

The TikTok Challenge

Curbing Social Media's Influence On Young Minds



Introduction

Each generation faces its challenges and struggles to adapt to a rapidly changing technological world. In the 1980s, computers transformed how society worked, communicated, and accessed information. In the 1990s the Internet ushered in an era of global connectivity and e-commerce. Today, social media shapes and redefines our politics, culture, and norms at a dizzying pace, particularly for young people.

Take TikTok, the video-centric social networking app that didn't exist just five years ago. Currently, it boasts more than 1 billion users, and in [2021 it surpassed Google](#) as the most popular global website. It is the app of choice for teens and young adults, with an estimated [38 percent of U.S. teens saying it's their favorite social media platform](#). Indeed, a third of TikTok's American users are minors. And these teens

are using TikTok in ways that go beyond sharing memes and watching choreographed dance videos. *The Wall Street Journal* has called TikTok [the "new Google"](#) as young people use it to seek information on everything from fashion trends to financial advice.

The problem with that? TikTok is rife with mis- and disinformation, bunk science, and harmful content. In December 2022, the [Center for Countering Digital Hate](#) revealed that it took TikTok's algorithm less than three minutes to recommend "suicide content" to new 13-year-old users, and only eight minutes to serve them videos related to eating disorders. [Another report from late 2022](#) found that "for a sampling of searches on prominent news topics, almost 20 percent of the videos presented as search results contained misinformation."

The hours teens spend on social networks like TikTok profoundly [impacts](#) their understanding of the world. This is especially true for those with little guidance from the adults in their lives. And the amount of time young people spend on TikTok and other social media apps is staggering: According to [a 2021 survey](#), teenagers spend an average of nearly two and a half hours a day scrolling their social networks. The hours spent passively consuming dubious content may erode young people's ability to accurately judge and assess the information they encounter, both on- and offline.

Is astrology a science? Is numerology legitimate? Is the Earth flat? The answer to all these questions is "no." But young people glued to their social media had a hard time answering when the Reboot Foundation surveyed them this past March. Nearly 40 percent of TikTokers (ages 13 to 24) who use the app for more than an hour a day said they believed in numerology. When it came to astrology, 58 percent said it might be a legitimate science. And the flat Earth? 17 percent of teen users couldn't say definitively that the Earth is round.

The hours spent passively consuming content of dubious origin may be eroding young people's ability to accurately judge and assess the information they encounter.

Is all this time on social media making young people less intelligent?

Probably not. However, the significant changes social media has made to how young people access and interpret information may be making them vulnerable to influence in ways that affect what they think and what they believe to be true.

In light of these questions and the [substantial body of research](#) linking social media to negative life outcomes, Reboot conducted a series of surveys in early 2023 to learn about the usage habits of young TikTokers. Of particular interest was how the app influences their beliefs and understanding of news, especially as it relates to science. The surveys also targeted U.S. adults to assess what social media reforms or regulations they would support.

Taken together, the survey results paint a picture of a society that is both increasingly influenced by – and wary of – social media platforms that have emerged as the dominant source of news and entertainment for the nation's youth.

Highlights of our findings include:

- Young users (ages 13 to 17) of TikTok have low trust in science: 42 percent said they disagreed with the statement "Science helps the world more than it harms it." Conversely, in the general population, [similar surveys](#) have found about 75 percent of people agree that science helps more than it harms.
- Heavy users of TikTok generally had a more skeptical attitude toward science (+1) and were more likely to believe in things like astrology (+4), tarot cards (+9), psychics (+4), and numerology (+4).
- The average teen TikToker spends more than two hours daily on the app, with 23 percent on it for more than four hours. Of young girls and women, 29 percent use the app more than four hours daily.
- There is a correlation between the amount of time young people spend on the app and whether they perceive the content as trustworthy: 42 percent of heavy TikTok users said the information on the app is "reliable," compared with 23 percent of those who use it less than an hour a day.
- When asked to choose between suspending their social media use for one year or giving up their right to vote for a year, teen users overwhelmingly – 64 percent – said they would give up their voting rights.
- Among U.S. adults, there is strong support for prohibiting children under 16 from having social media accounts. There is also strong support for requiring social media platforms to warn their users about the links between social media and mental health issues; for prohibiting digital platforms from advertising to children; and for reducing the power of algorithms.

