

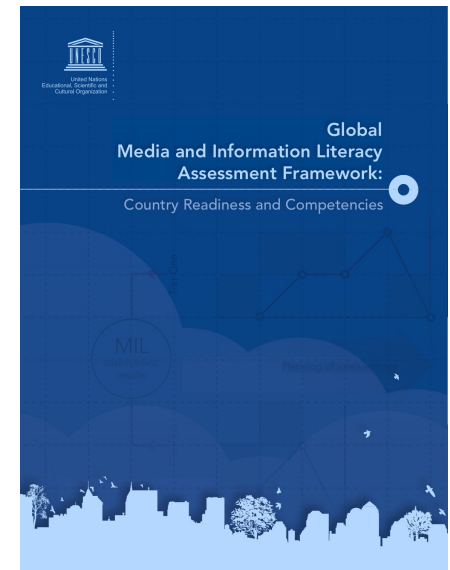


Informationskompetentes Verhalten: Konzeptuelle Voraussetzungen und eine einfache Bewertungsheuristik

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und Sprachtechnologie
Universität Hildesheim

Was ist Informationskompetenz?

Gemäß der UNESCO (2013) ist unter Informations- und Medienkompetenz ein Bündel an Kompetenzen zu verstehen, das es Bürgern ermöglicht auf Informations- und Medieninhalte in allen Formaten effizient zuzugreifen, diese abzurufen, zu verstehen, evaluieren und benutzen, erstellen und teilen mittels verschiedener Hilfsmittel unter kritischen und ethischen Gesichtspunkten, um an privaten, beruflichen und gesellschaftlichen Aktivitäten teilzunehmen
UNESCO (2013)



UNESCO (2013). Global media and information literacy (MIL) assessment framework: country readiness and competencies. Paris: UNESCO,
<https://unesdoc.unesco.org/ark:/48223/pf0000224655/PDF/224655eng.pdf.multi> (letzter Zugriff 01.10.2022)

Wozu benötigen wir Informationskompetenz?

- Relevante und gültige Gesundheitsinformationen recherchieren und nutzen: Impfung, Distanzierung während der aktuellen Pandemie, wirksame Behandlung von Beschwerden (z.B. Krebs)
- Eine kompetente Fachkraft zu sein, z.B. im Online-Marketing
- Gut zu lernen (Schule, Uni, Weiterbildung, informell)
- Widerstandsfähig gegen Manipulationen sein, z.B. im E-Commerce oder in der Politik

Eine fundierte Wissensbasis ist Voraussetzung für gute Entscheidungen und einen sachlich-zielführenden Diskurs

„Das ist interessant, aber ich bin mit digitalen Medien aufgewachsen/sehr vertraut. Deshalb glaube ich, dass ich hinreichend informationskompetent bin“

Sind sie sicher? Die Dinge sind nicht immer so einfach (zu googlen)

Informationsraum Internet: komplex, interessengesteuert, intransparent

Das Internet ist ein komplexer interessengetriebener und zumindest teilweise intransparenter Informationsraum

Offene
Infrastruktur
vs. Tendenzen
zur Kontrolle
und
Regulierung

Dominante
Akteure auf
Informations-
märkten

Fake News
Industrie

Unsichtbare
und
intransparente
Algorithmen

Informationsverhalten von Internetnutzern

Informationsverhalten oftmals problematisch. Fehlende Fähigkeiten und Bereitschaft sich informationskompetent zu verhalten

Typisches
Suchverhalten in
Suchdiensten:
Anstrengungs-
vermeidung kurze
Anfragen und
Sitzungen etc.

Gebrauch ungünstiger
Heuristiken und kognitive
Verzerrungen:
Bestätigungsfehler,
Verwendung von
oberflächlichen
Bewertungskriterien

Studien zur Informationskompetenz

McGrew (2021)

Glaubwürdigkeit von Information wird anhand einfacher Eigenschaften der Informationsobjekte bestimmt (Layout, Domain, Vorhandensein von Daten)

ICILS 2018 (Eickelmann et al. 2019)

- Weniger als 25% der Schüler und Schülerinnen (SUS) können Informationen selbstständig ermitteln, bewerten, organisieren sowie anspruchsvolle Informationsprodukte erzeugen
- Ca. 30% der SuS verfügen nur über sehr geringe Kenntnisse

Viele Nutzer haben Schwierigkeiten, die Parteilichkeit und Glaubwürdigkeit von Information einzuschätzen (Meßmer et al. 2021, Khan 2020)



<https://www.nationalgeographic.com/science/article/150723-fukushima-mutated-daisies-flowers-radiation-science>

Ansatzpunkte zur Beförderung von Informationskompetenz

Paradigmatische Dimension in Bezug auf die Erfahrungswirklichkeit und deren Erkennbarkeit

