



Kids and the Future of Artificial Intelligence

Key findings from a national survey of 1,510 children conducted online
November 6-15, 2023



Methodology Overview

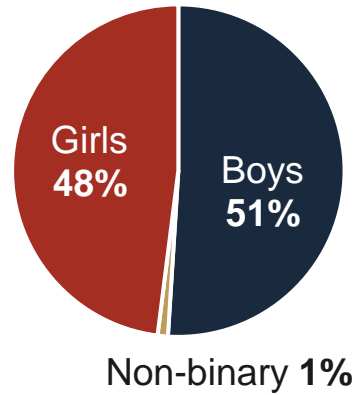
- The survey instrument was designed and reviewed through a collaborative process with 4-H, University of California-Irvine, Sunshine Sachs Morgan & Lylis, and Dr. Martha Bernadette Molina.
- **Phase I**: 10 cognitive interviews with children between the ages of nine to 17 years old to test and refine the survey instrument in October 2023.
- **Phase II**: Online survey with 1,510 children between the ages of nine to 17 years old.
 - Fielded November 5 to 16, 2023.
 - Credibility interval ± 2.5 percentage points for full sample, higher tolerances for subgroups.



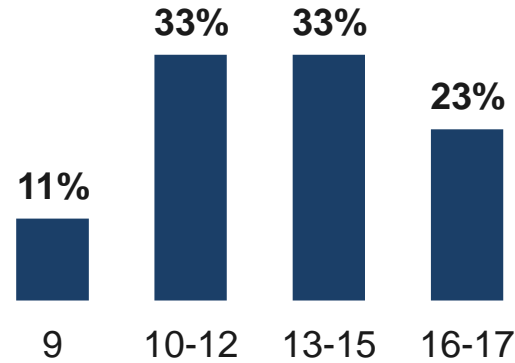
Sample Overview

Children, ages nine to 12 were recruited exclusively through invitations sent initially to their parents or caregivers asking permission for them to participate in the study. Once they were granted permission to participate, respondents participated in the study. In addition, children ages 13 to 17 were recruited directly to complete the survey.

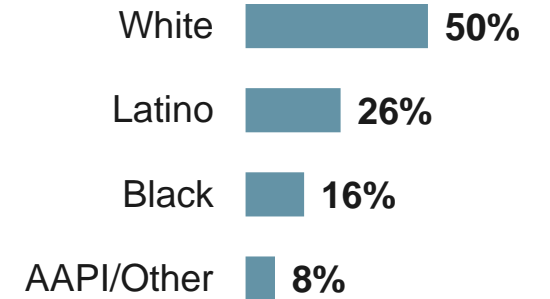
Gender



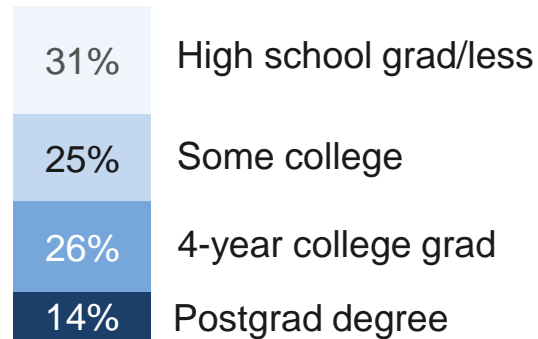
Age



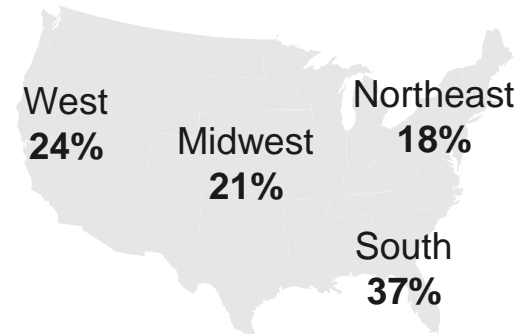
Race



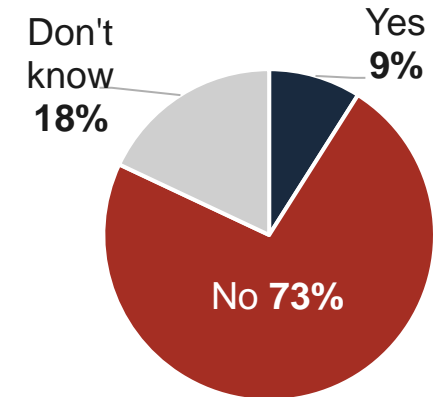
Caretakers' Highest Education



Region



4-H Participation



Key Findings

1

Kids have a solid understanding of generative AI as a concept and are aware of various AI tools and platforms. When first prompted, they are familiar with generative AI and its capabilities in very broad terms, including what it can do and how it operates. Further, most kids have heard of one or more AI-powered tools, such as search engines, apps that answer questions or generate text, educational apps and games, and virtual friend apps.

2

While many kids are aware of and possess some knowledge about AI and AI-powered tools, their daily and weekly level of engagement and usage is generally low. The only AI-powered tool whose usage by kids mirrors their overall knowledge is search engines, which most kids report using daily. Among kids familiar with the tool, half report weekly usage for learning apps and games, as well as for apps that listen and type what you say to text, and apps that answer questions or write text.

3

Kids want adults involved in learning how to use and engage with the AI tools they have used or might use in their lives. Encouragingly, seven in 10 kids say they are already getting the right amount of help from adults in learning to use different AI tools AND would like some help from adults in learning how to use AI tools. Younger users especially would like help from adults in learning how to use these AI-powered tools.

4

Many kids use AI-powered tools and ChatGPT for schoolwork, but many are not clear about the right way to use them. Over six in 10 users report using one or more AI-powered tools for schoolwork done at home, and two in five for schoolwork done in class. Furthermore, a strong minority (over 20%) of kids use ChatGPT for schoolwork, both in class and at home. Among kids who use ChatGPT as a tool to complete school assignments, one in three is not clear about the right way to use it.

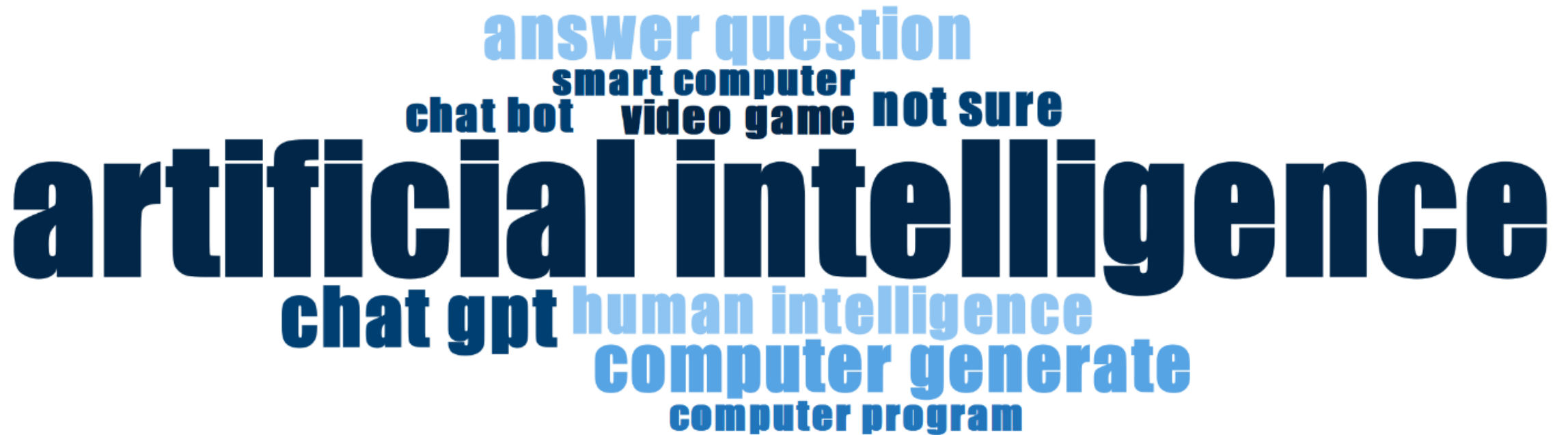
5

Kids see a number of benefits to AI but also express concerns about its use and confidence in what it generates. They feel there are a lot of opportunities that could come from using AI—for their education, future careers, and asking uncomfortable questions—but express some reservations about how it could be used for cheating in school and some of the privacy implications of its use. They also recognize that not all information generated by AI is accurate or trustworthy.

