FACHTAG I DIE MISCHUNG MACHT'S I VHS FRANKFURT I 16.3.2024

PH Wien

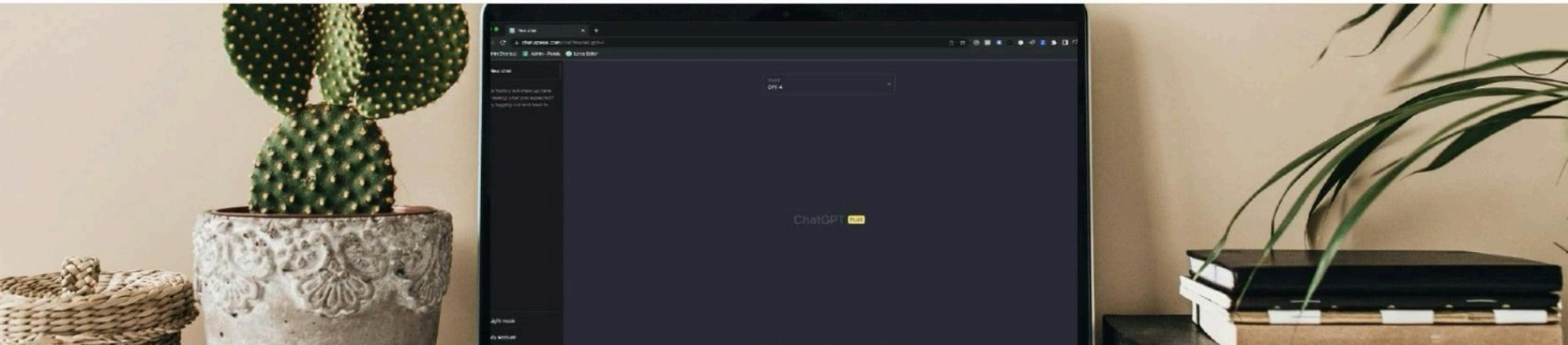
Ich bin ein K,

vhs

holt mich hier raus.

Warum das K in KI nur ein Puzzlestein in einer Kultur der Digitalität ist.

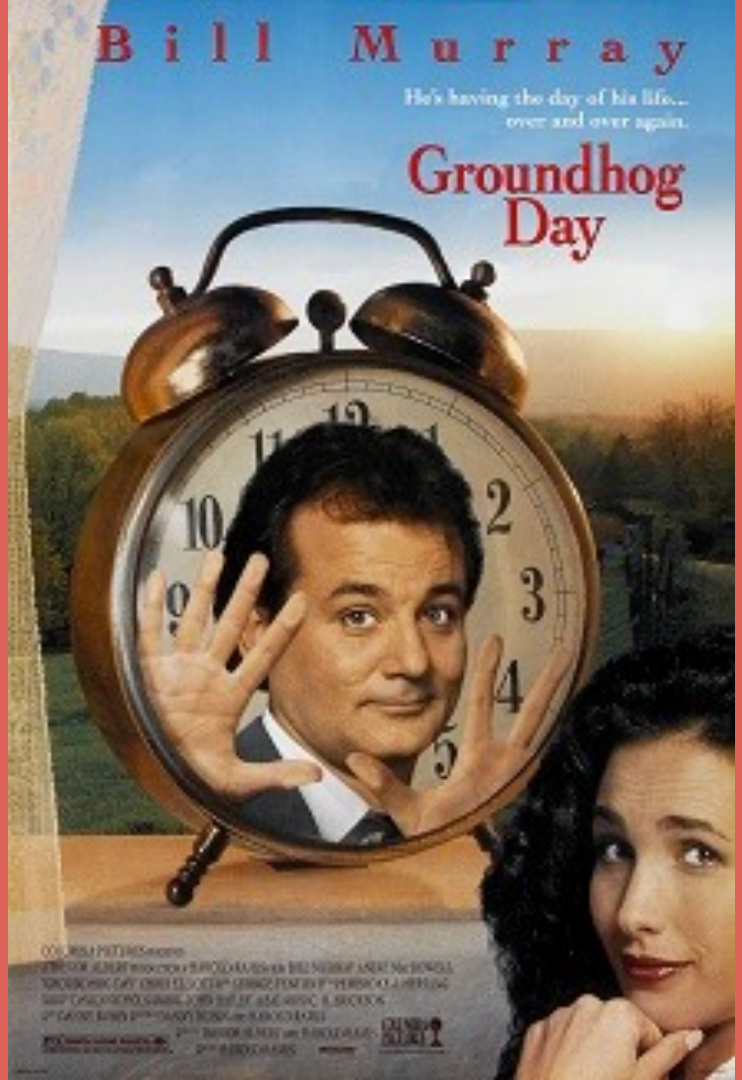
Thomas Strasser I Pädagogische Hochschule Wien I thomas.strasser@phwien.ac.at I bildungshipster.online



Wow!

Warum gerade
jetzt?

K



https://en.wikipedia.org/wiki/Groundhog_Day_(film)

Ruhe bewahren?

