

(1) Ω With a partner, describe what you see on the image, take notes:

(2) \Re Be prepared to discuss the meaning of the image with the class:

Lead-In

1 Compare what is more insightful:

- a tweet?
- a book?



Video

(2) $\widehat{\mathfrak{H}}_{\overline{\mathtt{C}}}^{-}$ Watch the video, summarise Nicolas Carr's main point in your own words:

Vocabulary:

- *species* (Art): a group of living things that are similar in some way
- *shallow* (oberflächlich): not deep; lacking depth or complexity
- *synopsis* (Zusammenfassung): a brief summary or overview
- context (Kontext): the circumstances or background information that helps to understand something
- complexity (Komplexität): the state of being intricate or complicated
- *fαctoids* (Faktenhäppchen): small pieces of information, often trivial or insignificant
- transmission (Übertragung): the act of conveying or passing on information
- gratification (Befriedigung): the feeling of satisfaction or pleasure
- mindfulness (Achtsamkeit): the quality of being aware and fully present in the moment
- sacrificing (aufgeben): giving up something in exchange for something else
- understanding (Verständnis): comprehension or comprehension
- *critical thinking* (kritisches Denken): the ability to analyse and evaluate information objectively and thoughtfully
- process (Prozess): a series of steps or actions taken to achieve a particular result
- meaningless (bedeutungslos): without significance or value
- experience (Erfahrung): the process of gaining knowledge or skill through direct involvement or exposure

Discussion Preparation

At the end of the next session, we will prepare and then hold a debate about whether the internet makes us stupid. You will be assigned assigned a position (pro or contra) and are given three texts that give you fodder for arguments.

For each argument provided, work through the following steps:

- 1 Read the argument carefully and summarize the main idea in your own words.
 - Take your time in reading and discussing the arguments, make mind maps to summarise important aspects, or use visualisation to make sure you understand the logic.
- 2 Think of at least three pieces of evidence that support this argument.
 - Some arguments may already offer evidence, if not, try to find examples and remember the strongest to use them later.
- ③ Discuss potential counterarguments that could be made against this argument and come up with responses.
 - The opposing side will consider your points as well, make sure that you are prepared to deal with that.
- ④ Prepare an opening statement for the debate as well as your main arguments.
 - Use the advice given in the "Useful Phrases" section to make your arguments more convincing.

Group A: Pro-Arguments

1

The speed and ubiquity of the Internet is different from previous breakthrough technologies and is reprogramming our brains for the worse.

The Internet has reduced our ability to focus; changed how our memory works; promoted skimming text over deep, critical reading; and changed how we interact with people. In the 2020 update to The Shallows: What the Internet Is Doing to Our Brains, Nicholas Carr summarized:

- ⁵ "It takes patience and concentration to evaluate new information—to gauge its accuracy, to weigh its relevance and worth, to put it into context—and the Internet, by design, subverts patience and concentration. When the brain is overloaded by stimuli, as it usually is when we're peering into a network-connected computer screen, attention splinters, thinking becomes superficial, and memory suffers. We become less reflective and more impulsive. Far from enhancing human intelligence, I argue, the Internet degrades it."²
- ¹⁰ A 2019 study found that the Internet "can produce both acute and sustained alterations" in three areas:

"a) attentional capacities, as the constantly evolving stream of online information encourages our divided attention across multiple media sources, at the expense of sustained concentration; b) memory processes, as this vast and ubiquitous source of online information begins to shift the way we retrieve, store, and even value knowledge; and c) social co-

15 gnition, as the ability for online social settings to resemble and evoke real-world social processes creates a new interplay between the Internet and our social lives, including our self-concepts and self-esteem."³

Moreover, studies have found that people reading digital text skim more and retain less information than those reading text printed on paper. Also the effects of digital reading span from less reading comprehension to less in-depth textual analysis to less empathy ²⁰ for others. ⁴

Reading less critically results in low English grades and in readers believing and sharing false information, as well as misunderstanding potentially important documents such as contracts and voter referendums.⁴