AI Awareness and Use

When first prompted, kids express that they are generally familiar with the concept of AI and what it does.

Word associations and understanding of AI (Based on verbatim responses)



In their own words...



“AI is a modern technology. AI stands for Artificial Intelligence, and that is a pretty good description of what AI is. AI is able to learn and train to do specific tasks, like writing essays, programming, or simply chatting with users.”



“A machine that tries to use patterns in order to output something based on your input and a database.”



“A really smart robot.”



“With AI, technologies can be completely changed. Everyday processes can be more efficient and effective. Time to figure things out would be completely cut in half.”

Initially, most kids say they are not using any AI tools. Chatbots are the tool that kids are mostly likely to use, with greater usage for teens.

Which of the AI technologies, tools, platforms, or services have you used in the past few weeks?

		9-12 Year-Olds %	13-17 Year-Olds %
Chatbots	20%	14	26
Search Engines	6%	5	7
Virtual Assistants	6%	7	5
Social Media AI	4%	3	5
AI in Devices	3%	4	2
Writing Aids	2%	1	3
Voice Recognition	2%	3	2
Non-Usage	51%	55	48





Most kids have heard of search engines and apps that answer questions/write text. Awareness among teens is generally higher.

Have you heard of any of these tools?

		9-12 Year-Olds %	13-17 Year-Olds %
Search engines	82%	84	81
Apps that answer questions or write text	63%	56	69
Apps that act as virtual friends	40%	29	49
Learning apps or learning games	34%	33	35
Apps that read out loud	29%	28	30
Apps that create images or music	29%	23	33
Apps that listen/type what you say to text	25%	26	24
Chatbots that help with mental health	17%	16	17

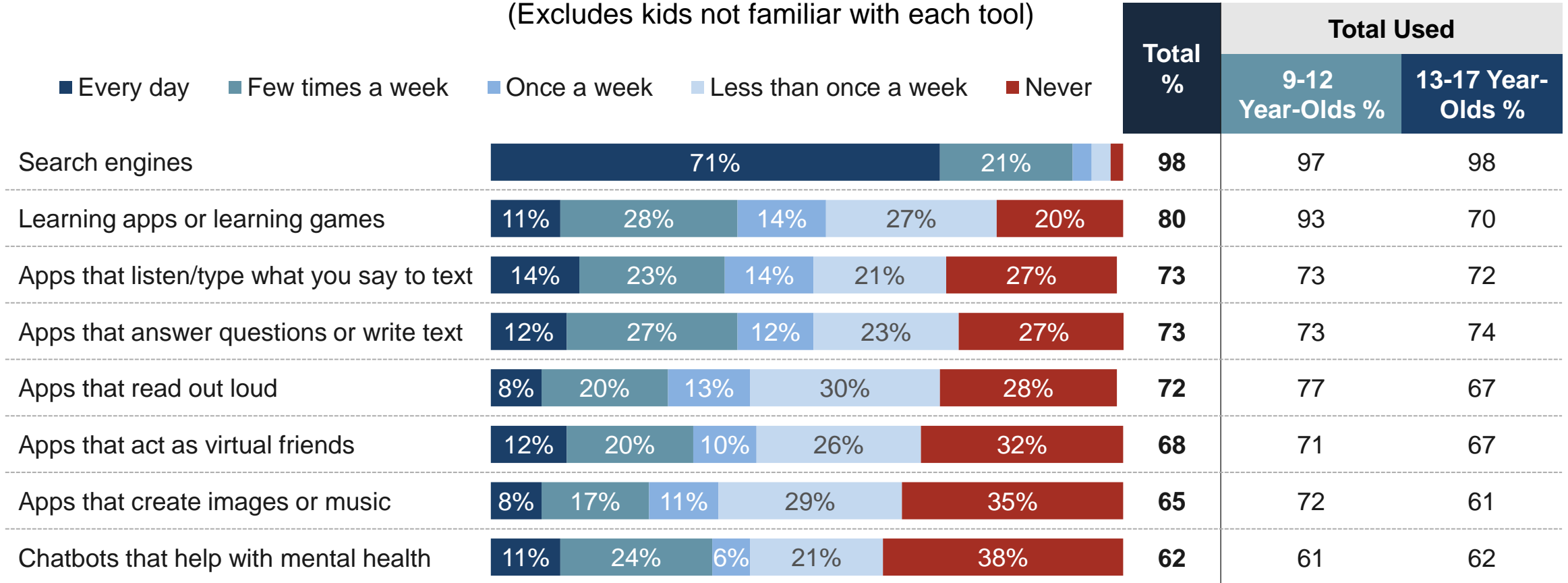
Familiarity with answer/writing, virtual friend, and learning apps varies by gender and grade level.

Have you heard of any of these tools?
(Among the four most well-known tools)

	 Search engines %	 Answer/writing apps %	 Virtual friend apps %	 Learning apps %
All kids	82	63	40	34
White kids	84	60	42	38
Black kids	80	64	42	32
Latino kids	80	65	37	30
AAPI kids	85	76	35	28
Boys/Elementary school	84	59	30	35
Girls/Elementary school	86	56	25	28
Boys/Middle school	84	59	31	37
Girls/Middle school	86	62	40	40
Boys/High school	79	74	47	31
Girls/High school	79	64	55	33
Non-college caretakers	79	58	39	31
College caretakers	89	72	41	39
4-Her	74	63	40	38





Among those familiar with various tools, most use search engines daily; other tools are used much less frequently.

How often have you used each of these tools?
(Excludes kids not familiar with each tool)



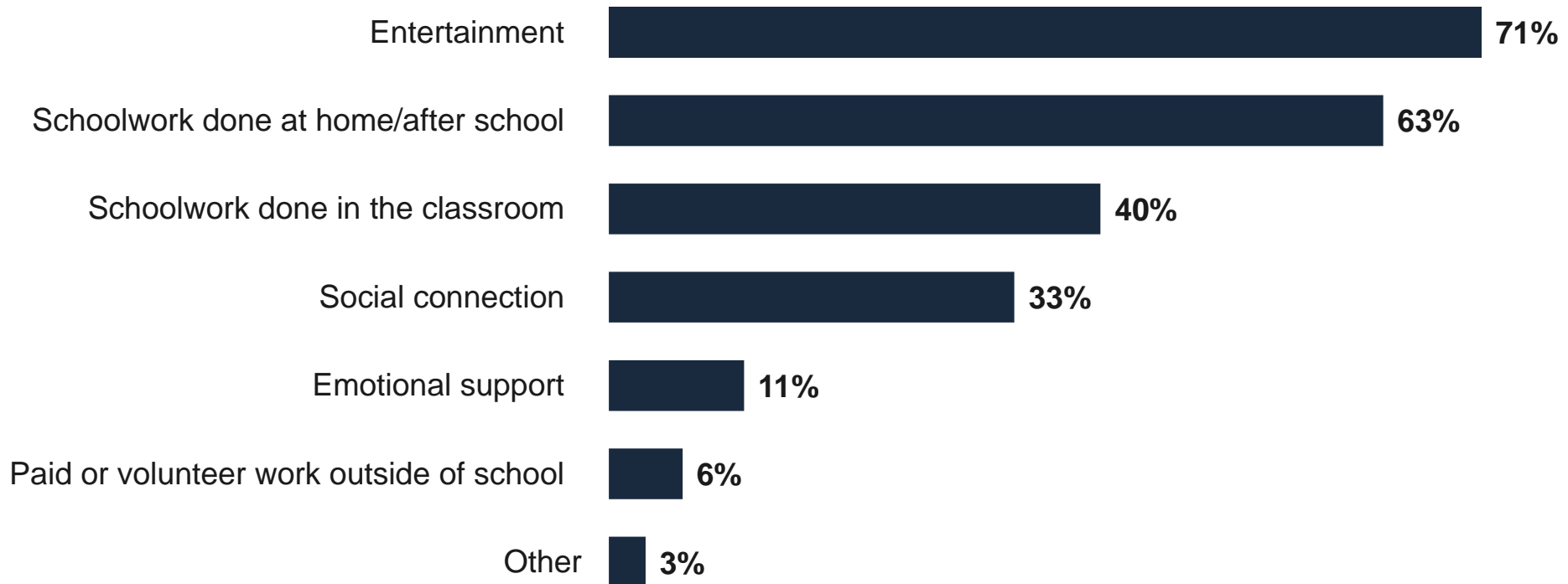
Usage also varies in important ways across gender and grade levels and race/ethnicity.