Sicht auf die Realität

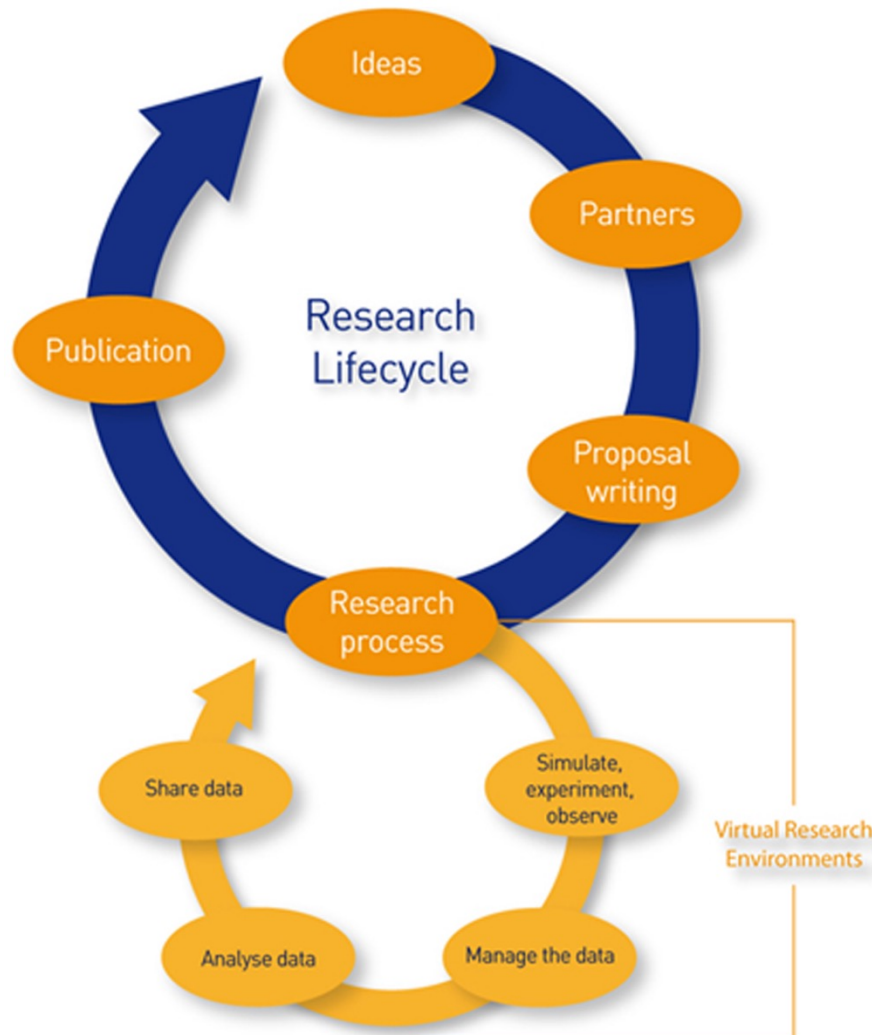
Neugier,
Wissensaufnahmebereitschaft,
Mediendisziplin

**Wissen zur Informations-
umwelt & zum Informations-
verhalten**

Wissensgenese,
Informationsmärkte,
Recherchetechniken,
domänenbezogenes
Wissen

**Motivation zu informations-
kompetenten
Verhalten**

Wie wissenschaftliches Wissen entsteht



- Peer Review als primäres Modell der Qualitätssicherung
- Ansteigendes Publikationsvolumen
- Problemfelder
 - Publikationskrise
 - Replikationskrise
 - Publication bias
 - Predatory publishing

<https://www.webarchive.org.uk/wayback/k/archive/20140615113149/http://www.jisc.ac.uk/whatwedo/campaigns/res3/jisc-help.aspx#simulate>

Erkenntnisbezogene Sicht auf Realität

Erkenntnistheoretische Entwicklungsstufen nach Kuhn & Park (2005)

D. Kuhn, S.-H. Park / Int. J. Educ. Res. 43 (2005) 111–124

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Table 1
Levels of Epistemological understanding

Level	Assertions	Knowledge	Critical Thinking
Realist	Assertions are <i>Copies</i> of an external reality.	Knowledge comes from an external source and is certain.	Critical thinking is unnecessary.
Absolutist	Assertions are <i>Facts</i> that are correct or incorrect in their representation of reality.	Knowledge comes from an external source and is certain but not directly accessible, producing false beliefs.	Critical thinking is a vehicle for comparing assertions to reality and determining their truth or falsehood.
Multiplist	Assertions are <i>Opinions</i> freely chosen by and accountable only to their owners.	Knowledge is generated by human minds and therefore uncertain.	Critical thinking is irrelevant.
Evaluativist	Assertions are <i>Judgments</i> that can be evaluated and compared according to criteria of argument and evidence.	Knowledge is generated by human minds and is uncertain but susceptible to evaluation.	Critical thinking is valued as a vehicle that promotes sound assertions and enhances understanding.

Klingt komplex und kompliziert

Ja.