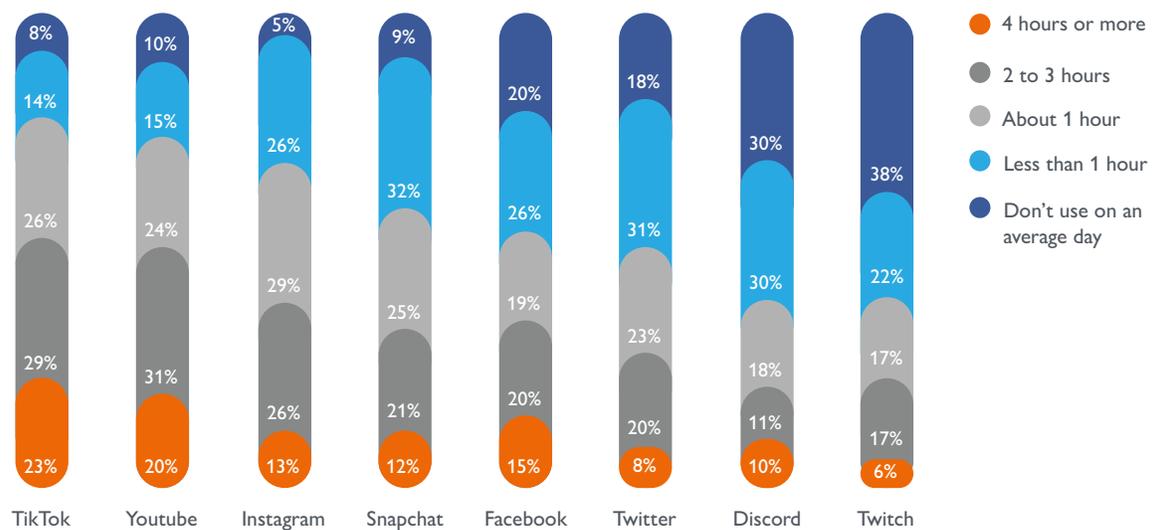
Key Finding: The extraordinary hours young people spend on TikTok and other social media apps influence their beliefs in science and undermine their critical thinking skills.

The amount of time young people spend on social media is astonishing: 29 percent of young female TikTokers use the app four or more hours a day; 47 percent of young males use it at least two hours daily. Altogether, 80 percent of teen TikTok users told Reboot they are on the app at least an hour every day.

In March, TikTok instituted a **60-minute time limit** for users younger than 18 and debuted some new parental controls on time limits. However, the time limits are not hard-and-fast; users can continue to use the app for more than an hour.

Length of Time Spent on Social Media Apps

Besides TikTok, the most frequently used apps are YouTube, Instagram and Snapchat.



These young TikTokers acknowledge they are influenced by the app's content on a wide variety of topics. Male users are more influenced by topics such as finance, science, education, and politics, while female users are more influenced by accounts promoting fashion and lifestyles (although, it should be noted that a lot of "lifestyle" accounts push mis- and disinformation on topics such as nutrition, vaccines, and mental health).

Only 58 percent of young TikTok users had a positive opinion of science and whether it helps the world more than it harms it.

In all, 56 percent of TikTok users say the app influences their beliefs on science and discoveries. This is concerning given the amount of anti-vaccine content, COVID conspiracies, and other science-related disinformation users can find on the app. Teen users

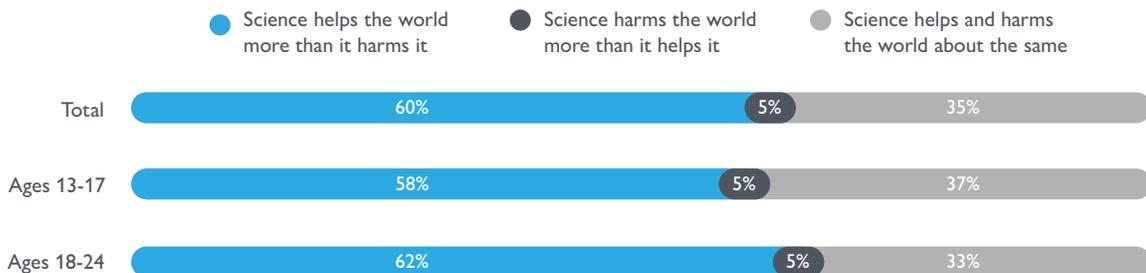
of TikTok in our survey were far more likely to question the safety of children’s vaccines (30 percent) than were older users (25 percent) and the population at large (12 percent).