Total used tool weekly among most well-known tools
(Excludes kids not familiar with each tool)

	 Search engines %	 Answer/writing apps %	 Virtual friend apps %	 Learning apps %
All kids	94	50	42	53
White kids	94	44	37	48
Black kids	95	59	46	63
Latino kids	96	57	52	64
AAPI kids	94	54	39	41
Boys/Elementary school	93	60	55	74
Girls/Elementary school	92	59	43	67
Boys/Middle school	94	50	44	69
Girls/Middle school	95	47	62	57
Boys/High school	96	52	39	35
Girls/High school	96	43	28	35
Non-college	94	54	45	60
College	95	47	37	47
4-Her	95	65	63	73



Most AI users are using the tools for entertainment and schoolwork.

For what purpose did you use these tools?



While many kids are using these tools for schoolwork both at home and in the classroom setting, usage is taking place at home more often.

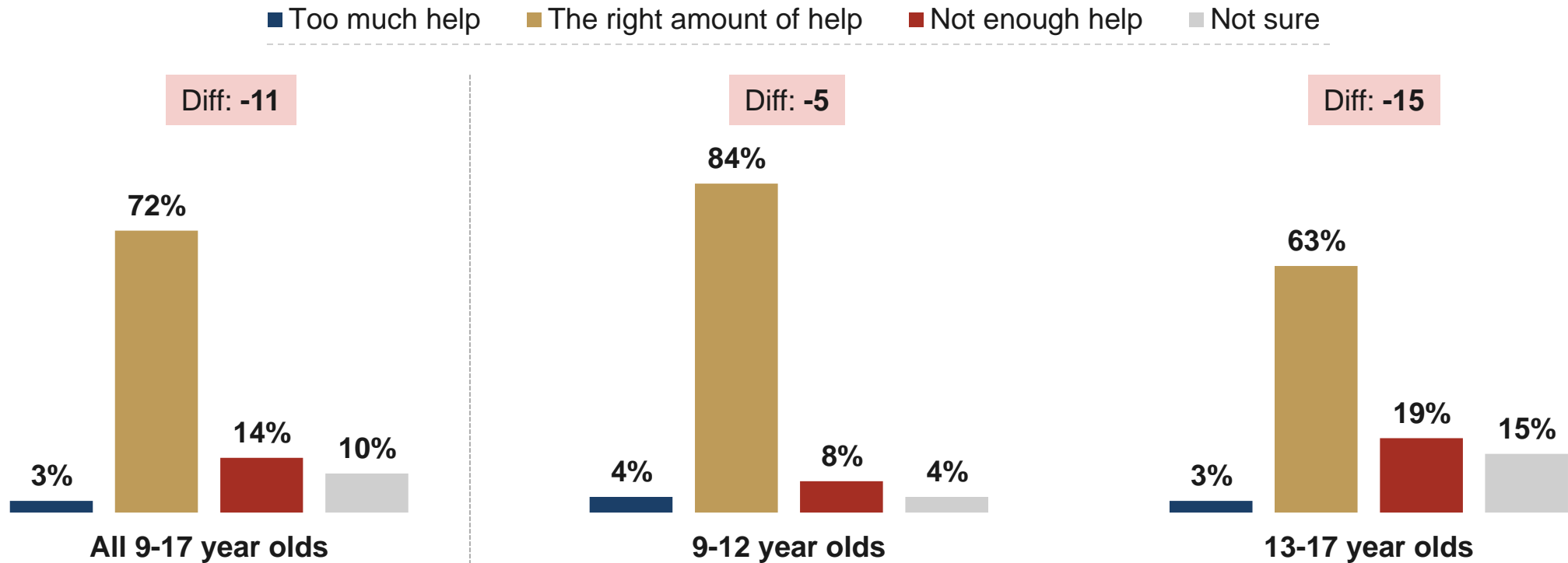
For what purpose did you use these tools?

	 Schoolwork done at home %	 Schoolwork done in classroom %
Boys 9-12	64	39
Boys 13-17	65	46
Girls 9-12	53	31
Girls 13-17	70	41
Elementary (Grades 3-5)	54	34
Middle (Grades 6-8)	65	36
High (Grades 9-12)	68	47
White kids	64	41
Black kids	65	47
Latino kids	60	37
AAPI kids	63	30
Northeast	68	34
South	61	38
Midwest	64	48
West	61	41
4-Her	67	49

How Kids are Experiencing AI

Kids feel like they are getting the right amount of help from adults in learning how to use AI tools. Older kids are looking for more additional guidance than younger kids.

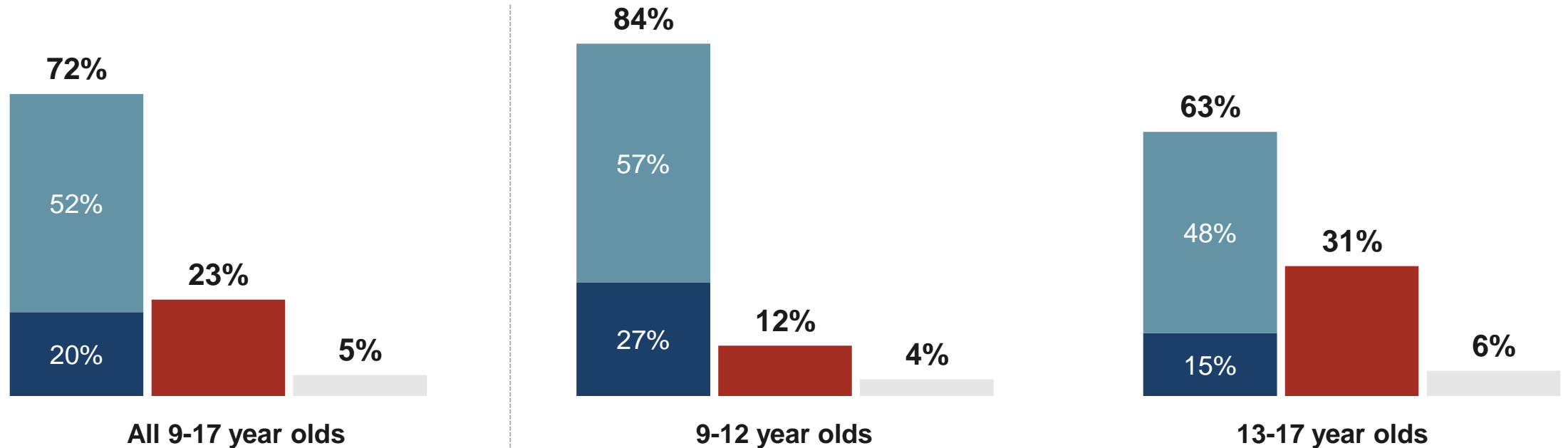
Among the tools you have used, how much help did you get from adults in learning how to use them?