AP photo

Elementary school teachers picket against use of calculators in grade school

The teachers feel if students use calculators too early, they won't learn math concepts

Math teachers protest against calculator use

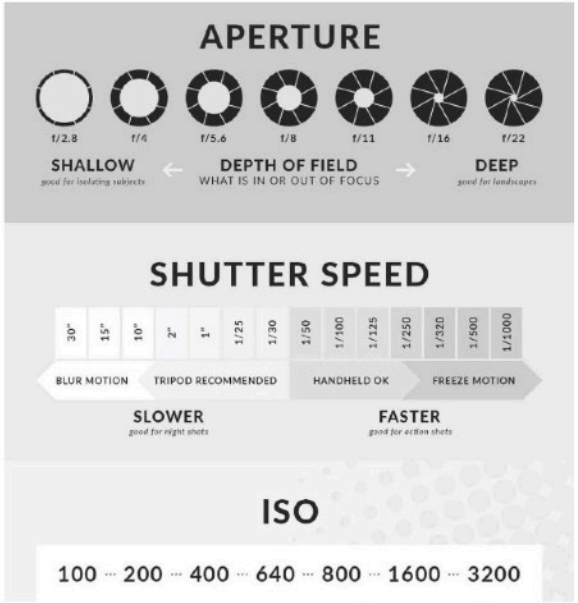
By JILL LAWRENCE

"My older kids don't pay any strate," he said. "Teachers are

- Auf Twitter gefunden; Originalquelle: The Daily Item, April 5 1966

Definition von
Wow?

Beispiele Beautiful.ai

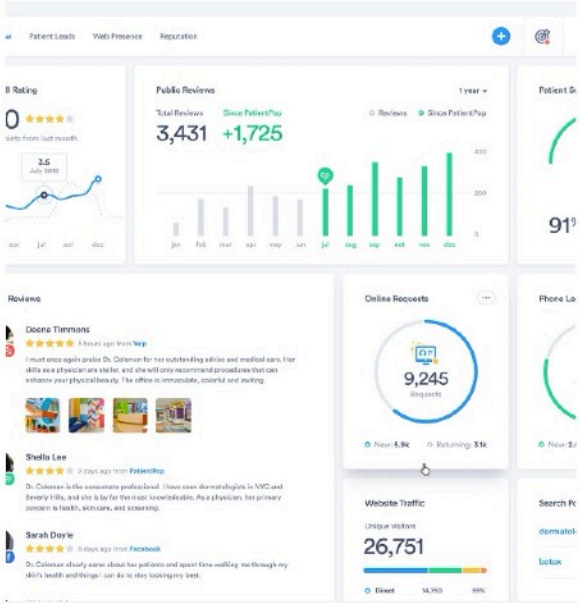


Beautiful Infographic

This infographic uses a clean, minimalist design with pops of color to clearly visualize data.

Modern Presentation Template

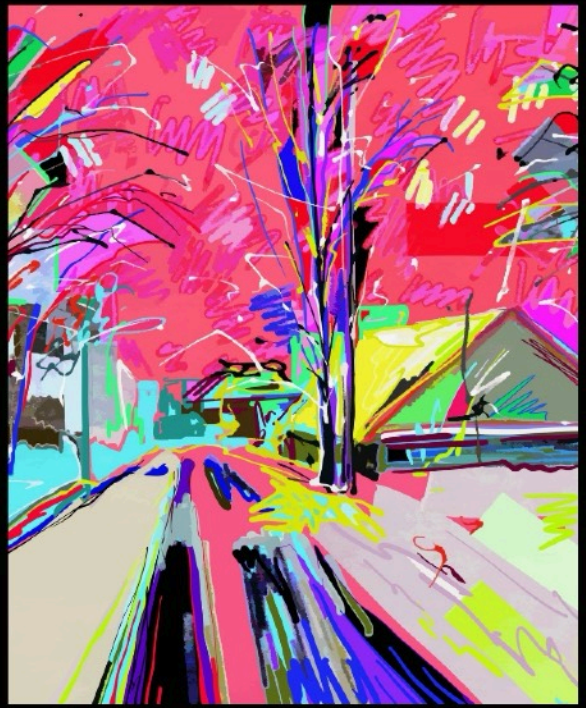
The sleek gradients and large font in this presentation template create an elegant, contemporary look.



Vibrant Dashboard

The vivid colors and intuitive layout in this dashboard make complex data easy to digest.

