devices at home, along with growing interest by teachers, parents, and students in continuing learning outside of the classroom has created an expansion of the education ecosystem.

Teachers see the potential, but assume boundaries...

Gaps exist between teachers' perceived benefits of education technology and their actual frequency of use. Some of the widest gaps exist around learning outside of the classroom.



How much of a positive difference, if at all, do you think technology makes for your students on each of the following?
How often are you currently using educational technology in the classroom to achieve each?



...and those boundaries don't really exist.

Parents and teachers crave more school-related, at-home digital content. **88%** of parents and **84%** of teachers are very or somewhat interested in having more at-home digital content available to supplement what's being taught in school.

Something we can all agree on.



Students are not far off from parents and teachers.

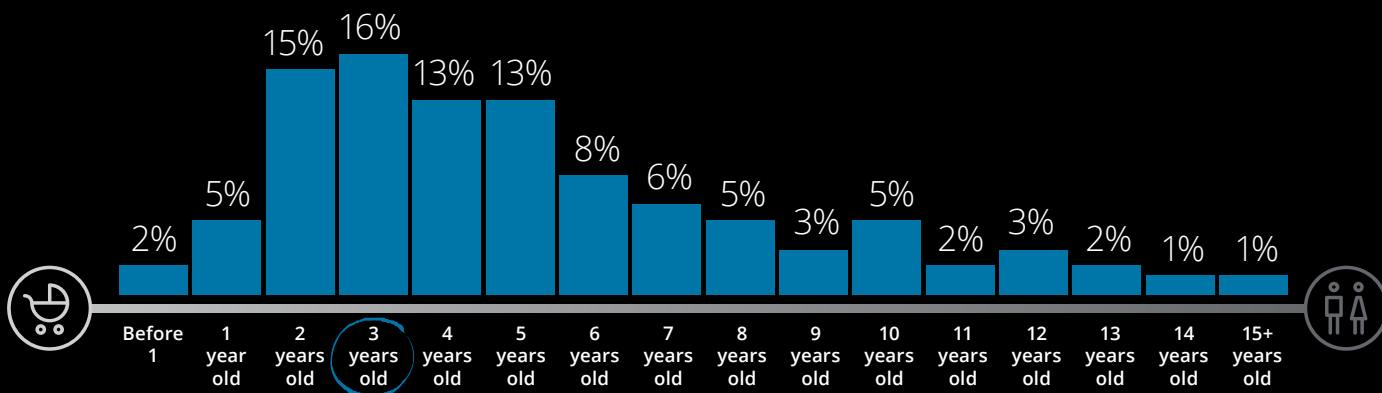
75% of students are very or somewhat interested in spending time learning more about the things they learn about in school when they are not in school.

The majority of kids are digitally learning at home—and starting early.

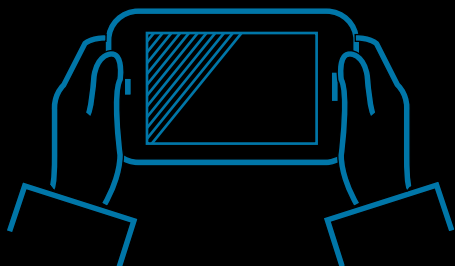
90% of kids use digital learning materials at home and **2/3** start by the age of 5.



At which age did your child start using digital learning materials or devices outside of a school setting?

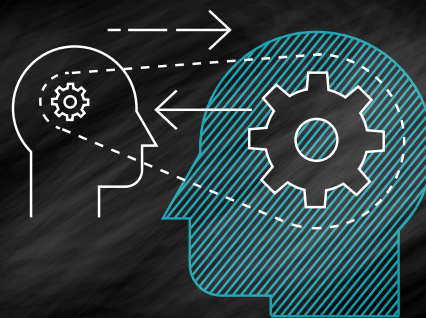


More access to digital learning materials equals more summer learning.



73% of kids say more access would increase their time spent learning over the summer.

A diversity of expectations and motivations



The usage expectations and motivations driving education technology use are varied between teachers, parents, and students, perhaps illuminating a need for greater customization for each audience, learning environment, and grade levels. Understanding the biggest motivators for digital product acquisition can be helpful in informing product design, learning objectives, and marketing messages.