Bonnie Kristian, Contributing Editor at The Week, also noted the Internet's destruction of

²⁵ interpersonal relationships, especially during the COVID-19 pandemic: Many people have

"a lack of intimate friendships and hobbyist communities. In the absence of that emotional connection and healthy recreational time use, this media engagement can become a bad substitute. The memes become the hobby. The Facebook bickering supplants the relationships. And it's all moving so fast — tweet, video, meme, Tucker, tweet, video, meme, Mad-

30 dow — the change goes unnoticed. The brain breaks." ⁵

Because the Internet touches nearly everything we do now, the ways our brains process information is changing to accommodate and adapt to the fast, surface-level, distracting nature of the Internet, to the detriment of ourselves and society.

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IQ scores have been falling for decades, coinciding with the rise of technologies, including the Internet.

For the majority of the 20th century, IQ scores rose an average of three points per decade, which is called the Flynn effect after James R. Flynn, a New Zealand intelligence researcher. Flynn believed this constant increase of IQ was related to better nutrition and increased access to education. ⁶However, a 2018 Norwegian study found a reversal of the

⁵ Flynn effect, with a drop of 7 IQ points per generation due to environmental causes such as the Internet. As Evan Horowitz, PhD, Director of Research Communication at FCLT Global, summarized, "People are getting dumber. That's not a judgment; it's a global fact." ⁶⁷⁸⁹¹⁰

James R Flynn, in a 2009 study, noted a drop in IQ points among British male teenagers, ¹⁰ and hypothesized a cause: "It looks like there is something screwy among British teenagers. What we know is that the youth culture is more visually oriented around computer games than they are in terms of reading and holding conversations." ¹¹

Further, the Internet makes us believe we can multitask, a skill scientists have found humans do not have. Our functional IQ drops 10 points as we are distracted by multiple ¹⁵ browser tabs, email, a chat app, a video of puppies, and a text document, not to mention everything open on our tablets and smartphones, while listening to smart speakers and waiting on a video call. ^{12 13 14}

The loss of 10 IQ points is more than the effect of a lost night's sleep and more than double the effect of smoking marijuana. Not only can we not process all of these func-²⁰ tions at once, but trying to do so degrades our performance in each. Trying to complete two tasks at the same time takes three to four times as long, each switch between tasks adds 20 to 25 seconds, and the effect magnifies with each new task. The Internet has destroyed our ability to focus on and satisfactorily complete one task at a time. ^{12 13 14}

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The Internet is causing us to lose the ability to perform simple tasks.

- Hey, Alexa, turn on the bathroom light... play my favorite music playlist, cook rice in the Instant Pot... read me the news... what's the weather today...""Hey, Siri, set a timer... call my sister... get directions to Los Angeles... what time is it in Tokyo... who stars in that TV show I like..."
- ⁵ While much of the technology is too new to have been thoroughly researched, we rely on the Internet for everything from email to seeing who is at our front doors to looking up information, so much so that we forget how to or never learn to complete simple tasks. And the accessibility of information online makes us believe we are smarter than we are. 40
- ¹⁰ In the 2018 election, Virginia state officials learned that young adults in Generation Z wanted to vote by mail but did not know where to buy stamps because they are so used to communicating online rather than via US mail.¹⁵

We require GPS maps narrated by the voice of a digital assistant to drive across the towns in which we have lived for years. Nora Newcombe, PhD, Professor of Psychology ¹⁵ at Temple University, stated, "GPS devices cause our navigational skills to atrophy, and there's increasing evidence for it. The problem is that you don't see an overview of the area, and where you are in relation to other things. You're not actively navigating you're just listening to the voice." ¹⁶

Millennials were more likely to use pre-prepared foods, use the Internet for recipes, and ²⁰ use a meal delivery service. They were least likely to know offhand how to prepare lasagna, carve a turkey, or fry chicken, and fewer reported being a "good cook" than Generation X or Baby Boomers, who were less likely to rely on the Internet for cooking tasks. ¹⁷ 18

Using the Internet to store information we previously would have committed to memory ²⁵ (how to roast a chicken, for example) is "offloading." According to Benjamin Storm, PhD, Associate Professor of Psychology at the University of California at Santa Cruz, "Offloading robs you of the opportunity to develop the long-term knowledge structures that help you make creative connections, have novel insights and deepen your knowledge." ProCon

Group B: Contra-Arguments

1

Virtually all new technologies, the Internet included, have been feared, and those fears have been largely unfounded.