Over seven in 10 kids that use AI would like to get some help from adults in learning how to use different tools.

How much help would you like to get from adults in learning how to use the AI tools you use?

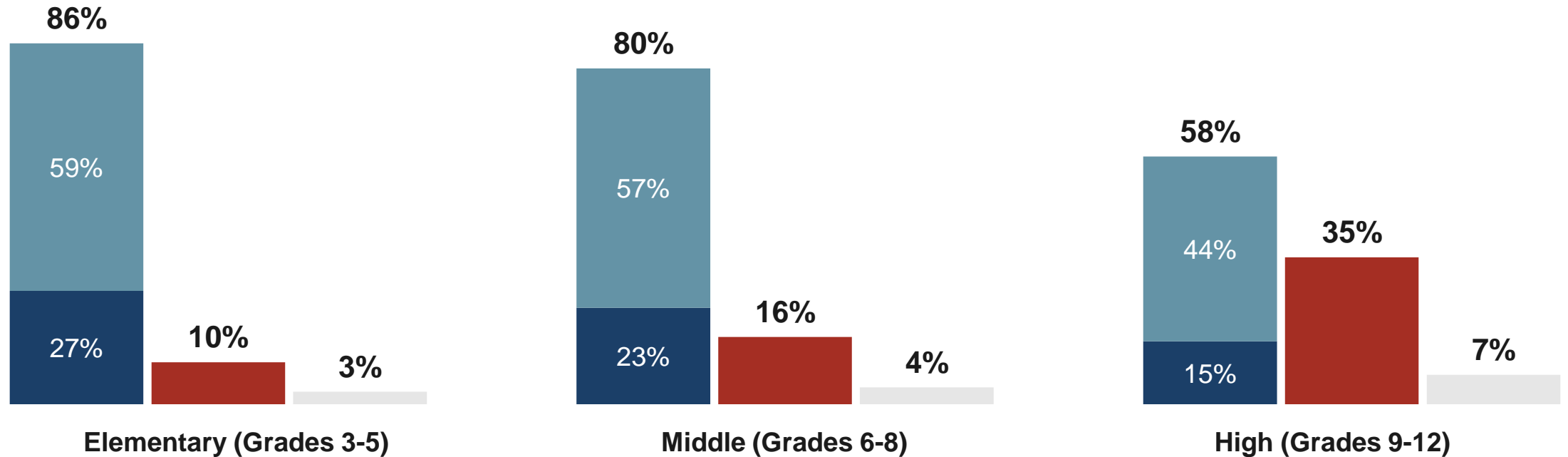
■ A lot of help ■ A little help ■ No help at all ■ Don't know



Elementary and middle school aged kids would especially like more help in learning how to use different AI tools.

How much help would you like to get from adults in learning how to use the AI tools you use?

■ A lot of help ■ A little help ■ No help at all ■ Don't know



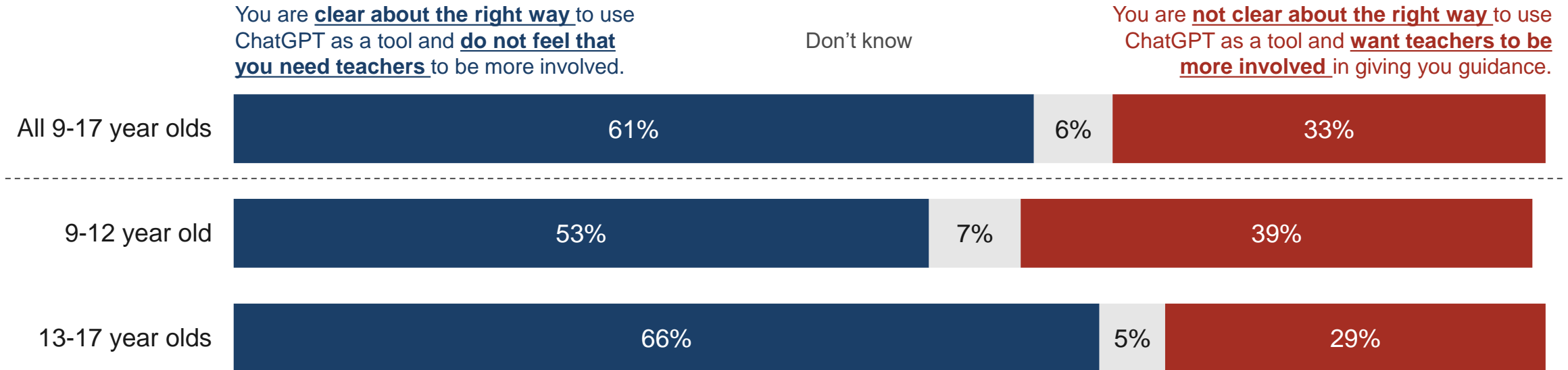
Adults are primarily helping kids learn how to use search engines, and to a lesser extent answer/writing and learning apps.

Which of these tools have adults, like parents or teachers, helped you learn?

		9-12 Year-Olds %	13-17 Year-Olds %
Search engines	59%	69	52
Apps that answer questions or write text	26%	30	23
Learning apps or learning games	22%	29	18
Apps that read out loud	11%	15	8
Apps that act as virtual friends	8%	9	7
Apps that listen/type what you say to text	7%	7	7
Apps that create images or music	7%	9	5
Chatbots that help with mental health	4%	5	4
None of these	17%	6	25

While most kids feel that they know how to use ChatGPT for school the right way, many want teachers to be more involved in giving guidance.

Which of the following comes closer to your view?
(Excludes kids who do not use ChatGPT as a tool in school assignments)



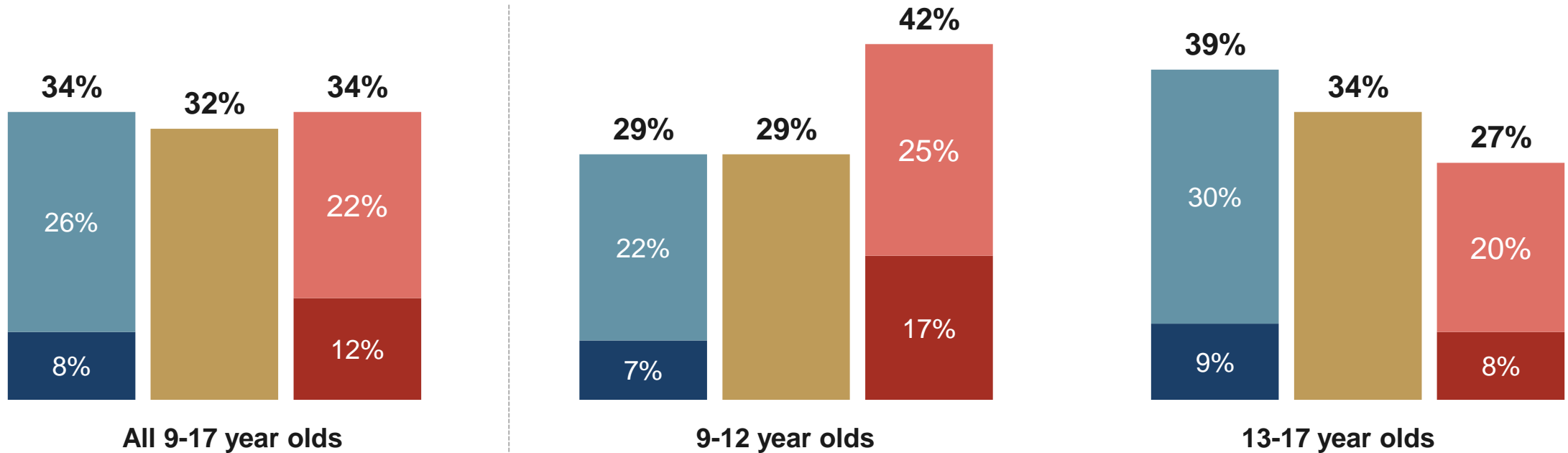
37% of kids familiar with the tool say they do not use ChatGPT as a tool to complete school assignments.