Midjourney Automatisierte Bildgeneratoren



Kunstwerke

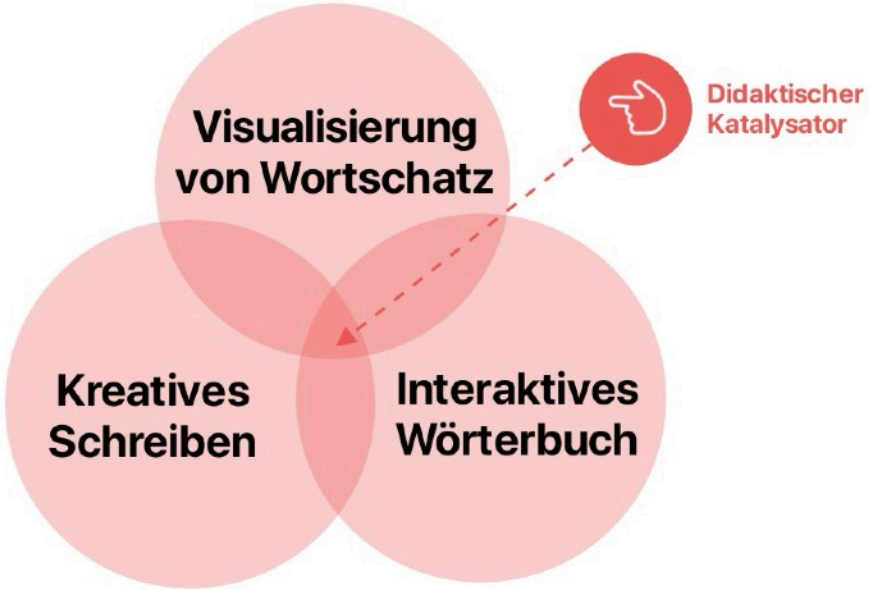
Futuristische Städte

Mystische Landschaften

"Ein persönliches Porträt eines Lehrers, der an einem Schreibtisch in einem Heimbüro sitzt und mit KI-Tools arbeitet, mit einem unscharfen Hintergrund aus Bücherregalen. Verwenden Sie eine Hasselblad-Kamera mit einem 85-mm-Objektiv bei Blende 1,2 und weichem Sonnenlicht, das auf das Motiv fällt, um die Kreativität und Intelligenz der Person einzufangen. -v5 "

Midjourney prompt:
<ein Lehrer in trendiger Kleidung, der ein hyperrealistisches Selfie macht, GoPro-Kamera, der mit einem KI-Roboter durch das Brandenburger Tor läuft ar 16:9 v 5.1 style raw>

Potenziale für den FSU.



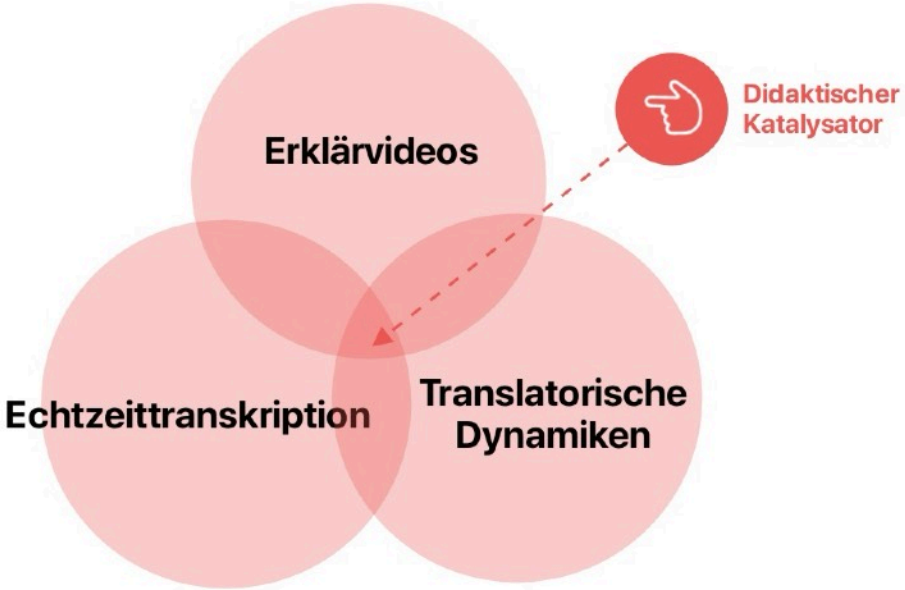
Caption KI-basierter Video/Audioübersetzer.