It’s not just niche issues, like vaccines, that young TikTokers seem to question in matters of scientific discovery. Our survey found a notable lack of trust in science generally. Our survey asked TikTok users to either agree or disagree with statements about whether science “helps” the world, “hurts” the world, or if it “helps and hurts” the world equally:

- 58 percent of TikTok users aged 13 to 17 thought that “Science helps the world more than it harms it” (positive opinion of science)
- 37 percent thought that “Science helps and harms the world about the same” (neutral opinion)
- 5 percent thought that “Science harms the world more than it helps it” (negative opinion)

These percentages are in stark contrast to the trust most Americans have in science. In 2019, the [Pew Charitable Trusts surveyed Americans](#) on this question and found only 25 percent had a negative or neutral opinion of science’s impact on society – 17 points better than the young TikTokers who answered Reboot’s survey.

Appreciation for Science



Reboot also asked TikTok users about specific, verifiable facts relating to science and popular conspiracy theories to test whether app usage was correlated to low scientific knowledge. The survey showed that 56 percent of young TikTok users either did not believe in evolution or didn’t know if they did, and 32 percent told us that the U.S. moon landings were either faked or that they didn’t know if they had occurred. The uncertainty or rejection of these established scientific ideas and events is considerably higher than what other surveys have found in the general population, and they correlate with a 2022 Reboot survey that found a strong relationship [between social media use and beliefs in conspiracies](#).

When asked which media they had used in the past week for news and information, young people overwhelmingly – 91 percent – defaulted to social media platforms.

Why the dearth of scientific knowledge among young TikTokers? Perhaps part of the problem is the fact that teens and young people who use social media rarely venture off of those apps to check or verify the information they find there – [a key component of critical thinking](#). Our survey – [and others](#) – found that young people make little effort to seek out

news and information from outlets that have traditionally formed the foundation of reliable sourcing: the traditional news media.

That such a large percentage of teen TikTok users are isolated in their apps speaks to how social media undermines and erodes a generation's ability to think critically.

When asked which media they had used in the past week for news and information, the young people in our survey overwhelmingly – 91 percent – defaulted to social media platforms. Fewer than half – 48 percent – said they had consulted a newspaper (or its online version) within the past week. Young people also reported not using podcasts (34 percent), online-only news sites (36 percent), or TV news (47 percent) with much regularity.

One of the hallmarks of a person with good critical thinking skills is an ability to focus their thinking by asking questions – lots of them – and then drawing on well-researched ideas and facts in a search for answers. True critical thinkers gather as much valuable data as possible while avoiding extraneous or illegitimate information to ensure that they've truly backed up their thinking with evidence and reason. That such a large percentage of teen TikTok users are isolated in their apps, rarely seeking to vet what they've seen, speaks to how social media is undermining and eroding a generation's ability to think critically.



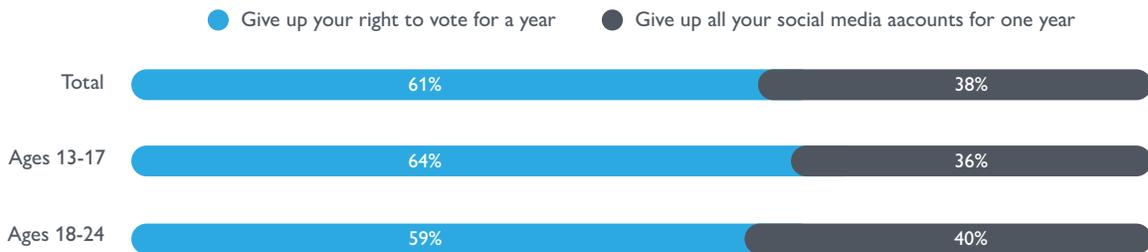
Like many platforms, TikTok offers its celebrity and notable users the opportunity to be a “verified” account. Verified accounts mean that the platform has taken steps to check the identity of the user – primarily celebrities – to prevent impersonated accounts. However, many young TikTokers appear to not understand what verification means; almost 30 percent of them said a “verified account” means that the account is either popular, “posts good content,” or is a “reliable” source of information. The danger, then, is when verified accounts post content about junk science or harmful information, the app's youngest and most cognitively-vulnerable users are more apt to believe it.

Key Finding: Young people value their social media more than they value their right to vote: 61 percent said they would give up their voting rights for one year rather than forgo social media.

