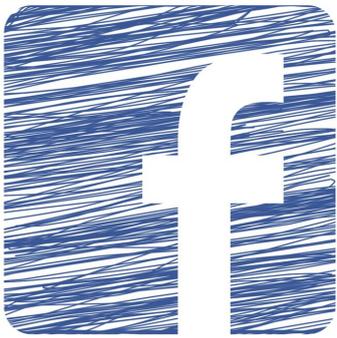


# Facebook fed posts with violence and nudity to people with low digital literacy skills

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Credit: Pixabay/CC0 Public Domain

Facebook studies said algorithms harmed users with low tech skills with repeated disturbing content. Some users did not understand how content came to appear in their feeds or how to control it. These users were often older, people of color, lower-educated and of lower socioeconomic status.

Two years ago, Facebook researchers conducted a five-question survey designed to assess its users' digital literacy skills.

It tested users on how well they understood Facebook's app interface and terms like "tagging" someone on social media. Their score was the number of questions they answered correctly. The

researchers then compared the users' scores to the types of content Facebook's algorithms fed them over a 30-day period.

They found that, on average, the users' scores nearly perfectly predicted the percentage of posts that appeared in their feeds containing graphic violence and borderline nudity. Users who answered none of the questions correctly saw 11.4% more nudity and 13.4% more graphic violence than users who correctly answered all five.

"This is super interesting," an employee commented on an internal post about the study. "It's also super sobering to realize that the 'default' feed experience, so to speak, includes nudity + borderline content unless otherwise controlled."

In another study, Facebook researchers conducted dozens of in-depth interviews and in-home visits with [real people](#) they'd identified as vulnerable users with low digital literacy skills. The upsetting posts that permeated these users' feeds, the study determined, caused them to disconnect from Facebook for long periods and exacerbated hardships they were already experiencing.

For instance, Facebook repeatedly showed a middle-aged Black woman posts about racial resentment and videos of people bullying children, threatening, and killing other people. A person who joined a Narcotics Anonymous Facebook group started seeing ads, recommendations, and posts about alcoholic beverages. Soon after another person started following coupon and savings pages, their feed became inundated with financial scams.

The studies are among several conducted by Facebook in recent years into the damaging effects of its platforms on people with low digital literacy

skills, according to documents provided to the Securities and Exchange Commission and Congress by attorneys for Frances Haugen, a former Facebook employee. A consortium of 17 news organizations, including USA TODAY, obtained redacted copies of them.

The studies concluded that Facebook's algorithms harmed people less conversant with technology by continually exposing them to disturbing content they didn't know how to avoid. Many of them did not know how to hide posts, unfollow pages, block friends, or report violating content. But the algorithms mistook their lack of negative feedback for approval and fed them more.

"Low-skilled users lack the abilities to cope with uncomfortable content, and instead mainly scroll past it, leaving the user with a bad experience and Facebook clueless of the user's preferences," one researcher wrote.

Only a small fraction of posts on Facebook—less than one-tenth of one percent, according to company estimates—show violating content, said Drew Pusateri, a spokesperson for Facebook's parent company, Meta. He also noted its research found users with low digital literacy on average saw less hate content. The research said this may be because users who view hate content tend to seek it out, and tech-savvy people may be better at locating it.

"As a company, we have every commercial and moral incentive to try to give the maximum number of people as much of a positive experience as possible on Facebook," Pusateri said. "The growth of people or advertisers using Facebook means nothing if our services aren't being used in ways that bring people closer together."

Facebook has spent over \$5 billion this year on safety and security and dedicated 40,000 people to work on these issues, he said.

### **Facebook literacy: Who has trouble**

Users with low digital literacy skills were significantly more likely to be older, people of color, lower-educated and of lower socioeconomic status,

the studies found. They were also far more likely to live outside the U.S.

Between one-quarter and one-third of all Facebook users qualify as low-tech-skilled, the researchers estimated. That included roughly one-sixth of U.S. users and as many as half of the users in some "emerging markets."

"When you think about who's being harmed by the choices that Facebook and other platforms are making, it is those who have been who've been harmed in the past in structurally, historically, systemic kinds of ways," said Angela Siefer, executive director of the National Digital Inclusion Alliance, an advocacy group that aims to bridge the digital divide in part through digital literacy education.

"Whether it's a broadband service or a platform, we have to stop pretending that their interests completely align with those of individuals and community members," Siefer said. "If we keep it, we pretend like they align, then we're going to be sorely disappointed again, again and again."

When Facebook researchers showed users in this demographic how to use functions like 'hide' and 'unfollow' to curate their feeds, they started using them regularly and their experiences improved significantly, the researchers found. Facebook also tested an "Easy Hide" button that quadrupled the number of posts people hid.

The researchers recommended Facebook undertake extensive education campaigns about these features, make them prominent, and stop showing users content from groups and pages they do not follow.

Facebook does not appear to have deployed Easy Hide. It has introduced other features, Pusateri said, including "Why am I seeing this post?" in 2019. That feature allows users to see how their previous interactions on the website shape its algorithms' decisions to prioritize specific posts in their feeds.