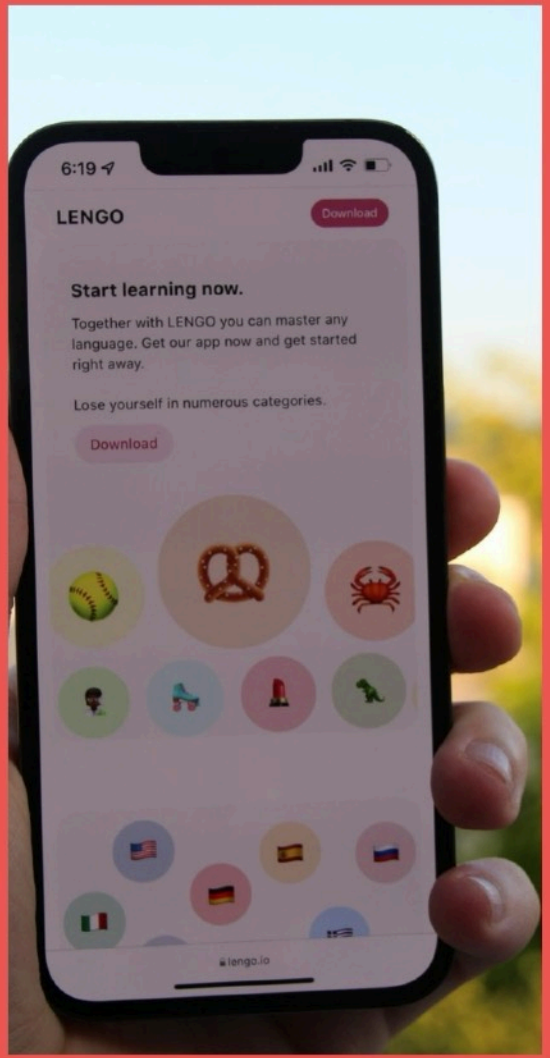
Kurzvideos

Reels

Lehrvideos

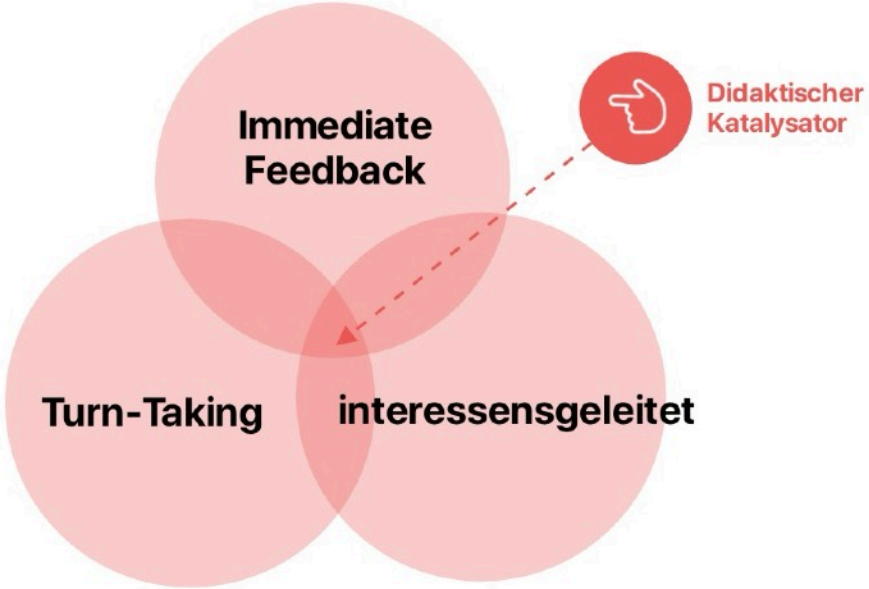
Potenziale für den FSU.





KI-basierte Sprachlernapps.

Potenziale für den FSU.



Wow!

Wäh!
[umgangsprachlich für nicht gut]

“German A(l)ngst.”

*das immer währende Vorurteil

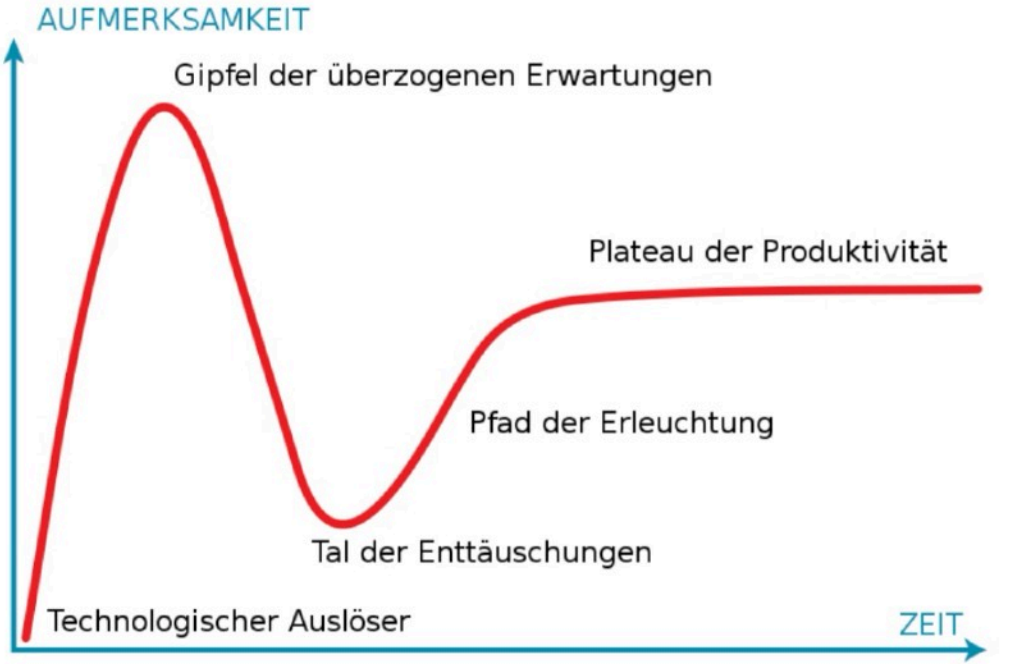
Weniger s/w-Malerei

mehr professionell-pädagogische Haltung.

Hype-Cycle Theorie
(Gartner 2020)

Das Plateau der Produktivität.

als Indikator einer professionellen Haltung?



- https://de.wikipedia.org/wiki/Hype-Zyklus

Wissenschaft

> Wow.

auch bzw. gerade bei KI.

Beobachtbarkeit des
positiven Effekts.