Teachers put student engagement front and center.

For teachers, student engagement is the most important hook for acquisition of digital learning materials.



Which are the top reasons you acquire or want to acquire digital learning materials for your classroom?



74%

To engage my students



61%

To have materials that are fun/entertaining for my students



60%

To develop the skills I want to improve in my students



56%

I can personalize learning to my students' skill levels and interest



45%

My students express interest in using digital learning materials



44%

I can see how my students are understanding the materials in real-time



39%

To provide a way for my students to work with other students even if they are not all in the same place

If it's not improving skills or engaging their kids, parents aren't likely to buy it.

For parents, skills development is the leading motivator for acquiring/using digital learning materials at home.



Which are the top reasons you acquire or want to acquire digital learning materials for your home?



53%

To develop the skills I want to improve in my child



45%

To engage my child



43%

To have materials that are fun/entertaining for my child



39%

My child expresses interest in using digital learning materials



31%

I want to help connect my child's at-home activities to what's being done in school*



19%

To provide a way for my child to work with other students even if they are not all in the same place*



18%

My child's teacher recommended them to me*








**Only asked among parents of school-aged kids*

Outside-the-classroom learning motivations differ by children's grades.

Students in grades 4-8 are more attracted by a wider variety of motivators, with the exception of college preparation, which is more compelling for high school students.



Who or what makes you want to learn when not in school?

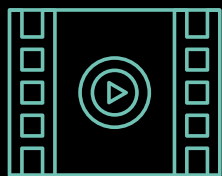
	Grades 4-5	Grades 6-8	Grades 9-12
 Having the chance to learn new things	41%	42%	37%
 Getting to do assignments that are fun	47%	44%	30%
 Wanting to do what my parents expect me to do	38%	36%	30%
 Getting to use technology to learn	32%	37%	28%
 Having the chance to learn with friends	33%	34%	25%
 Getting good grades in school	28%	28%	22%
 Wanting to be more prepared for what I will need to learn and do in college	15%	18%	29%

The (digital) category counts.

91% of parents are very or somewhat comfortable with their children using devices independently to play digital learning games, yet they are more likely to allow their child to spend more time with educational videos or apps than with educational video games.



For each activity listed, would you allow your child to spend more time on the activity if it was an educational activity or experience?



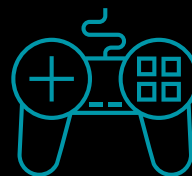
81%

Watching videos



80%

Using apps



68%

Playing video games

The power and influence of teachers



Teachers are empowered to play a key role in overcoming some of the barriers of education technology adoption. The survey results illuminate that teachers are uniquely trusted by other teachers, parents, and students, and they are looked to most for advice and knowledge regarding education technology. Teachers remain in digital times a key avenue to adoption.

Classrooms are using technology, but there are plenty of challenges.

Following financial pressures, classroom integration challenges are the second biggest barrier to increasing the use of educational technology inside the classroom.



Which things do you feel represent the biggest barriers to increasing the use of educational technology inside the classroom? Choose all that apply.

School/district doesn't have the funding

63%

Not enough devices per student

60%

Wifi connections are too slow

45%

Current school devices are too old

44%



Financial pressures chosen by **87%** of all respondents

Teachers aren't trained on using educational technology

41%

Not enough time in the day to make greater use of educational technology

31%

Difficulty integrating digital learning materials with current instructional content

22%

School/district administrators don't support using educational technology

7%

I don't believe education technology enhances student learning

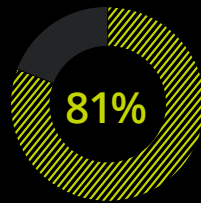
6%



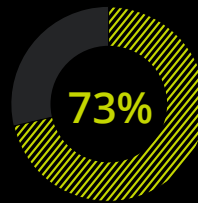
Classroom integration issues chosen by **61%** of all respondents

Digital natives are becoming digital teachers.