Giving up the “right to vote” for the “right to post” is an alarming admission at a time when the populace is [politically fractured](#), [culturally splintered](#), and [distrustful of American institutions](#). Rates of voluntary disenfranchisement were even higher among the youngest users we surveyed: 64 percent of those aged 13 to 17 would give up their vote for one year.

Do young people really think so little of the democratic process that they’d trade their vote for their TikTok username? Perhaps. While many young people are enthusiastic about voting and see it as an important way to make their voices heard, for far too many the opposite is true.

Preference for giving up right to vote vs social media for a year



These results highlight the incredible hold social media has on the nation’s youth. For millions of teens and young adults, it’s not just a social media account. Rather, it’s their lifeline to the world around them. Social media is how they connect with friends; it’s a predominant source of entertainment; it’s how they share their successes and failures; it’s how they learn and stay up to date on fashion, trends, sports, and everything in between. Given the primary role social media plays in their lives and in shaping their identities, is it any wonder they would rather sacrifice their vote for a year than give up all of that?



Key Finding: There is strong support among adults for new restrictions and regulations on how social media companies interact with children.

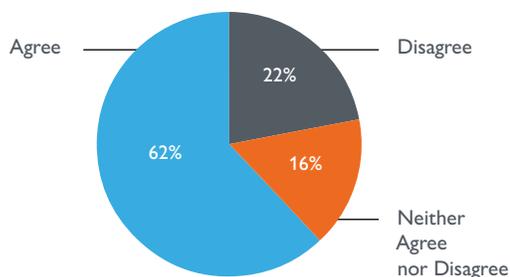
From raising the age at which a child can open a social media account to requiring warning labels on their usage, adults overwhelmingly support measures that would shift the playing field between social media platforms and their youngest users.

Age restrictions: 62 percent of adults agreed that children under the age of 16 should be prohibited from having social media accounts

Social media is increasingly coming under fire from researchers, lawmakers, and child advocates for the deleterious effects it is having on society, including the spread of disinformation and fake news, cyberbullying, and the erosion of privacy. Of particular concern is the impact social networks are having on young people, [particularly girls](#). Studies in [Britain](#), [Spain](#), and [Scotland](#) have linked social media to increased aggression, anxiety, bullying, psychological distress, and thoughts of suicide in teens. An [Australian](#) study found that after spending only 10 minutes on Facebook, young women reported being in a more negative mood than those who browsed a control website.

Already this year, in both houses of Congress, lawmakers introduced bills that would set the minimum age for creating a social media account at 16 and require platforms to verify the ages of their users. Congress is also [considering a ban on TikTok](#) in the United States, partially due to the harmful impact the app has on kids. And in late March, Utah Gov. Spencer Cox signed into law [new requirements](#) that all social media users prove they are over the age of 18, or provide evidence of parental consent if they're not.

Children younger than 16 should not be allowed to create social media accounts.



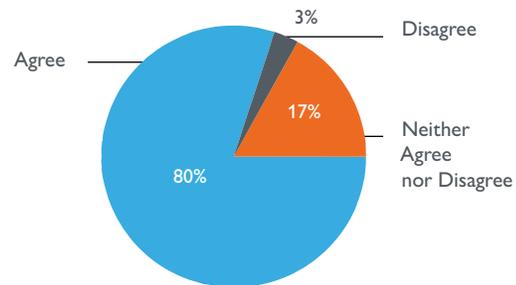
According to our research, the general public fully endorses these new age limit restrictions. Ostensibly, social media platforms already do restrict their use to the youth of certain ages. Most, like Twitter, TikTok, and Instagram, require users to be at least 13 in order to set up an account. However, platforms make virtually [no effort to enforce these standards](#), and any child can bypass a platform's age restriction by simply lying about their age when they set up an account.

Our survey found support for age restrictions is strongest among older adults, and weakest among younger users. Only 46 percent of those in the 18 to 29 age group agreed that children under 16 should not be allowed to create social media accounts. In every other age group, at least 60 percent of respondents agreed with that idea, with 71 percent support among those aged 70 and older.