Generative AI and ChatGPT

Most kids say they know something about Generative AI, but this knowledge is limited.

How much do you know about Generative AI?

■ A great deal ■ A fair amount ■ Just some ■ Very little ■ Nothing at all

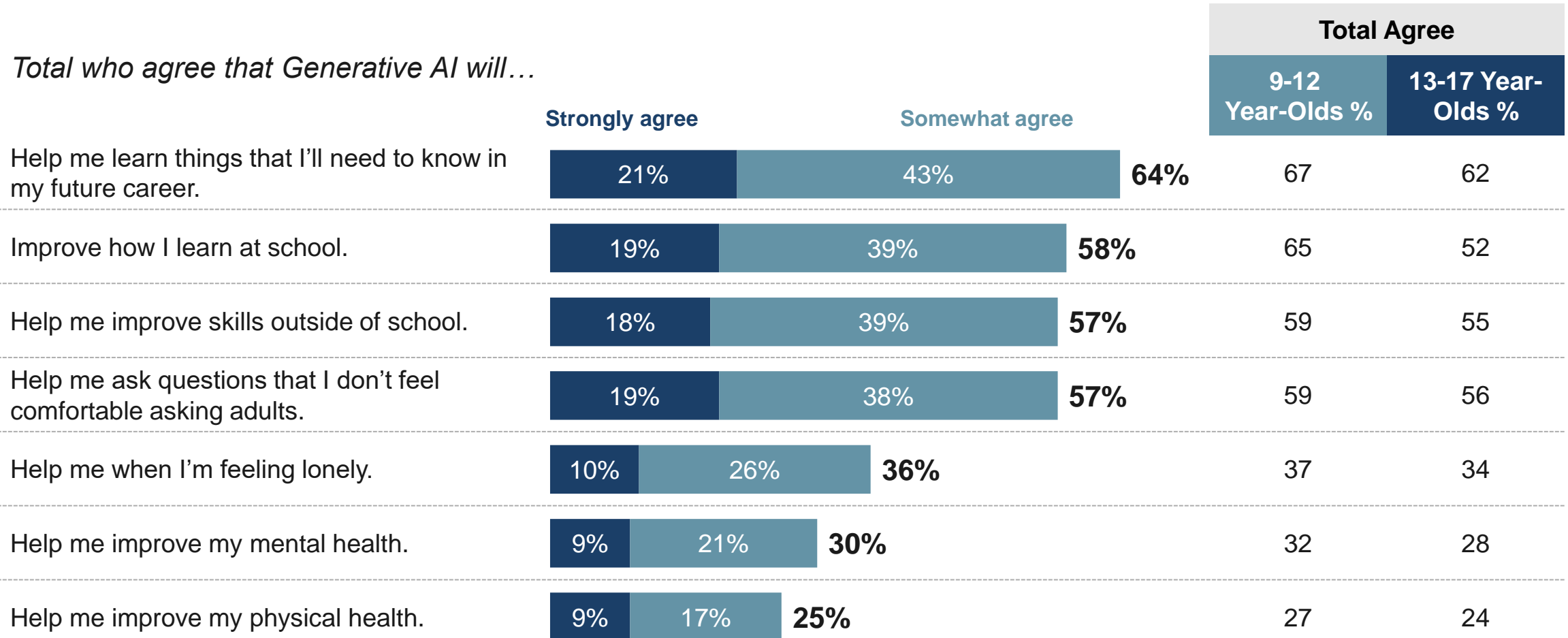


Gender, grade level, race/ethnicity, and geography separate the kids who feel they have a stronger or weaker understanding of Generative AI.

How much do you know about Generative AI?

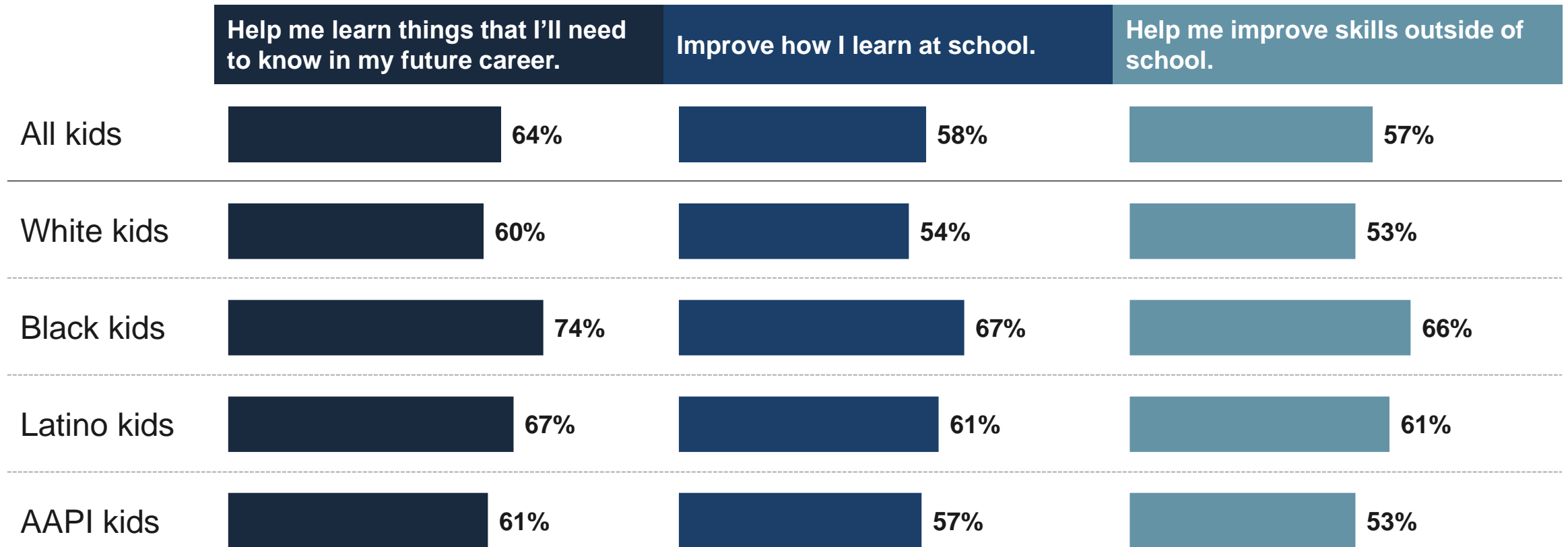
	Total great deal/fair amount %	Total very little/nothing at all %	Net AI knowledge
All kids	34	34	0
White kids	30	37	-7
Black kids	46	28	+18
Latino kids	35	32	+4
AAPI kids	36	31	+5
Boys/Elementary	30	44	-15
Girls/Elementary	22	50	-27
Boys/Middle	34	35	-1
Girls/Middle	34	34	+1
Boys/High	43	23	+20
Girls/High	38	30	+8
Northeast	39	33	+6
South	37	33	+4
Midwest	28	36	-8
West	33	34	-1
Urban	38	31	+7
Suburban	36	33	+2
Small town/rural	28	38	-10

Kids identify many positive aspects of Generative AI, including for their education, career, and asking uncomfortable questions.