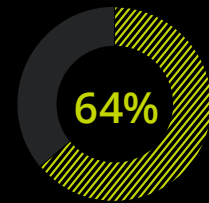
Newer teachers are bigger believers in the impact of education technology. **81%** of teachers with 10 or fewer years of experience believe educational technology at school makes a really big or pretty big positive difference on students' learning. But, only **73%** of teachers with 11-20 years of experience and **64%** of teachers with 20+ years of experience feel similarly. Harnessing the positive attitudes of newer teachers could help spread wider use of tech for learning.



of teachers with **10 or fewer years** experience



of teachers with **11-20 years** experience



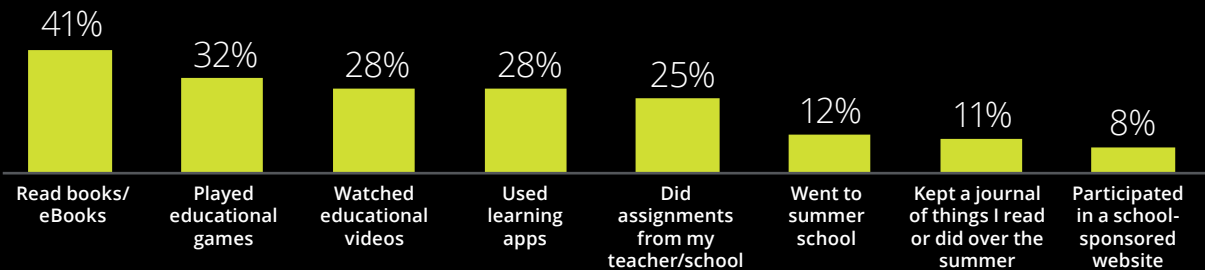
of teachers with **20+ years** experience

Teachers can light the fuse.

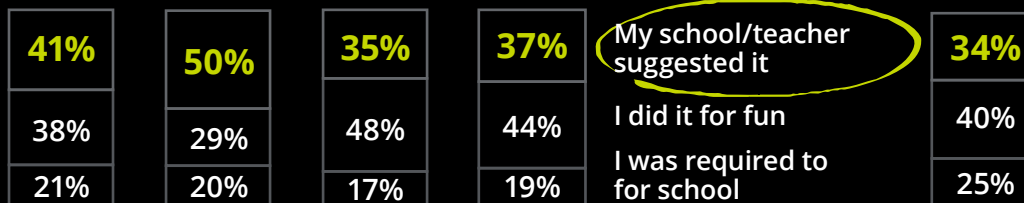
Teachers have the power to initiate summer learning. **81%** of kids said they did some kind of summer learning last summer and teacher suggestions were as important in driving engagement in summer learning activities as simply doing them for fun.



Last summer, when you spent time learning or doing assignments, what did you do?



Why did you do it?



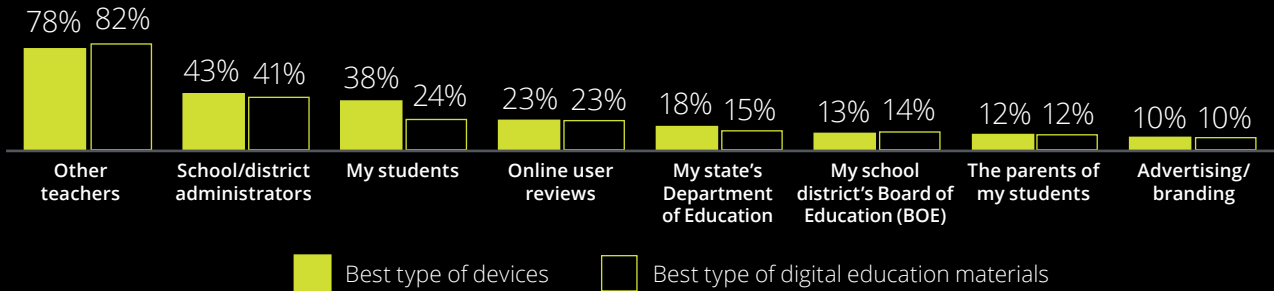
Parents trust teachers...and so do teachers.