Es ist allerdings nicht immer notwendig (oder möglich) den Dingen selbst auf den Grund zu gehen. Die Wissenschaft und qualitativ hochwertige Medien stellen uns glaubwürdige Information zur Verfügung. Sie ermöglichen es uns neue Informationen und Informationsanbieter einzuschätzen.

Informationsbedürfnisse und informationskompetentes Verhalten

- Wetter (Ort einfügen)
- Freizeitaktivitäten (Ort einfügen)
- Reiserucksack Handgepäck

Einfach zu lösende Informationsbedürfnisse. Verlust gering bei nicht optimaler Lösung.

- Augenoperation Kurzsichtigkeit
- Videos als Lernwerkzeuge
- Impfung bei Kindern
- Ursachen des Klimawandels

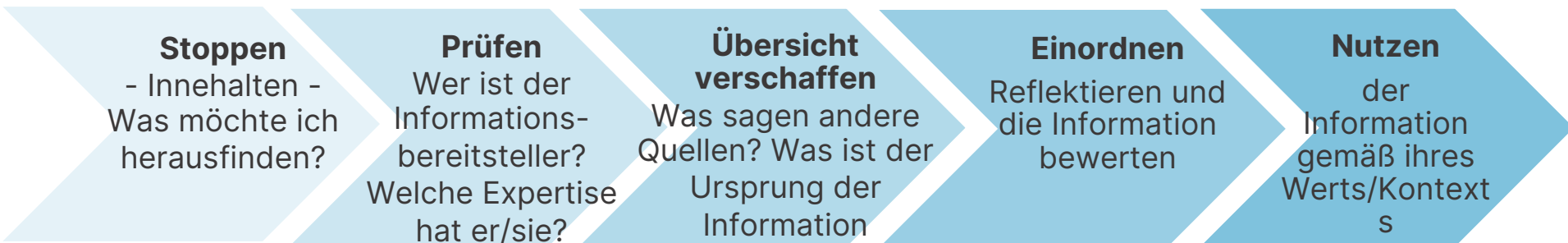
Informationsprozess herausfordernd. Informationskompetentes Verhalten anzuraten. Objektive Problemlösung aufgrund der richtigen Information möglich.

- Todesstrafe
- Cannabis Freigabe
- Maßnahmen Klimawandel
- Mindestlohn

Diskursive und normative Themen. Die „richtige Information“ und Widerstandsfähigkeit gegenüber Desinformation wichtige Grundlage für eigene (rationale) Entscheidungsfindung aber diese nicht determinierend.

Lateral reading: ein schnelle und einfache Vorgehensweise zur Informationsbewertung (Caulfield 2017; Wineburg & McGrew 2017)

Lateral reading beruht auf der Idee, das Wissen von vertrauenswürdigen Dritten zur Informationsbewertung zu nutzen



Wineburg & McGrew (2017). Ergebnisse

Figure 1. Percentage of participants in each group selecting the College or the Academy as more reliable.

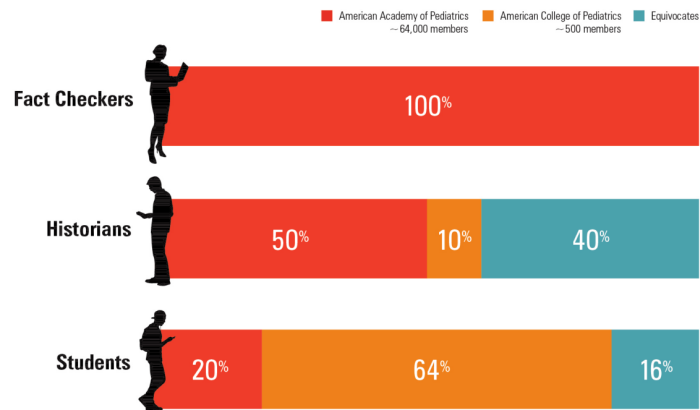
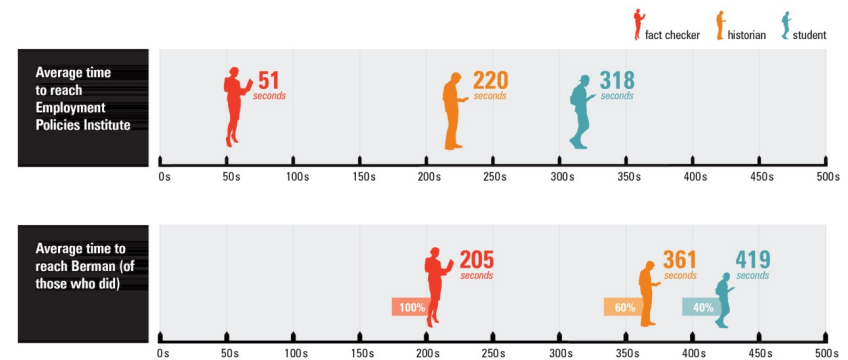