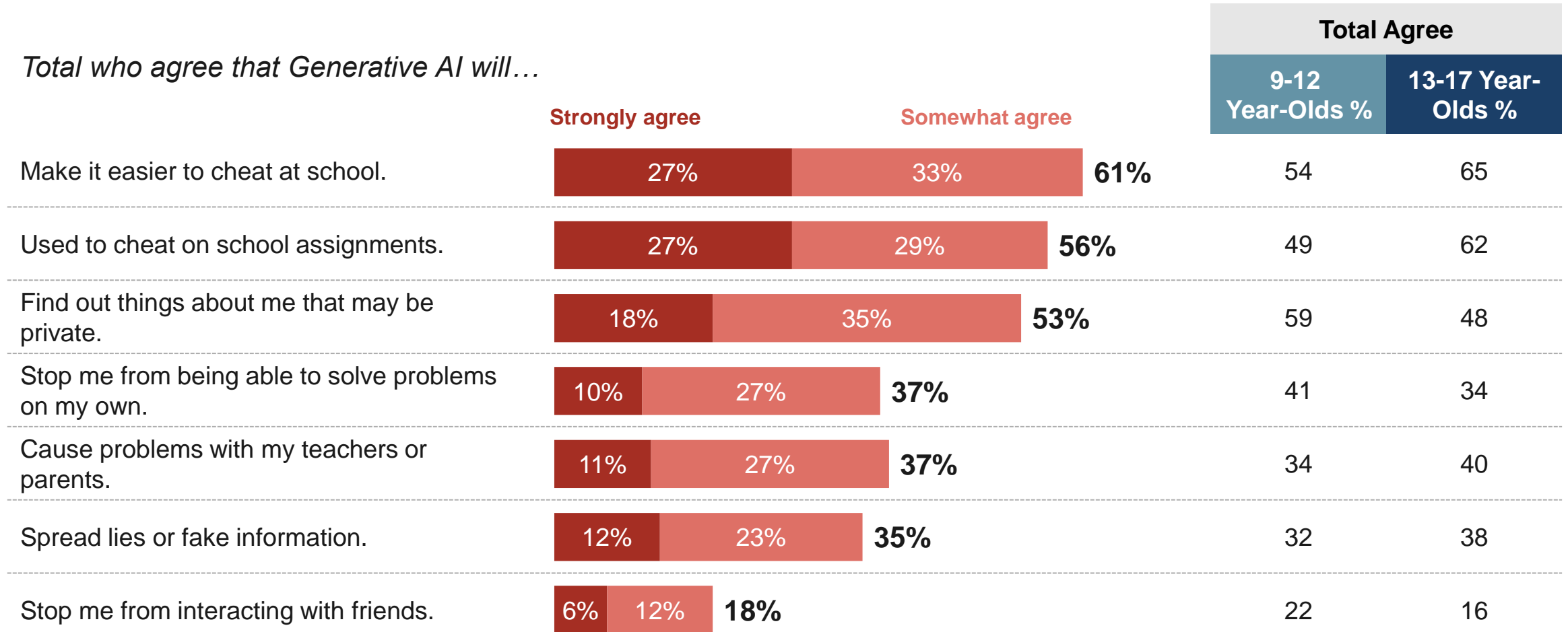
Black and Latino kids are more likely than White kids to see the positive impact of AI on their education and career.

Total who agree that Generative AI will...?



But kids also express concerns about Generative AI being used to cheat on school assignments and privacy implications.

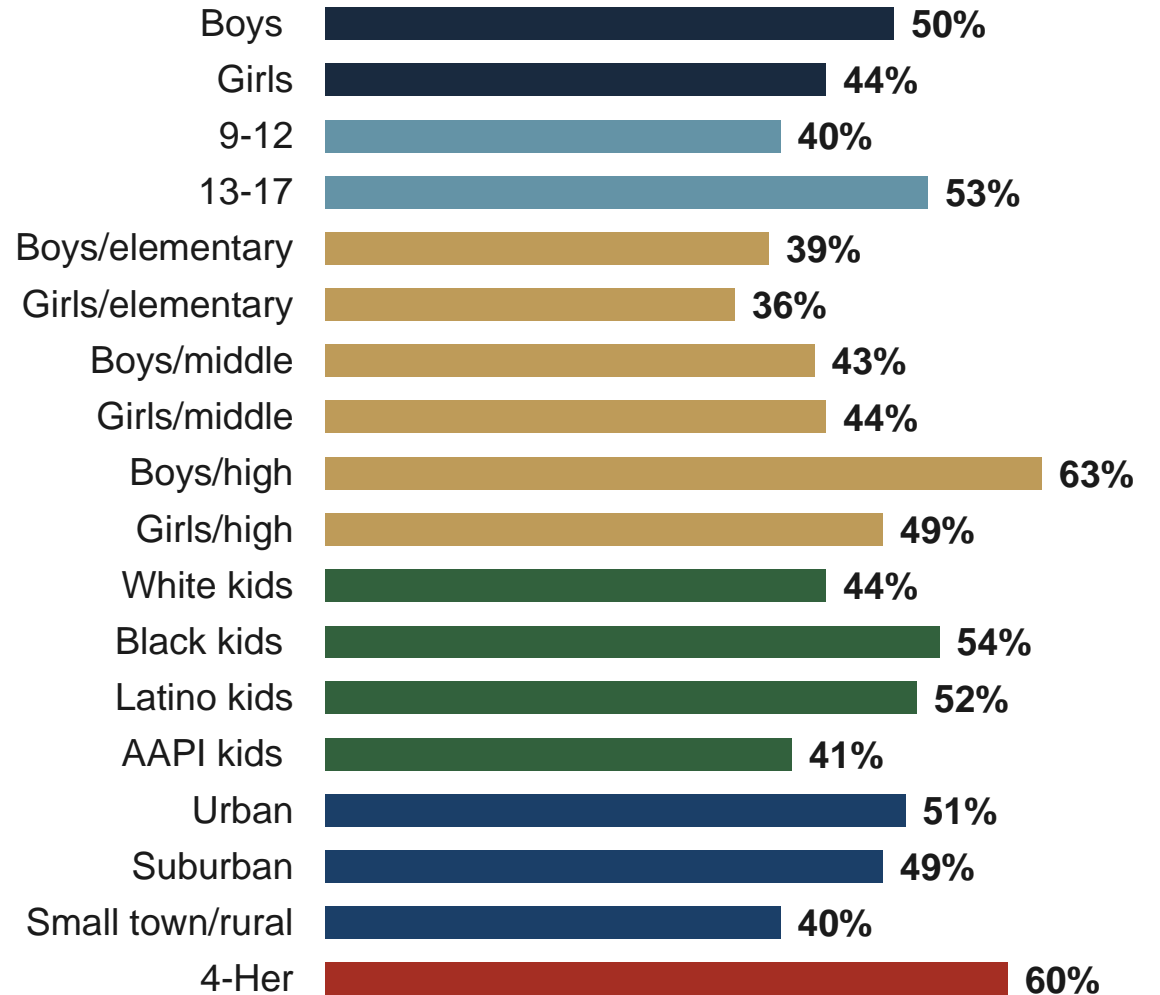
Total who agree that Generative AI will...



After reading a brief description, nearly half of kids and most teens say they have used Generative AI.