Schwache KIs, starke Performanz? Form und Wirkung von KI-gestützten Erklärvideos im Englischgrammatikunterricht der Sekundarstufe I

Thomas Strasser[1]

The primary goal of this contribution is to show to what extent certain grammatical skills of lower secondary English learners can be improved by using AI-powered visualizer tools compared to only analogue, teacher-centered grammar introduction processes.
The items to be investigated were syllabus-specific grammar topics (past simple vs. present perfect simple). The focus group was exposed to AI-powered visualizer tools and the control group received analogue teacher input. The quantitative measurement method found that the focus groups did not achieve a significantly better test score in the post-test than the control groups, who received analogue teaching input under almost identical conditions. However, the evaluated data suggest that especially learners with a lower language level (based on C-test measurements) achieved a significantly better result in the post-tests after the AI-video exposition than those learners with a similarly low language level who received the analog teacher input.

5

Narrow AI-Powered Visualization Facilitation Tools in Foreign Language Learning: A Visual Approach Promoting Equal Opportunities in Foreign Language Grammar Teaching

Thomas Strasser

Introduction

A Multitude of Definitions

Digital technologies have been a prominent part of the academic discourse, especially in education (Belshaw 2011; Cunningham et al. 2019; Toh et al. 2013). Especially during such complex processes like learning and teaching a foreign language, it is of great relevance to put digitization into a more concise conceptual framework (Garone et al. 2022). Digitization derives from the Latin word *digitus* (finger). Therefore, one can assume that digitization tries to measure something in particular (Grünberger et al. 2017). But what needs to be measured, especially in

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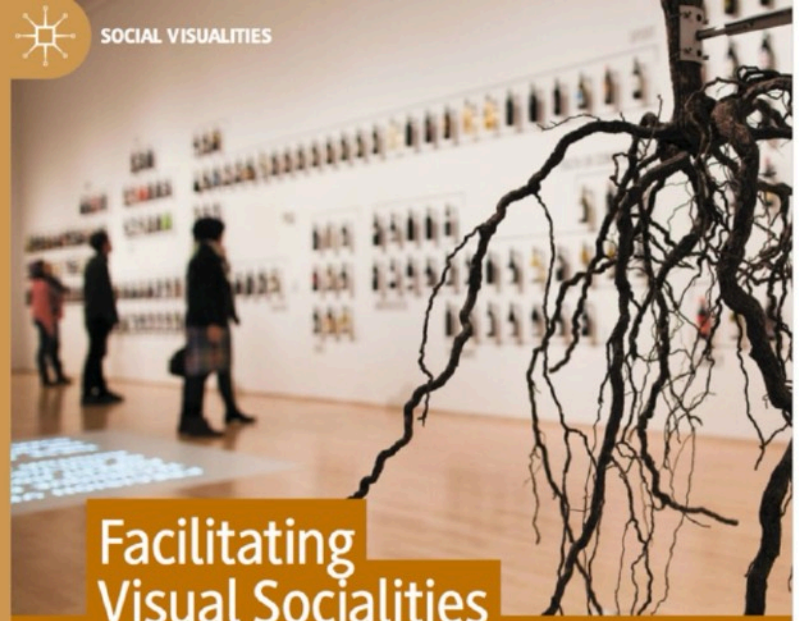
C. Burkholder et al. (eds.), *Facilitating Visual Socialities*, Social Visualities,
https://doi.org/10.1007/978-3-031-25259-4_5

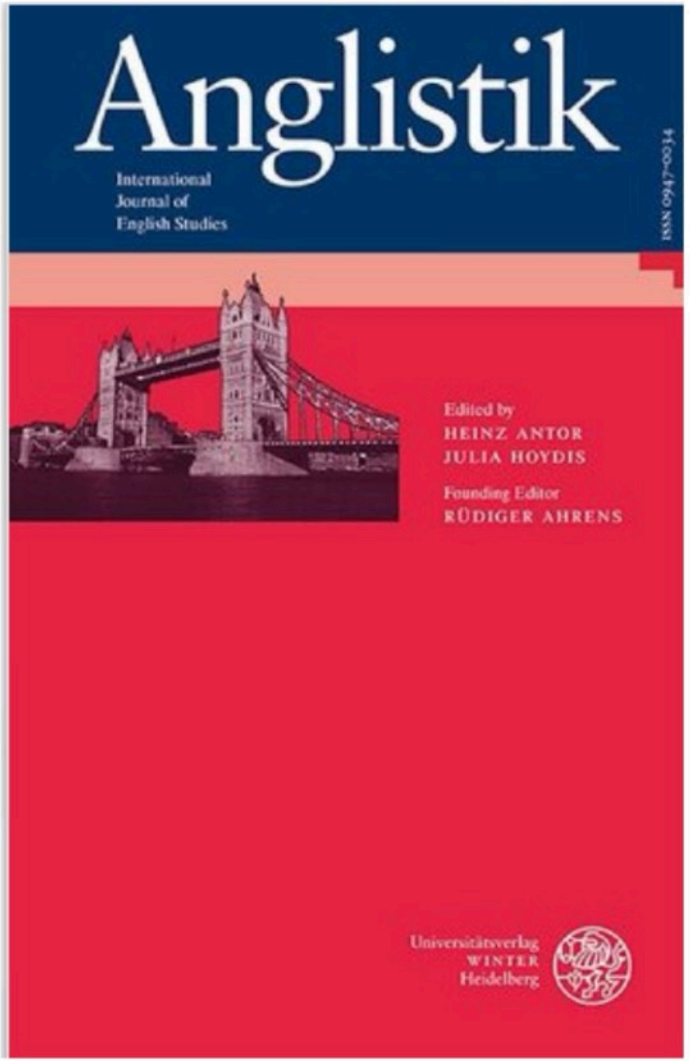


Facilitating Visual Socialities
Processes, Complications and Ethical Practices

Edited by
Casey Burkholder
Joshua Schwab-Cartas
Funké Aladejebi

Social Visualities

palgrave macmillan



TORBEN SCHMIDT AND THOMAS STRASSER

Artificial Intelligence in Foreign Language Learning and Teaching: A CALL for Intelligent Practice