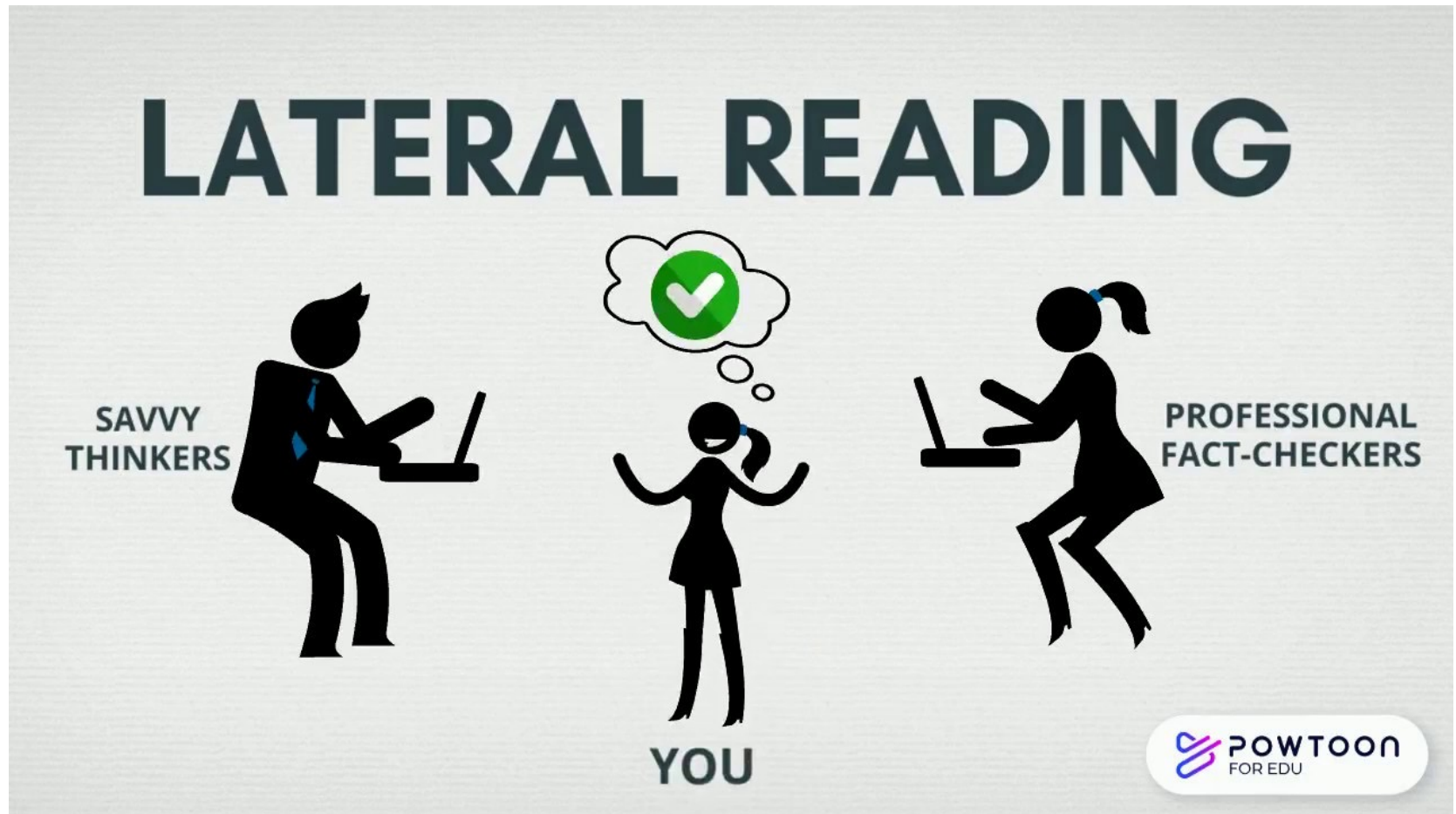
Figure 4. Average time for participants to determine Employment Policies Institute's sponsorship of minimumwage.com; average time and percentage of each participant group to determine Richard Berman or Berman and Company's sponsorship of both websites.