Teachers' advice carries significant weight. By a wide margin, parents trust teachers most, and teachers trust each other, for advice on both digital devices and learning materials.



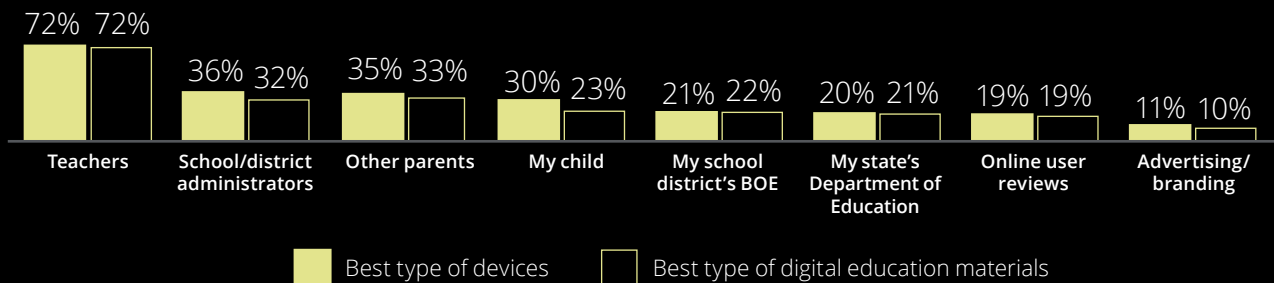
Who do you trust for advice on the best type of devices for your students learning in school?

Who do you trust for advice on the best type of digital educational materials for your students learning in school?



Who do you trust for advice on the best type of devices for your child's learning at home?

Who do you trust for advice on the best type of digital educational materials for your child's learning at home?

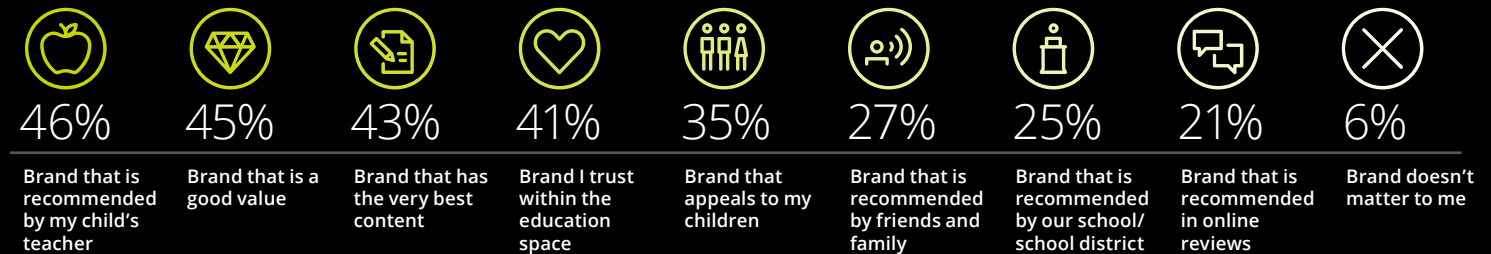


Teachers drive parents' dollars.

94% of parents care about brand when selecting digital learning materials, with teacher recommendations, good value, quality content, and trusted brand as the highest brand attributes.



Which brand attributes do you think are most important to you when you are selecting digital learning materials for use by your child outside of the school setting?





Navigating the future of the digital education landscape

Teachers are uniquely trusted by parents, students, and other teachers—and they see the potential for learning technology inside—and outside—the classroom. But this critical group hasn't embraced or deployed these tools as aggressively as their beliefs would indicate. Understanding the Why and addressing the How are critical to moving education technology from a great concept that will someday deliver, to an essential learning asset that provides value today and connects the classroom to the rest of a student's life.



About our practice

Deloitte has over 1100 global practitioners focused on the education industry, serving a diverse range of PreK–12, University, and Professional Education clients in a variety of capacities. In particular, Deloitte's Digital Education practice partners with clients across the evolving education landscape, ranging from global legacy players interested in improving efficacy to freshly minted education technology start-ups and non-profit education organizations looking to expand their reach.

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