1. Introduction

Practice and focus on form play a crucial and decisive role in foreign language learning. But what would an intelligent, adaptive foreign language learning environment look like if all students could individually practice their language skills with exercises tailored to their individual skill levels, interests, and motivation? How could all learners be supported and challenged according to their abilities, so that they all have the opportunity to achieve specific learning goals in a self-directed manner? And how could digital media contribute to the kind of learning that adapts to the individual student's needs in heterogeneous foreign language classrooms?

In the past years, digital technologies have become scientific and practical focal points in the English language teaching (ELT) world. Whether digital media [are] "friend or foe" (Grimm et al. 2015), technology-enhanced language learning (TELL) has been part of an international discourse, varying between "euphoric proposals," "pessimistic stances," and "opinions which stress that the risks of digital media need to be addressed" (2015, 210). Regardless of general TELL, research studies have shown that "technology can influence the processes and outcomes of education, and many countries are investing in technological support for teaching and learning" (Paiva and Bittencourt 2020, 448). The dynamic development of new technologies and the concomitant digital transformations result in significant challenges both for society as a whole and at all levels of the education system.

One of the latest technological developments, which raises more and more interest in connection with these questions, is artificial intelligence (AI). There are many

Haltung korreliert mit Performanz.

> „[...] main predictors of teachers' classroom technology use [...]"

(Hsu, 2016 zitiert nach Miller et al., 2003, S. 37)

Historisch-empirische Zusammenschau.

Mentalität des Lehrender hat großen Einfluss

Hanisch (1992)

Professionelles Wissen ein Zeichen von Haltung

Weinert & Helmke (1996)

Haltung oftmals ethisch-philosophisch

Krumbach (2008)

Positive Grundhaltung

> “Die meisten befragten Lehrpersonen gaben an, digitalen Medien positiv gegenüber zu stehen und diese häufig in der Unterrichtspraxis und zur Unterrichtsvorbereitung zu nutzen.”

Hannemann 2014; Ludwig 2013 in: Waffner 2020

Positive Grundhaltung

> „[…] Diskrepanz zwischen kommunizierter Haltung und der mangelnden handlungspraktischen Umsetzung […]“

Brügge-Mann, 2014, S. 65

KI-Kompetenzen (AI-literacies).

Long & Magerko (2020)

Sprachdidaktische & ethische Implikationen

AI-literacies

1 | **Design Consideration 1: Explainability**
Erklärpotenziale von Bildgeneratoren nutzen.

2 | **Kompetenz 10: Rolle des Menschen (fine tuning)**
Chat-GPT mit ständigen Fragen verbessern. Turn-taking.

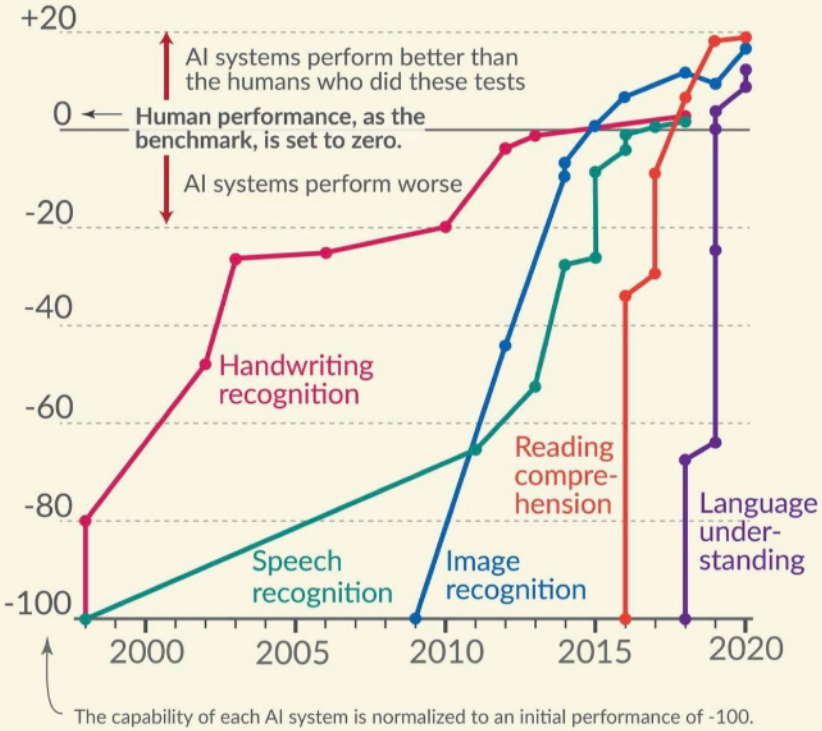
3 | **Kompetenz 13: Inhalte fachlich prüfen**