Many technologies considered commonplace today were thought to be extremely dangerous upon their invention. For example, trains caused worry among some "that women's bodies were not designed to go at 50 miles an hour," and so their "uteruses would fly out of {their} bodies as they were accelerated to that speed." Others feared

⁵ that bodies, regardless of gender, would simply melt at such a high speed. ¹⁹ Information technologies have not escaped the centuries-old technophobia.Greek philosopher Socrates was afraid that writing would transplant knowledge and memory. ¹

The printing press created a "confusing and harmful abundance of books" that, according to philosopher Gottfried Wilhelm, "might lead to a fall back into barbarism." ² ²¹ ²²

¹⁰ Similarly, the newspaper was going to socially isolate people as they read news alone instead of gathering at the church's pulpit to get information. ²⁰ The telegraph was "too fast for the truth," and its "constant diffusion of statements in snippets" was bemoaned. ^{22 23}

The telephone was feared to create a "race of left-eared people—that is, of people who ¹⁵ hear better with the left than with the right ear." We would become "nothing but transparent heaps of jelly to each other," allowing basic manners to degrade. ^{22 23}

Schools were going to "exhaust the children's brains and nervous systems with complex and multiple studies, and ruin their bodies by protracted imprisonment," according to an 1883 medical journal. Excessive academic study by anyone was a sure path to mental ²⁰ illness. ²⁰

The radio was "loud and unnecessary noise," and children had "developed the habit of dividing attention between the humdrum preparation of their school assignments and the compelling excitement of the loudspeaker." ^{20 22}

Television was going to be the downfall of radio, conversation, reading, and family life.²⁰

- ²⁵ Calculators were going to destroy kids' grasp of math concepts. ² The VCR was going to be the end of the film industry. Motion Picture Association of America's (MPAA) Jack Valenti complained to Congress, "I say to you that the VCR is to the American film producer and the American public as the {serial killer} Boston Strangler is to the woman home alone." ²⁴
- ³⁰ Clinical and neuropsychologist Vaughn Bell, PhD, DClinPsy, noted, "Worries about information overload are as old as information itself, with each generation reimagining the dangerous impacts of technology on mind and brain. From a historical perspective, what strikes home is not the evolution of these social concerns, but their similarity from one century to the next, to the point where they arrive anew with little having changed ex-³⁵ cept the label." ²⁰

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The Internet gives diverse populations of people more equal access to information and society.

The basis of the argument that the Internet is "making us stupid" is problematic and ignores large populations of people. First, the idea of "stupidity" versus intelligence relies heavily upon IQ and other standardized tests, which are racist, classist, and sexist. $^{25\ 26\ 27}\ _{28\ 29\ 30}$

- ⁵ Additionally, somewhere between 21 and 42 million Americans do not have reliable broadband access to the Internet at home, or between 6 and 13. And 49% of the US population (162 million people) is not using the Internet at broadband speeds. Thus we have to question who the "us" includes when we ask if the Internet is "making us stupid." ^{31 32}
- ¹⁰ For those who do have access, the Internet is an impressive tool. Kristin Jenkins, PhD, Executive Director of BioQUEST Curriculum Consortium, explained, "Access to information is enormously powerful, and the Internet has provided access to people in a way we have never before experienced... Information that was once accessed through print materials that were not available to everyone and often out of date is now much more rea-
- ¹⁵ dily available to many more people." ³³

Social media in particular offers an accessible mode of communication for many people with disabilities. Deaf and hearing-impaired people don't have to worry if a hearing person knows sign language or will be patient enough to repeat themselves for clarification. The Internet also offers spaces where people with similar disabilities can congregate to
 ²⁰ socialize, offer support, or share information, all without leaving home, an additional benefit for those for whom leaving home is difficult or impossible. ³⁴

Older adults use the Internet to carry out a number of everyday tasks, which is especially valuable if they don't have local family, friends, or social services to help. Older adults who use the Internet were also more likely to be tied to other people socially via hobby, ²⁵ support, or other groups. ^{35 36}

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Changing how the brain works and how we access and process information is not necessarily bad.