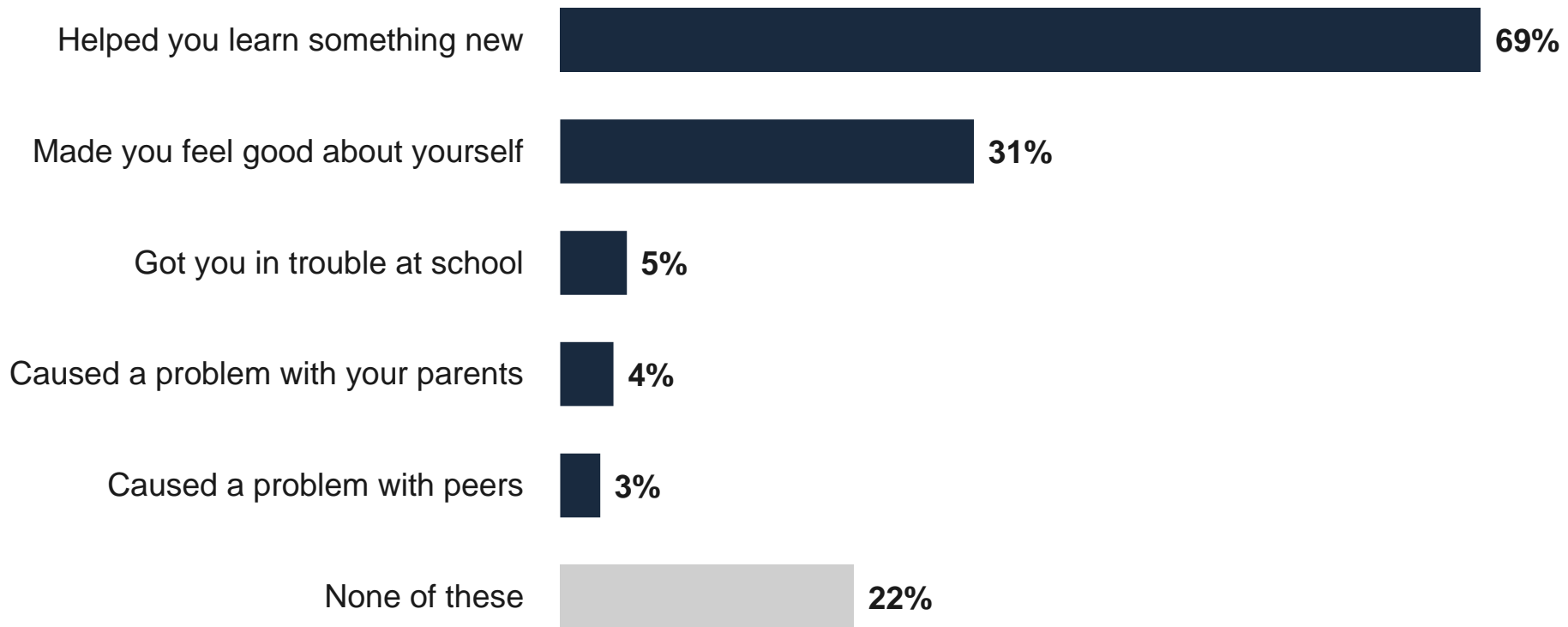
Generative AI is a type of smart computer that creates **new things, like art, music, or writing**, without help from humans by **learning from lots of examples**. Some examples of generative AI that you may have heard of are **ChatGPT, Bing, and Google Bard**.

Total percent who have ever used Generative AI



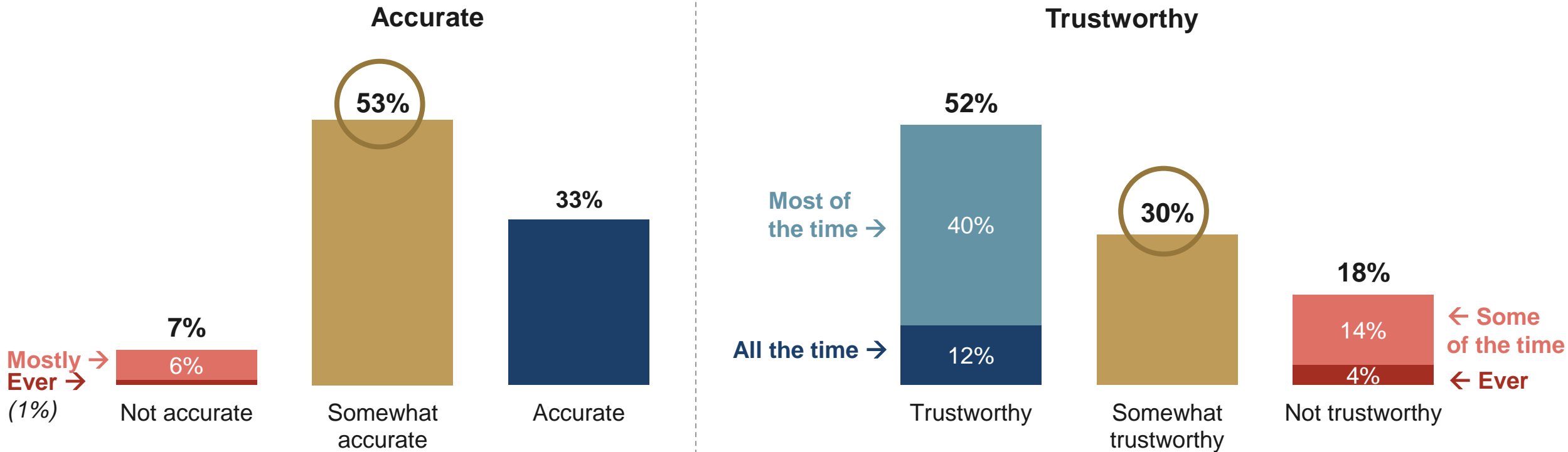
Generative AI users believe the tool has helped them learn new things. Negative academic and social experiences are rarer occurrences.

Have you, personally, ever had an experience with generative AI that...?



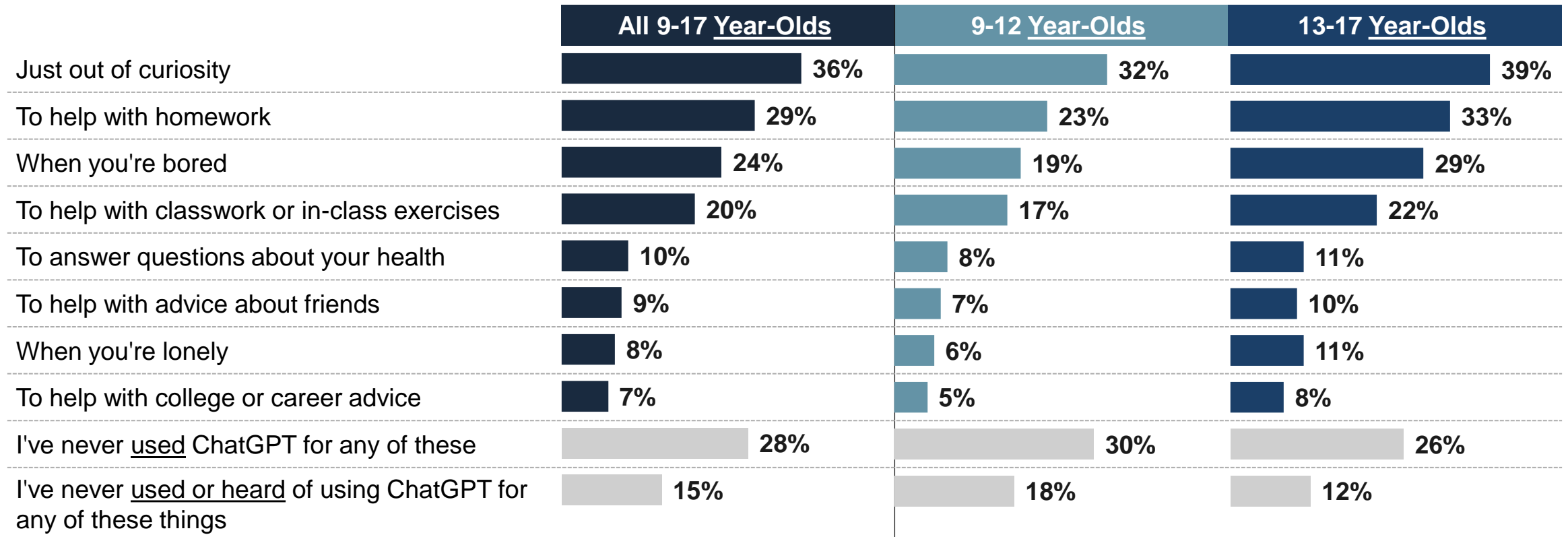
Even though Generative AI users are using the tool for learning, they also recognize not all AI-generated information is accurate or trustworthy.