4 | **Design Consideration 2: Embodied Interaction (learner agency)**
Sprachlernende befähigen, mit KI-Tools individuell zu lernen

5 | **Design Consideration 15: Niederschwellige Didaktisierung**

Language and image recognition capabilities of AI systems have improved rapidly

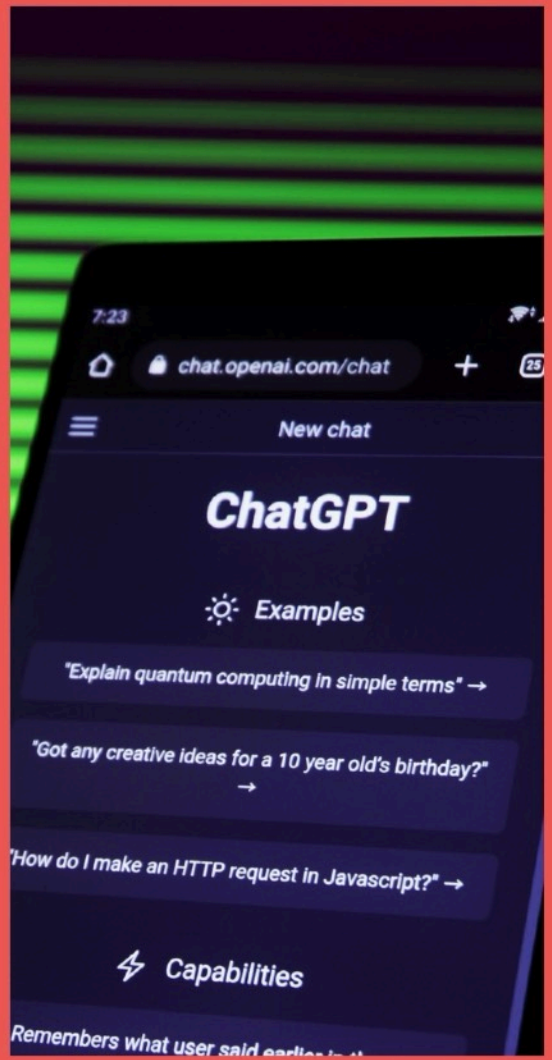
Test scores of the AI relative to human performance