Warning labels: 80 percent want warning labels on apps to alert users to the link between social media and increased mental health problems in young people

As noted, overusing social media can also lead to serious negative effects on a person's mental health and well-being. Furthermore, social media sites acknowledge that they design their interfaces to be addictive, with one calling his invention “behavioral cocaine.” Products that come with so many serious downsides typically face some level of government regulation or must operate under certain safety standards. For example, the federal government and individual states have implemented regulations that require gambling establishments to display warning messages about the potential risks of gambling and the signs of gambling addiction. Of course, addictive and dangerous products like tobacco and alcohol are highly regulated, age-restricted, and are required to carry warning labels.

Social media companies should warn their users that research has linked social media use to increased mental health problems in young people.



No such standards or regulations currently apply to social media companies.

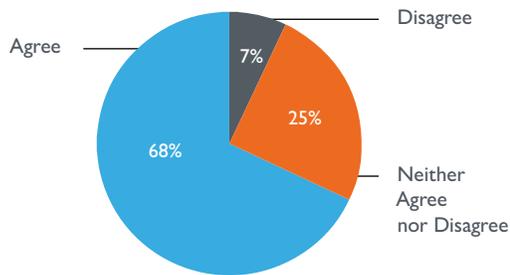
Many people agree that it's time to treat social media for what it is: an addictive activity with serious health implications. In our survey, an overwhelming majority supported (80 percent) warnings on social media apps, with almost equal levels of support between men (78 percent) and women (82 percent). The measure also found at least 75 percent approval among all age groups.



Advertising: 68 percent agreed that websites should not be allowed to advertise to children younger than 16

Developmental psychologists have noted that beginning at around age 13, adolescents can begin to **acquire and apply formal logical rules and processes** – this is key to building a lifelong foundation of critical thinking, but that development can be impeded by advertising that takes advantage of their intrinsic cognitive biases.

Websites should not be allowed to advertise to children younger than 16.



Digital advertisers target consumers by collecting and organizing their data across multiple platforms to identify their interests, demographics, lifestyles, and purchase histories. Companies that target children with digital advertisements are no different – but children are far less equipped cognitively to be aware of or fight back against such strategies. Overwhelmingly, adults oppose these practices, with nearly 70 percent agreeing that websites should not target ads to children younger than 16.

While our research shows wide agreement that children should not be targeted by digital ads, the data also suggests a generational divide, with younger adults more accepting of the practice: 11 percent of those aged 18 to 29 disagreed with a prohibition on advertising to children; among those aged older than 30, roughly 6 percent felt the same way.

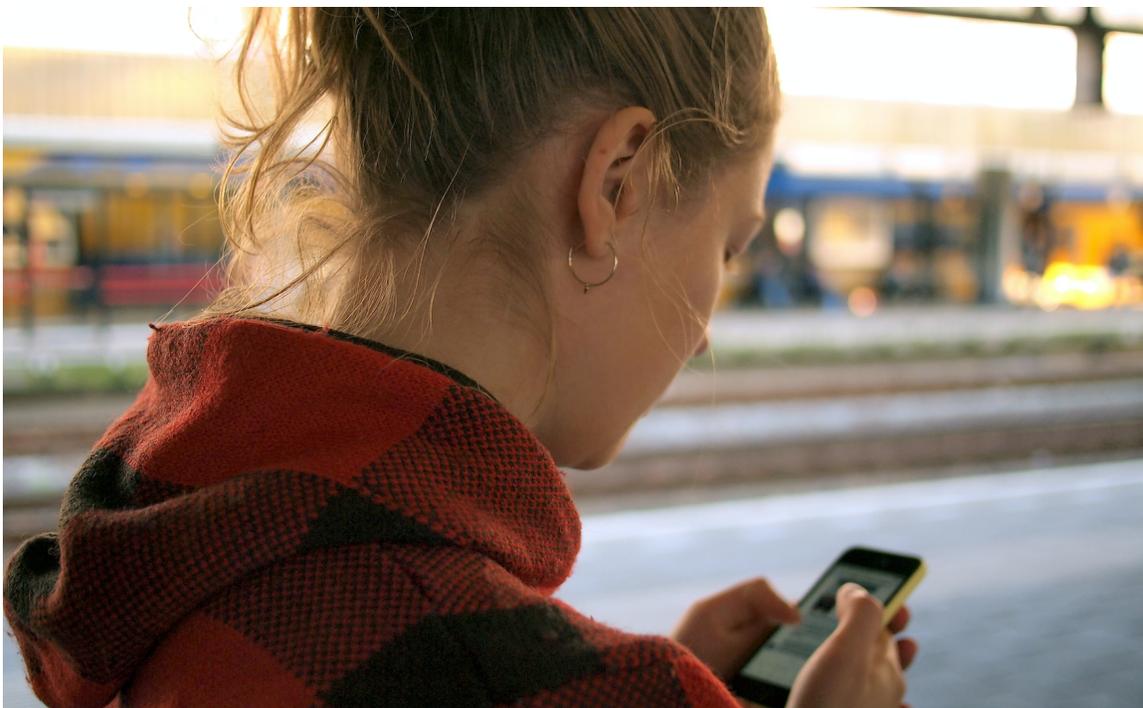
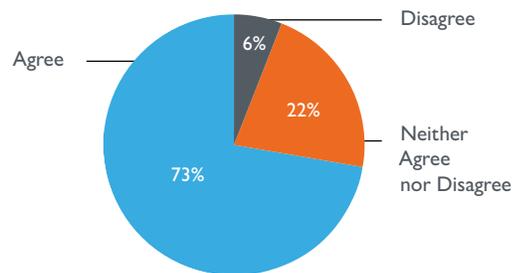