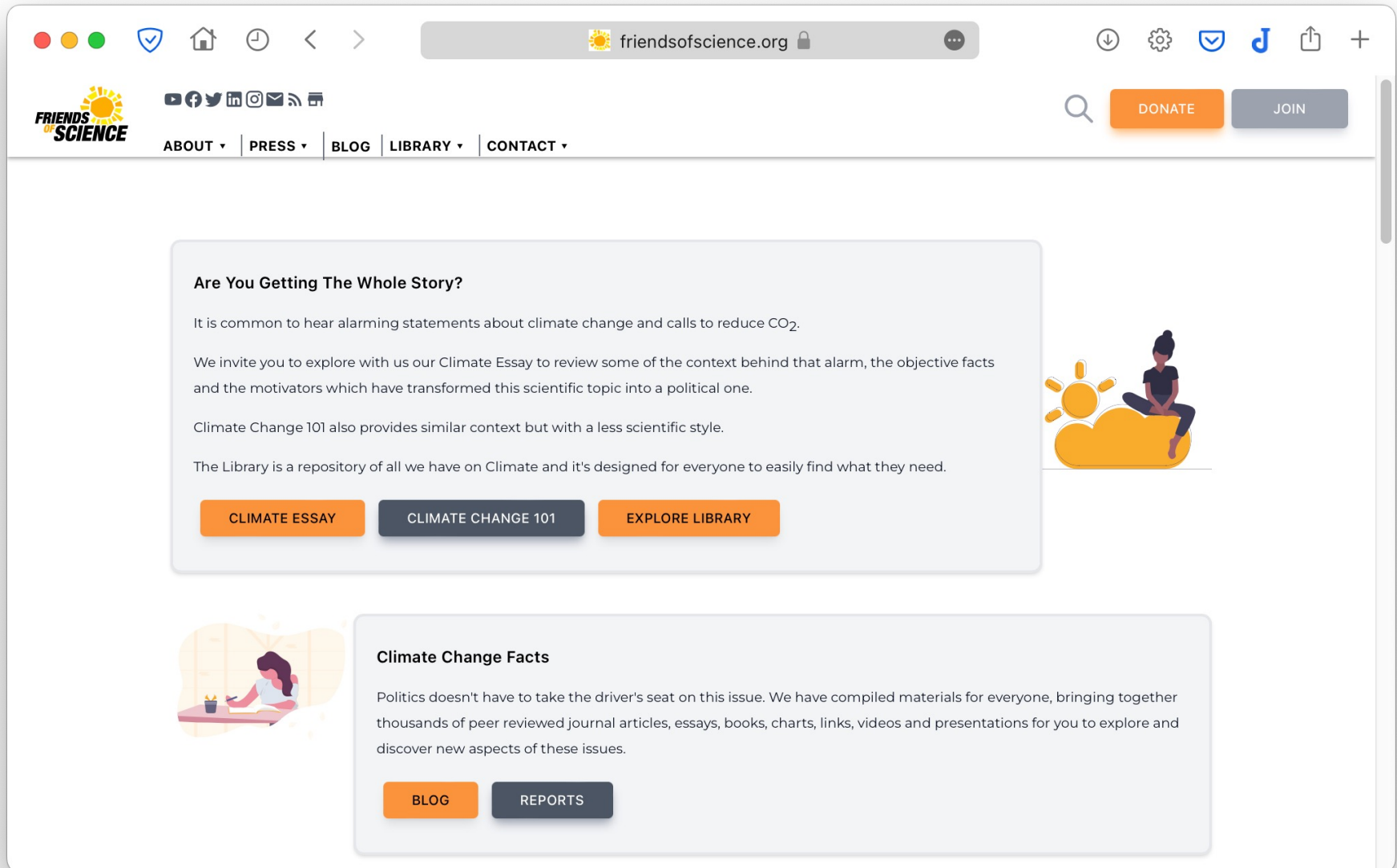
Lateral Reading

UofL Research Assistance & Instruction (2020). Lateral reading

<https://www.youtube.com/watch?v=GZvsGKvqzDs&t=152s>



Klimawandel: ist friendsofscience.org vertrauenswürdig?





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PRESS ▼

BLOG

LIBRARY ▼

CONTACT ▼

What We Do & History

Friends of Science Society is a non-profit society, run by active and retired earth and atmospheric scientists, engineers, economists, and other energy business experts, supported by a handful of contracted services. Our Canadian scientific adviser is Dr. Madhav Khandekar, a 40 year veteran research scientist of Environment Canada, past IPCC expert reviewer, author of over 160 peer-reviewed papers, past WMO regional expert and acknowledged world expert on the monsoon phenomenon. We network with a number of esteemed climate scientists and energy policy experts from around the world and we work closely with CLINTEL, the international climate intelligence group of over 980 scientists and scholars.

Friends of Science Society offers insights on climate science and related energy policies for the public and policy makers.

We do extensive literature research on these scientific subjects and issue a bimonthly Climate science review "Cli-Sci", along with "Extracts" our energy/politics news round-up to our members.

The Society was formed early in 2002 to challenge the questionable science and destructive economic impacts inherent in the politically inspired Kyoto Protocol. We offer evidence that challenges the premises of catastrophic human-caused global warming and climate change and present the broader picture of natural factors that drive climate change.

Friends of Science Society is concerned at the shift in recent years away from air and water pollution as valid and important environmental issues, to a societal and policy focus almost exclusively on climate change and a singular focus on "carbon dioxide" as the driver and cause. This current obsession is misguided in that climate fluctuations are mostly driven by natural phenomena like solar cycles and influences, ocean cycles, and naturally changing atmospheric oscillations. Humans contribute to climate

Klimawandel: ist friendsofscience.org vertrauenswürdig?