### **What is digital literacy?**

The concept of digital literacy encompasses a broad range of skills necessary to use the internet safely, according to Facebook researchers. It covers functional skills online, like knowing how to create an account or adjust one's privacy settings, as well as basic reading and language skills and the ability to assess information as subjective, biased, or false.

The strongest predictor of users' digital literacy skills was the length of time they've been on the platform, a Facebook analysis found. Generally, lower-skilled users did not understand how content came to appear in their feeds or how to control it. They include people who may have been familiar with technology but still vulnerable to misinformation, hoaxes, and scams, like some teenagers.

Amy VanDeVelde is the national technology program director for Connections, a branch of The Oasis Institute, a St. Louis-based nonprofit that teaches [older adults](#) digital literacy and cybersecurity skills. Connections offers two Facebook courses that teach people how to hide posts and change their privacy settings, among other features.

"Some of what I think is plaguing digital newcomers when they're getting to use Facebook is a kind of sensory overload," VanDeVelde said. "There are so many things to look at and so many options. They have no idea about what the algorithm does, how to turn off notifications, and how to report any content that they don't want."

A lot of older adults join Facebook to view photos of their grandchildren, get in touch with old friends and join support groups, VanDeVelde said. They don't always understand how their interactions on the platform can be used to take advantage of them.

Allan S., who requested his full name not be published out of concerns for his online privacy, is an older Facebook user who enjoyed participating in nostalgic polls and quizzes when he first joined the website several years ago. It wasn't until he took a Connections course that he realized some polls asked for personal information, like his favorite subject in school, that could be used to

reset his online account passwords through security questions.

"It's not as if you get on Facebook and all the sudden you know what you're doing," he told USA TODAY. "They don't come right out and tell you, 'You should do this, you shouldn't do that.'"

He described a recent incident that put in perspective how much information Facebook was collecting about people's private lives.

On an online dating site, he had been chatting with a woman who did not provide her last name, he said. Nor did he provide his. They spoke once on the phone, and soon after, Facebook recommended he send her a friend request. Her Facebook profile showed her last name.

"To be perfectly honest, I felt very uncomfortable that, at that point, I had access to more about her than she wanted me to know," he said. "It's just amazing how this harmless little thing is not necessarily that harmless. It's not necessarily all that bad. But you can't use it without being careful."

### **Why some Facebook users have problems using the platform**

Some of the problems facing these users are of the company's own making, the researchers found. For instance, people did not understand why Facebook was recommending content from pages they did not follow or like.

Users with lower digital literacy tended to heavily use Facebook's Watch, a curated feed of popular and viral videos. One study found Watch showed irrelevant and potentially uncomfortable content to these users, who provided little negative feedback.

Additionally, when random Facebook groups would invite users to join, Facebook's algorithms would include posts by the groups in the users' feeds while the invitations were pending. These posts confused and sometimes disturbed these users. One researcher remarked that the feature "seems like a loophole in Facebook's policies."

"(T)his may contribute to user's perception that their

feed is a stream of unconnected content which they have little agency over," the researcher wrote.

The problems compounded for users less conversant with technology in countries Facebook classified as "at-risk," including India, Syria, Iraq, Yemen, Ethiopia, Russia and the Philippines, the research found. Users from Myanmar and some other countries tended to indiscriminately send and accept friend requests and join pages and groups, which are major vectors of divisive content and misinformation, one study found. Low-quality information, including about COVID-19, was also more prevalent in low-language-literacy regions.

Facebook has added "veracity cues" to help users combat misinformation, but researchers found users with low tech skills—particularly in other countries—did not understand them or paid little attention to them. These users mistook virality as a barometer for trustworthiness, didn't notice verification badges and overlooked warning prompts designed to alert them to old and out-of-context photos in posts.

Facebook researchers criticized the neutral language in its warning prompts, saying it didn't arouse enough skepticism. Phrases like, "This post includes a photo that was shared three years ago," for example, did little to deter users in some areas from clicking "Share Anyway."

Instead, researchers recommended Facebook use strong words like "caution," "misleading," and "deceiving" to convey seriousness and command attention. Facebook could also more direct to [users](#) about why certain posts raise suspicion, they said, such as by saying, "Old photos can be misleading."

But these recommendations "come at odds with (CEO) Mark (Zuckerberg)'s latest guidance to keep our messaging neutral in tone and language choice in circumstances like these," where Facebook's algorithms may be imperfect at recognizing misleading content, one study from October 2020 noted.

Zuckerberg feared false positives, the study said, preferring to err on the side on and under-enforcement and nonjudgment. This frustrated

some employees.

"(T)his will be a very tough pill to swallow internally," an employee commented on the study. "At a gut level, letting borderline misinformation and bad-faith attacks at democracy/civility go unpunished feels like a moral affront."

"If this is really where Mark's head is at, I'd expect more and more internal values-based conflict in the coming years and months."

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