Algorithms: 73 percent do not want their user profiles, Internet histories or search histories used for content recommendations

Algorithms themselves are not inherently bad. In some instances, algorithms can strengthen a user's privacy by, for example, encrypting users' data so that it can only be read by authorized users with the right key. However, algorithms can expose users' online activities. For instance, companies analyze their customers' browsing histories, search queries, and social media activities to target them with advertising or personalized recommendations.

When it comes to this kind of algorithmic data use, 73 percent of Reboot's survey respondents said they do not want platforms accessing their user profiles, Internet histories, or search histories when recommending new content. Compared to older users, younger users are more accepting of algorithms mining their data for insights. Among adults aged 18 to 29, 64 percent agreed that algorithms should be prohibited from accessing user data compared to 75 percent of those aged 45 to 60, and 84 percent for those older than 60.

Digital platforms should not be allowed to examine user profile, Internet history, search history, etc. when recommending new content to you.



Conclusion

The rise of social media has brought about significant changes to the way people communicate and interact with each other, but its negative effects – including the spread of disinformation, cyberbullying, and erosion of privacy – are all too prevalent. The impact of social media on young children has become a front-burner issue among parents and lawmakers, with good reason.

The results of our recent surveys show that a large majority of the public exhibits a marked wariness toward these platforms and their influence over young people. While Reboot [supports reforms and regulations](#), this is not a problem the government can legislate away. This is a problem that needs to be attacked on multiple fronts by multiple partners including schools, researchers, policymakers, parents, and the tech companies themselves.

Good next steps include additional research into the effectiveness of “[prebunking](#)” in which social media users are taught the techniques and tricks used by purveyors of disinformation so they can better identify it online. Preliminary research, partially funded by Reboot, shows this to be a very promising method to fight disinformation online.

Parents must play a more active role in the digital lives of their children by more closely monitoring their activities online, and by deciding if their child should be on social media at all.

Reboot also supports requiring social media companies to help fund comprehensive media literacy and critical thinking education programs in schools, similar to what is being done in Finland, Sweden, and the Netherlands. In those countries, school children learn about digital literacy and critical thinking about misinformation. In Finland, for example, students are taught how to identify misinformation (defective information or mistakes), disinformation (hoaxes), and “malinformation” (stories that intend to damage individuals). As a result, Finland tops a list of European countries deemed the [most resilient to disinformation](#).

Finally, parents must play a more active role in the digital lives of their children by setting – and enforcing – limits on screen time, by more closely monitoring their children’s activities online, and by deciding if their children should be on social media at all.

Only through a coordinated and society-wide effort can we begin to right-size the role social media plays in the lives of youth and begin to reduce the influence it has on their thoughts, behaviors, and decision-making.

Methodology

Between Feb. 17-27, 2023 Reboot partnered with the polling firm YouGov to survey 1,000 U.S. TikTok users between the ages of 13 and 24 on issues related to their social media use, beliefs in science-related topics, and news consumption. Survey respondents were demographically representative of social media users on gender, age, race, and education. The survey has a margin of error of +/-3 percent.

Between March 6-7, 2023, Reboot used the survey platform Survey Monkey to poll 1,049 U.S. adults ages 18 and older on their support for social media reforms and for regulating how platforms interact with young people. That survey also has a margin of error of +/-3 percent.