Google friendsofscience.org

Ungefähr 5.910.000 Ergebnisse (0,36 Sekunden)

Tipp: Begrenze die Suche auf **deutschsprachige** Ergebnisse. Du kannst deine Suchsprache in den Einstellungen ändern.

<https://friendsofscience.org> ▾ Diese Seite übersetzen

Friends of Science: Providing Insight into Climate Change

Friends of Science Society is powered by volunteers and organizational engagement. Please take a moment to consider a contribution, joining or working to spread ...

[Friends of Science Calgary · Connect With Us](#)

<https://friendsofscience.org> > about ▾ Diese Seite übersetzen

Providing Insight into Climate Change - Friends of Science

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Myths / Facts - Friends of Science

POINT #3: Human produced CO2 has increased over the last 100 years adding to the Greenhouse effect and in turn fueling most of the warming of the last 100 ...

<https://de.wikipedia.org> > wiki > Friends_of_Science ▾

Friends of Science - Wikipedia

Friends of Science ist eine kanadische Non-profit-Organisation mit Sitz in Calgary (Alberta). Nach eigener Aussage setzen sich die Mitglieder hauptsächlich ...

<https://en.wikipedia.org> > wiki > Fr... ▾ Diese Seite übersetzen

Friends of Science - Wikipedia

Friends of Science (FoS) is a non-profit advocacy organization based in Calgary, Alberta. The organization rejects the established scientific ...

Founder: Douglas Leahey Founded: 2002

<https://www.facebook.com> > ... > Businesses > Education

Friends of Science - Facebook

Page · Education. PO Box 23167, Mission, Calgary, AB, Canada, Alberta. (888) 789-9597. contact@friendsofscience.org. friendsofscience.org. Always open ...

<https://de-de.facebook.com> > ... > Friends of Science

Friends of Science | Facebook

PO Box 23167, Mission, Calgary, AB, Canada, Alberta. (888) 789-9597. contact@friendsofscience.org. friendsofscience.org. Durchgehend geöffnet ...

<https://www.sourcewatch.org> > Frie... ▾ Diese Seite übersetzen

Friends of Science - SourceWatch

The Friends of Science Society (FoS) is a Canadian non-profit group based in Calgary, Alberta, ... Find out - watch our video at friendsofscience.org."

<https://dewiki.de> > Lexikon > Friends_of_Science ▾

Friends of Science - DeWiki.de

Friends of Science ist eine kanadische Non-profit-Organisation mit Sitz in Calgary ...

Artikel über **Friends of Science** auf sourcewatch.org (englisch) ...

Canada Day 2022 - Where's the Heat Dome?

YouTube · Friends of Scie... vor 3 Wochen

en (Zuhause) · Standort aktualisieren

Google friendsofscience.org

Ungefähr 5.910.000 Ergebnisse (0,36 Sekunden)

Tipp: Begrenze die Suche auf **deutschsprachige** Ergebnisse. Du kannst deine Suchsprache in den Einstellungen ändern.

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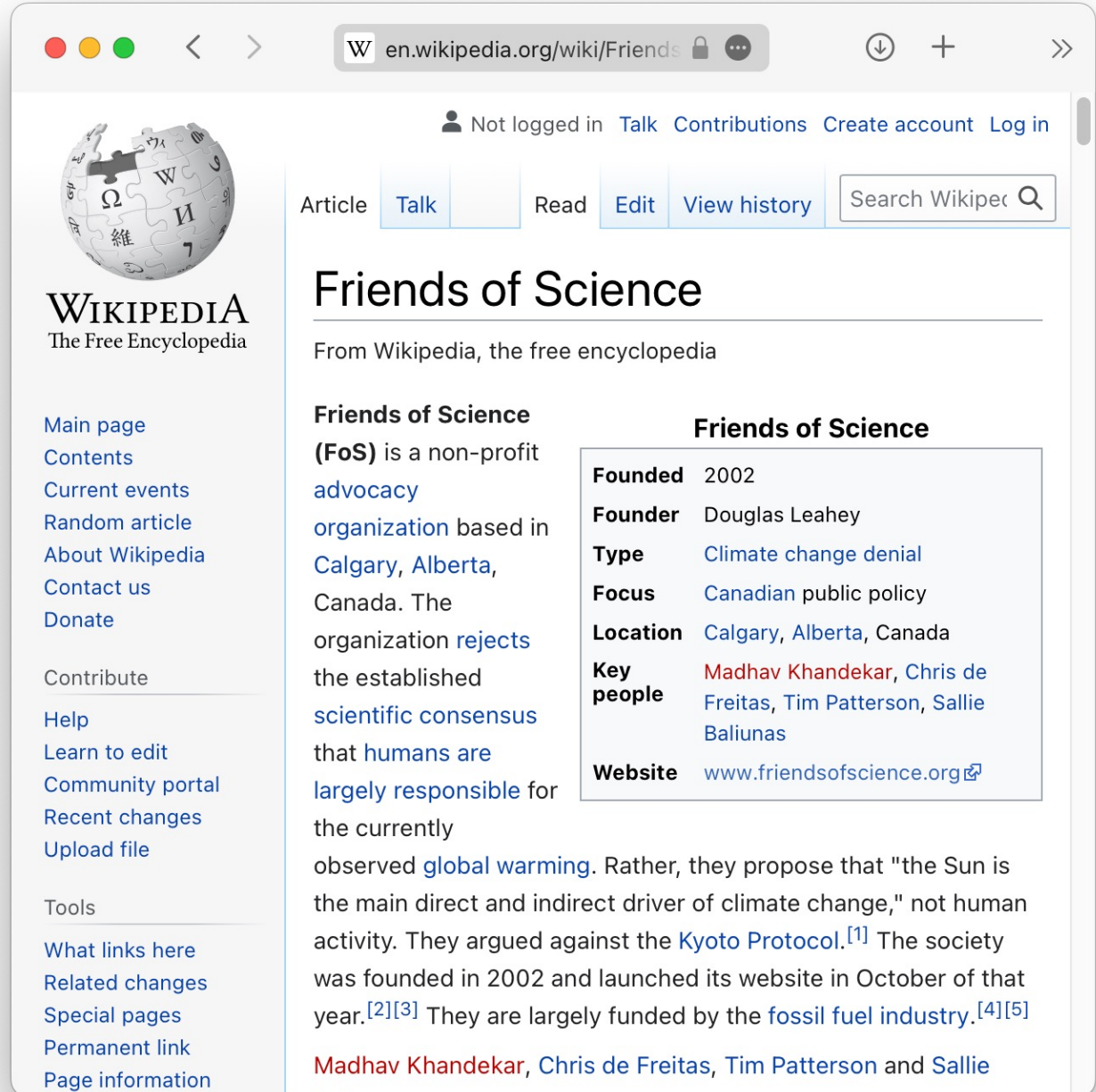
Friends of Science - Facebook