Neuroscientist Erman Misirlisoy, PhD, argues that "Internet usage has 'Googlified' our brains, making us more dependent on knowing where to access facts and less able to remember the facts themselves. This might sound a little depressing, but it makes perfect sense if we are making the most of the tools and resources available to us. Who

⁵ needs to waste their mental resources on remembering that an 'ostrich's eye is bigger than its brain,' when the Internet can tell us at a moment's notice? Let's save our brains for more important problems... {And} as with practically everything in the world, moderation and thoughtful consumption are likely to go a long way." ³⁷

While we do tend to use the Internet to look up more facts now, consider what we did
before the Internet. Did we know this information? Or did we consult a cookbook or call a friend who knows how to roast chicken? Benjamin C. Storm, PhD, Associate Professor of Psychology at the University of California at Santa Cruz, explained, "It remains to be seen whether this increased reliance on the Internet is in any way different from the type of increased reliance one might experience on other information sources." ³⁸

¹⁵ As with anything in life, moderation and smart usage play a role in the Internet's effects on us. Nir Eyal, author of Hooked: How to Build Habit-Forming Products (2013), summarized, "Technology is like smoking cannabis. Ninety percent of people who smoke cannabis do not get addicted. But the point is that you're going to get some people who misuse a product; if it's sufficiently good and engaging, that's bound to happen." We, and the ²⁰ Internet, have to learn to moderate our intake. ³⁹

Heather Kirkorian, PhD, Associate Professor in Early Childhood Psychology at the University of Wisconsin Madison, offered another example: "the effects of social media depend on whether we use them to connect with loved ones throughout the day and get social support versus {use them to} compare our lives to the often highly filtered lives of ²⁵ others and expose ourselves to bullying or other negative content." ³⁹

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Useful Phrases in a Discussion

Starting the discussion:

Let's start by talking about... I'd like to discuss... Can we talk about...? I want to share my thoughts on... Introducing the topic: The topic I want to discuss is... I'd like to talk about... This topic is important because...

Giving your own opinion:

In my opinion... From my point of view... I believe that... It seems to me that...

Giving reasons:

The reason why I think this is because... The evidence shows that... Based on my experience... If you look at the facts...

Agreeing:

I completely agree with you. I see your point of view. That's a valid point. I think we're on the same page.

Disagreeing:

I respectfully disagree... I can see where you're coming from, but... I'm afraid I have to disagree... I'm not sure I agree with that...

Putting the opposition down:

I'm sorry, but I can't agree with that. I'm afraid that's not a very convincing argument. I'm not sure I understand your point of view. I don't think that's a valid argument.

Sounding strong:

I strongly believe that... It's important to consider... I'm confident that... I'm convinced that...

Getting yourself heard:

Excuse me, can I add something? Can I interject for a moment? I'd like to share my thoughts on this topic. May I speak?

Buying time:

That's an interesting question. Let me think for a moment. I need to consider that for a moment. I'm not quite sure. Let me gather my thoughts. That's a tough question. Can I come back to you on that?

Looking for a compromise:

Is there a way we can find a middle ground? Can we find a compromise? Let's try to find a solution that works for everyone. Can we agree to disagree?

Concluding the debate:

In conclusion, I believe that... To sum up, we've discussed... Overall, I think we've made some good points. Thank you for the discussion.