Do you think the information that you personally get from ChatGPT and other types of Generative AI is...?





ChatGPT specific users are primarily using the tool either just for fun or school-related work. Many kids are not using ChatGPT.

Have you used ChatGPT...?



In line with other tools, ChatGPT users are more likely to use it for homework, NOT classwork.

Two in five kids who report high awareness and usage of different AI tools are using ChatGPT to help with homework.

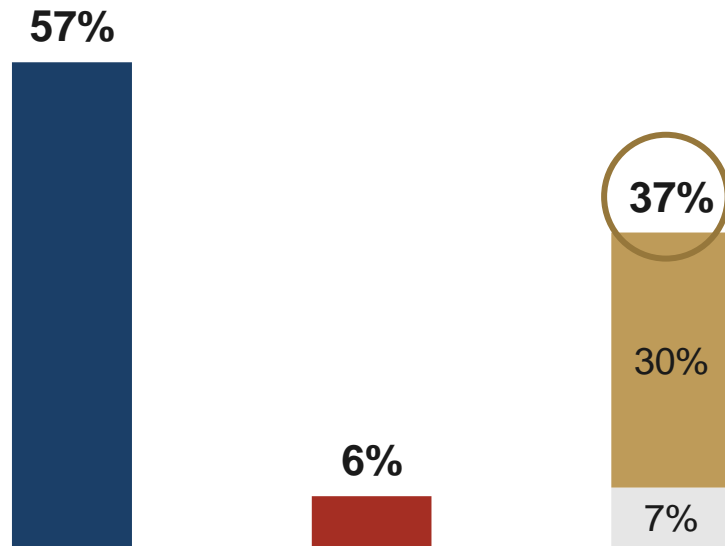
	 To help with homework %	 To help with classwork %
Boys 9-12	25	19
Boys 13-17	37	25
Girls 9-12	21	16
Girls 13-17	29	19
White kids	24	18
Black kids	35	22
Latino kids	34	24
AAPI kids	28	18
Elementary (Grades 3-5)	22	15
Middle (Grades 6-8)	25	19
High (Grades 9-12)	35	24
Low tool awareness	17	10
Medium tool awareness	33	21
High tool awareness	42	36
Low tool usage	10	5
Medium tool usage	29	17
High tool usage	43	34
Northeast	31	23
South	28	20
Midwest	27	15
West	30	22
4-Her	39	36

Most ChatGPT users believe the tool will be a good thing for both themselves personally and their education, but many are unsure.

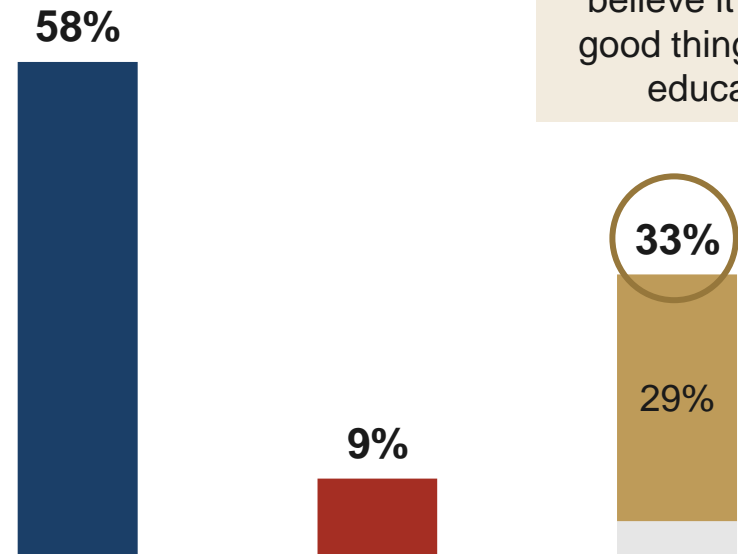
Do you think ChatGPT is a good thing for...?

■ Yes ■ No ■ Maybe ■ Don't know

You personally



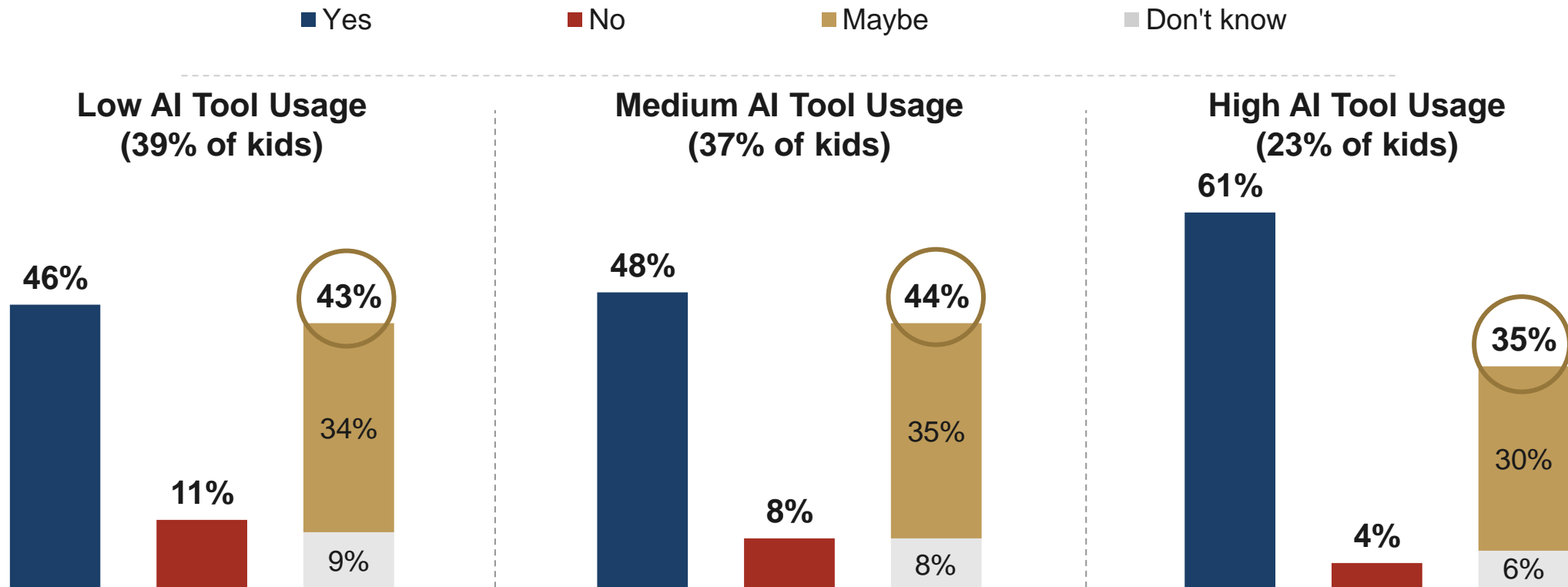
Your education



70% of Black kids who use ChatGPT believe it will be a good thing for their education.

Those who use AI tools the most are more likely to see the benefits of ChatGPT for them personally.

Do you think ChatGPT is a good thing for you personally?
(Excludes kids who do not use ChatGPT)



Like other Generative AI users, ChatGPT users believe the tool has helped them learn new things.

ChatGPT has helped me to...?