Page · Education. PO Box 23167, Mission, Calgary, AB, Canada, Alberta. (888) 789-9597. contact@friendsofscience.org. friendsofscience.org. Always open ...

<https://de-de.facebook.com> > ... > Friends of Science

Friends of Science | Facebook

Klimawandel:
ist
friendsofscience.org
vertrauenswürdig?



The screenshot shows a web browser window displaying the Wikipedia article for "Friends of Science". The browser's address bar shows the URL "en.wikipedia.org/wiki/Friends". The Wikipedia logo is visible on the left side of the page. The article title "Friends of Science" is prominently displayed. Below the title, a summary states: "From Wikipedia, the free encyclopedia". The article text begins with "Friends of Science (FoS) is a non-profit advocacy organization based in Calgary, Alberta, Canada. The organization rejects the established scientific consensus that humans are largely responsible for the currently observed global warming. Rather, they propose that 'the Sun is the main direct and indirect driver of climate change,' not human activity. They argued against the Kyoto Protocol.^[1] The society was founded in 2002 and launched its website in October of that year.^{[2][3]} They are largely funded by the fossil fuel industry.^{[4][5]}" A table on the right side of the article provides key information about the organization.

Friends of Science	
Founded	2002
Founder	Douglas Leahey
Type	Climate change denial
Focus	Canadian public policy
Location	Calgary, Alberta, Canada
Key people	Madhav Khandekar, Chris de Freitas, Tim Patterson, Sallie Baliunas
Website	www.friendsofscience.org

Klimawandel: ist friendsofscience.org vertrauenswürdig?



The screenshot shows a web browser displaying the SourceWatch profile for "Friends of Science". The browser's address bar shows "www.sourcewatch.org/in". The SourceWatch logo is visible in the top left, featuring a magnifying glass over a globe with various corporate logos like Koch, Fox News, AFP, and Monsanto. The page has a navigation bar with "Page", "Discussion", "Read", and "More" tabs, along with a search bar labeled "Search SourceWat". The main heading is "Friends of Science". Below it, a text block describes the "Friends of Science Society" (FoS) as a Canadian non-profit group based in Calgary, Alberta, composed of active and retired engineers, earth scientists, and other professionals, as well as concerned Canadians questioning the science behind the Kyoto Protocol. To the right of this text are two boxes: the top one features a word cloud about climate change and links to learn more from the Center for Media and Democracy; the bottom one shows silhouettes of people and the text "FRONT GROUPS Appearances may be deceptive". A sidebar on the left lists various links such as "What Is CMD?", "Donate Here", "ALEC Exposed", "Outsourcing America Exposed", "Koch Exposed", "FrackSwarm", "CoalSwarm", "NFIB Exposed", "Fix the Debt", "State Policy Network", "Recent Changes", "Random page", "How To", "Sign Up to Edit", "Contact Us", "Help Write History", "Research Corporations", "Edit an Article", "Correct Errors", and "Search Effectively". At the bottom of the main text, a paragraph mentions an August 12, 2006, article from *The Globe and Mail* revealing significant funding from the oil industry, including a major grant from the Science Education

www.sourcewatch.org/in

Log in

Page Discussion Read More

Search SourceWat

Friends of Science

The **Friends of Science Society** (FoS) is a Canadian non-profit group based in Calgary, Alberta, that is "made up of active and retired engineers, earth scientists and other professionals, as well as many concerned Canadians, who believe the science behind the [Kyoto Protocol](#) is questionable." [1]

In an August 12, 2006, article *The Globe and Mail* revealed that the group had received significant funding via anonymous, indirect donations from the [oil industry](#), including a major grant from the Science Education

Learn more from the Center for Media and Democracy's research on [climate change](#).