Citations

1. Nicholas Carr, "Is Google Making Us Stupid?," theatlantic.com, July/Aug. 2008

2. Nicholas Carr, The Shallows: What the Internet Is Doing to Our Brains, 2020

3. Joseph Firth, et al., "The 'Online Brain': How the Internet May Be Changing Our Cognition," World Psychiatry, ncbi.nlm.nih.gov, June 2019

4. Maryanne Wolf, "Skim Reading Is the New Normal. The Effect on Society Is Profound," theguardian.com, Aug. 25, 2018

5. Bonnie Kristian, "Our Parents Warned Us the Internet Would Break Our Brains. It Broke Theirs Instead.," theweek.com, Nov. 25, 2020

6. Will Conaway, "Technology Is on the Rise, while IQ Is on the Decline," forbes.com, Apr. 29, 2020

7. Bob Yirka, "Researchers Find IQ Scores Dropping since the 1970s," medicalxpress.com, June 12, 2018

8. Mahita Gajanan, "IQ Scores Are Falling Due to Environmental Factors, Study Finds," time.com, June 13, 2018

9. Rory Smith, "IQ scores Are Falling and Have Been for Decades, New Study Finds," cnn.com, June 14, 2018 10. Bernt Bratsberg and Ole Rogeberg," Flynn Effect and Its Reversal Are Both Environmentally Caused," pnas.org, June 26, 2018

11. Scottie Andrew, "Are Humans Dumber? Study Finds IQ Scores Have Been Dropping for Decades, and the Media Might Be to Blame," newsweek.com, June 12, 2018

12. Brittany Levine Beckman, "The Internet Tricked Me into Believing I Can Multitask," mashable.com, Jan. 31, 2021

13. David Burkus, "Why You Can't Multi-Task," psychologytoday.com, Nov. 15, 2018

14. Jodie Naze, "Does Using the Internet Reduce Your Intelligence?," computerworld.com, May 10, 2005

15. Ashley Collman, "College Students Say They Can't Send in Their Absentee Ballots because They Don't Know Where to Buy Stamps," businessinsider.com, Sep. 19, 2018

16. Joseph Stromberg, "Is GPS Ruining Our Ability to Navigate for Ourselves?," vox.com, Sep 2, 2015

17. Maura Judkis, "Do Millennials Really Not Know How to Cook? With Technology, They Don't Really Have To.," washingtonpost.com, Apr. 12, 2018

18. Porch, "Cooking Nightmares: A Generational Look at Capabilities in the Kitchen," porch.com (accessed Mar. 17, 2021)

19. Janet Burns, "Early Trains Were Thought to Make Women's Uteruses Fly Out," mentalfloss.com, Aug. 26, 2015

20. Vaughan Bell, "Don't Touch That Diall: A History of Media Technology Scares, from the Printing Press to Facebook," slate.com, Feb. 15, 2010

21. Len Wilson, "11 Examples of Fear and Suspicion of New Technology," lenwilson.us, Feb. 11, 2014

22. Adrienne LaFrance, "In 1858, People Said the Telegraph Was 'Too Fast for the Truth' Sound Familiar?," theatlantic.com, July 28, 2014

23. Taylor Danielle, "9 Times in History When Everyone Freaked out about New Technology" ranker.com (accessed Mar. 15, 2021)

24. Josh Barro, "Thirty Years Before SOPA, MPAA Feared the VCR," forbes.com, Jan. 18, 2012

25. John Rosales, "The Racist Beginnings of Standardized Testing," nea.org, Apr. 24, 2018

26. Frontline, "Interview: James Popham," pbs.org, Apr. 25, 2001

27. Young Whan Choi, "How to Address Racial Bias in Standardized Testing," nextgenlearning.org, Mar. 31, 2020

28. Christopher Bergland, "Why Do Rich Kids Have Higher Standardized Test Scores?," psychologytoday.com, Apr. 18, 2015

29. Eloy Ortiz Oakley, "Commentary: Standardized Tests Reward Kids from Wealthy Families," sandiegouniontribune.com, Nov. 27, 2019

30. Carly Berwick, "What Does the Research Say about Testing?," edutopia.org, Oct. 25, 2019

31. Tyler Sonnemaker, "The Number of Americans without Reliable Internet Access May Be Way Higher than the Government's Estimate — and That Could Cause Major Problems in 2020," businessinsider.com, Mar. 12, 2020

32. Microsoft News Center, "Nextlink Internet and Microsoft Closing Broadband Gap in Central US," news.microsoft.com, Sep. 18, 2019

33. Kathleen Stansberry, Janna Anderson, and Lee Rainie, "Experts Optimistic about the Next 50 Years of Digital Life," pewresearch.org, Oct. 28, 2019

34. Rebecca Thorne, "Social Media as a Communication Tool for Disabled People," everyonecan.org.uk (accessed on Mar. 16, 2021)

35. Namkee G Choi and Diana M DiNitto, "Internet Use among Older Adults: Association with Health Needs, Psychological Capital, and Social Capital," Journal of Medical Internet Research, ncbi.nlm.nih.gov, May 2013 36. Andreas Ihle, et al., "Internet Use in Old Age Predicts Smaller Cognitive Decline Only in Men," nature.com, June 2, 2020

37. Erman Misirlisoy, "This Is Your Brain on the Internet," medium.com, Sep. 3, 2018

38. Saga Briggs, "6 Ways Digital Media Impacts the Brain," opencolleges.edu.au, Sep. 12, 2016

39. Brian Resnick, Julia Belluz, and Eliza Barclay, "Is Our Constant Use of Digital Technologies Affecting Our Brain Health?," vox.com, Feb 26, 2019

40. David Ingram, "The Internet Is Tricking Our Brains," nbcnews.com, Dec. 9, 2021

41. ProCon.org, "Questions on the Internet," procon.org, Sep. 1, 2022

Is the Internet "Making us Stupid"?

1 Read the article provided, translate any words you might not know.

② Give a brief outline of the major issue stated in the article.

Nicolas Carr's thought-provoking article, "Is Google Making Us Stupid?", published in The Atlantic in July 2008, delves into the impact of technology on human cognition and the way we process information. As a writer and technology critic, Carr shares his concerns about how the internet, particularly ⁵ Google, may be shaping our brains and changing the way we think.

Carr begins his article with a personal anecdote about how he noticed changes in his own reading habits and attention span since he started using the internet extensively. He describes how he finds it increasingly difficult to concentrate on long articles or books and tends to skim through information ra-¹⁰ ther than deeply engaging with it. Carr raises the question of whether our reliance on Google for quick and easy access to information is affecting our ability to focus and think critically.

One key argument that Carr presents is the idea of neuroplasticity, which refers to the brain's ability to adapt and change based on its experiences. He

¹⁵ suggests that our brains are constantly being rewired by our online activities, and that the internet, with its constant bombardment of information and distractions, may be rewiring our brains in ways that are detrimental to deep reading and critical thinking.

Carr also cites research studies and quotes from scholars to support his ar-²⁰ gument. He references Maryanne Wolf, a cognitive neuroscientist, who expresses concerns about how the internet may be affecting our ability to

comprehend complex texts and engage in deep reading, which involves focused attention and critical analysis. Carr also discusses the concept of "hyperlinks" and how they may disrupt the flow of reading and encourage su-

²⁵ perficial skimming, as readers are tempted to click on links and navigate away from the main text.

Furthermore, Carr raises concerns about the impact of technology on memory and our ability to retain information. He argues that our reliance on external tools like Google for information retrieval may diminish our capacity
to store information in our long-term memory and develop a deep understanding of complex subjects.

In conclusion, Nicolas Carr's article "Is Google Making Us Stupid?" presents a thought-provoking argument about the potential effects of technology, particularly the internet and Google, on our cognitive abilities, attention span,

- ³⁵ and critical thinking skills. He raises concerns about how our online activities may be reshaping our brains and changing the way we process information, and he urges readers to reflect on the implications of these changes. Carr's article serves as a timely and relevant critique of the digital age and its impact on our cognitive processes, inviting readers to consider the potential
- ⁴⁰ consequences of our increasing reliance on technology for information consumption and processing.



read the text to you?