This article is part of the Center for Media & Democracy's spotlight on [front groups](#) and corporate spin.

FRONT GROUPS
Appearances may be deceptive

21

Ivermectin ein Heilmittel gegen COVID-19?

The screenshot shows the FLCCC Alliance website. The header includes the FLCCC logo and navigation links: ABOUT, PROTOCOLS, IVERMECTIN (highlighted), FAQ, THE ALLIANCE, PUBLIC STATEMENTS, VIDEOS & PRESS, and TESTIMONIALS. The main content area is titled 'Ivermectin in COVID-19' and features a video player with the title 'What is Ivermectin?' and a play button. Below the video, there is a summary of studies on the use of ivermectin in COVID-19, including a table of results.

FLCCC ALLIANCE
Front Line COVID-19 Critical Care Alliance
Prevention & Treatment Protocols for COVID-19

HOME / IVERMECTIN IN COVID-19

What is Ivermectin?
DOCUMENTARY
odysee

Ivermectin for COVID-19
89 studies from 960 scientists
133,038 patients in 27 countries
Statistically significant improvement for mortality, ventilation, ICU, hospitalization, recovery, cases, and viral clearance.
83%, 63%, 39% improvement for prophylaxis, early and late treatment, and treatment for severe COVID-19.

Study Type	Percentage	Direction
All studies	63%	Positive
With exclusions	68%	Positive
Mortality	51%	Positive
Hospitalization	33%	Positive
Recovery	44%	Positive
Cases	78%	Positive
Viral clearance	41%	Positive
RCTs	53%	Positive
Prophylaxis	83%	Positive

<https://covid19criticalcare.com/ivermectin-in-covid-19/>

The screenshot shows the Cochrane website. The header includes the Cochrane logo and navigation links: English, Deutsch, Español, فارسی, Français, 日本語, Media, Contact us, Community, and My Account. The main content area is titled 'Ivermectin for preventing and treating COVID-19' and includes a summary of the review, key messages, and a list of authors.

Cochrane
Trusted evidence. Informed decisions. Better health.

Ivermectin for preventing and treating COVID-19

Is ivermectin effective for COVID-19?
Published: 21 June 2022

Key messages
We found no evidence to support the use of ivermectin for treating COVID-19 or preventing SARS-CoV-2 infection. The evidence base improved slightly in this update, but is still limited.

What is ivermectin?
Ivermectin is a medicine used to treat parasites, such as intestinal parasites in animals, and scabies in humans. It is inexpensive and is widely used in regions of the world where

Authors:
Popp M, Reis S, Schießer S, Hausinger Rlona, Stegemann M, Metzendorf M-I, Kranke P, Meybohm P, Skoetz N, Weibel S

Primary Review Group:
Infectious Diseases Group, Haematology Group

See the full Review on the Cochrane Library

https://www.cochrane.org/CD015017/INFECTN_ivermectin-preventing-and-treating-covid-19

Fazit

- Das Internet ist ein komplexer, interessengesteuerter und teilweise intransparenter Informationsraum
- Das Informationsverhalten von Internetnutzern ist oftmals problematisch. In vielen Fällen ist eine fehlende Befähigung und Bereitschaft zu informationskompetenten Verhalten erkennbar
- Informationskompetenz erfordert Wissen, kritisches Denken und Motivation

- Informationskompetenz primär relevant für komplexe Themen
- In diskursiven/normativen Kontexten ist die Fähigkeit, den Wahrheitsgehalt von Aussagen und die Interessen von Akteuren bewerten zu können eine gute Grundlage, um gegenüber Manipulation resistent zu sein
- Lateral reading ermöglicht eine schnelle Orientierung hinsichtlich der Vertrauenswürdigkeit von Information und deren Anbietern

Danke

Ressourcen

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DOI:10.2139/ssrn.3048994.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3048994

Further lateral reading examples

Taken and adapted from Neele Wichards, Karen Malin Krüger, Irina Schick, Lynn Rakel who created „Lateral Reading. How can information be evaluated easily, quickly and purposefully? The lateral reading approach“ (translated from German) in July 2022,

<https://tropical-parrot-7ca.notion.site/Lateral-Reading-cc03a714eb76493499dfb35778e33b9e>