Source:
Kiela et al. (2021) Dynabench: Rethinking Benchmarking in NLP

OurWorldInData.org/artificial-intelligence • CC BY

Our World in Data

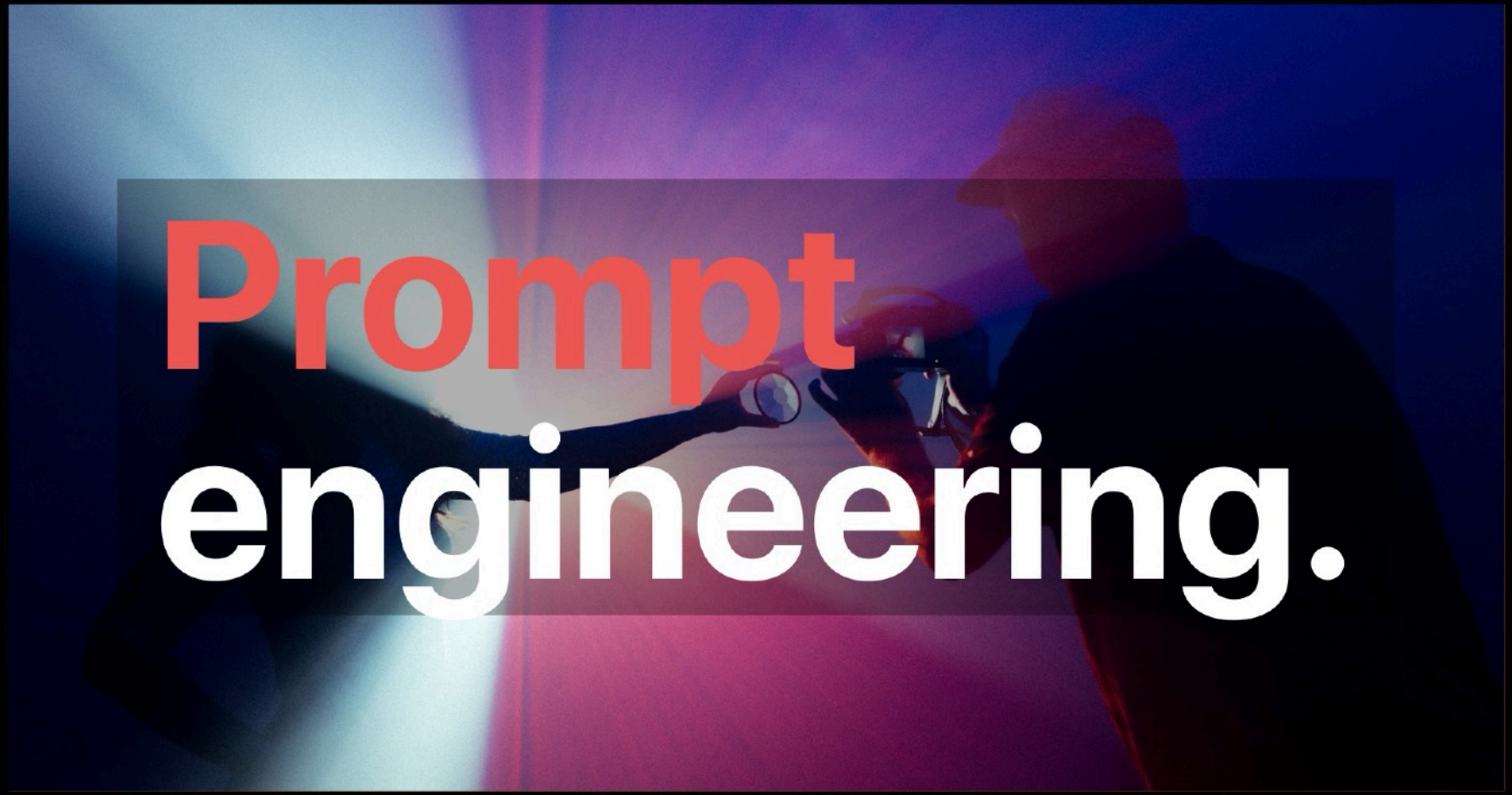


Checken statt Cheaten.

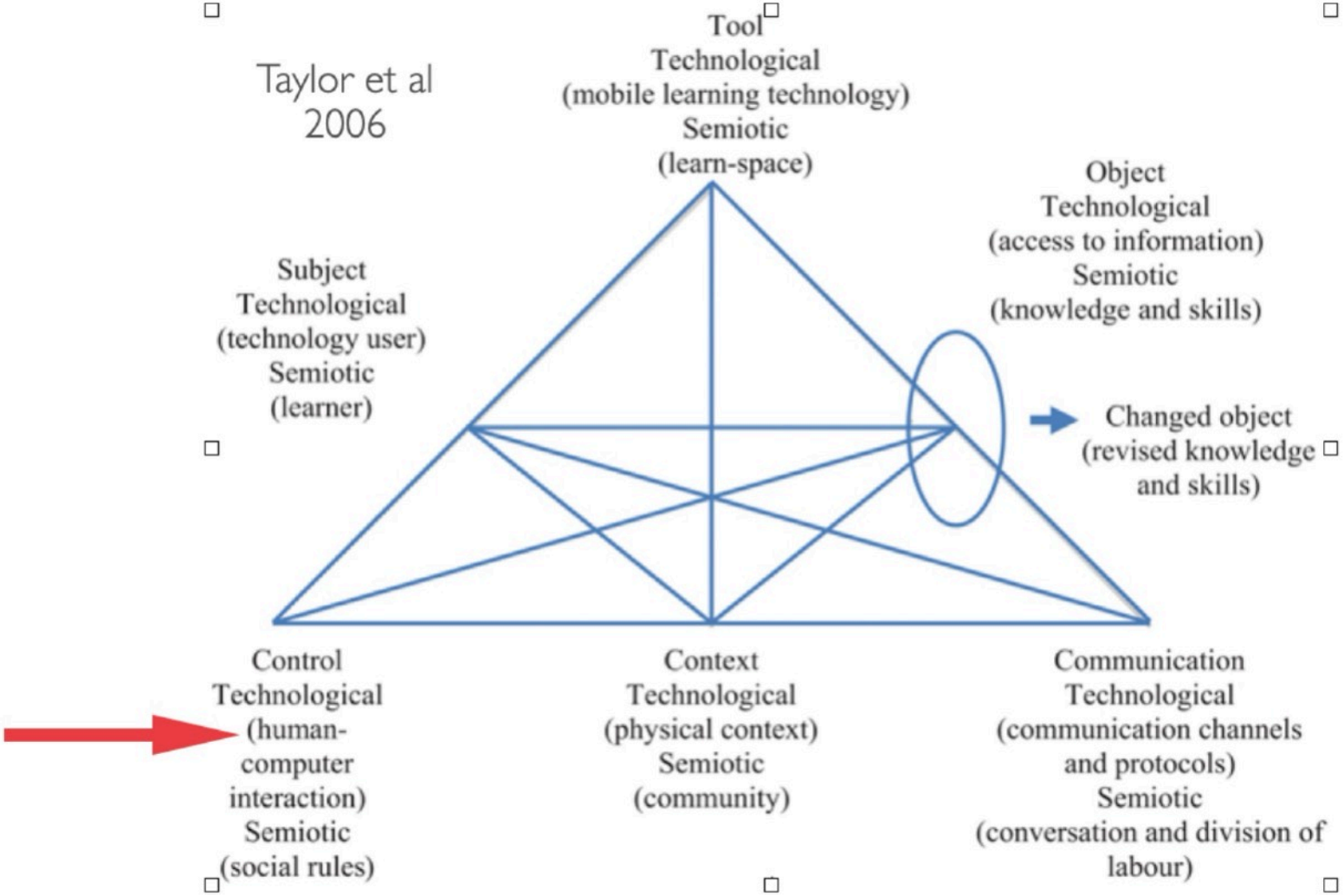
AUTOCOMPLETE
auf STEROIDEN.
Marcus 2023

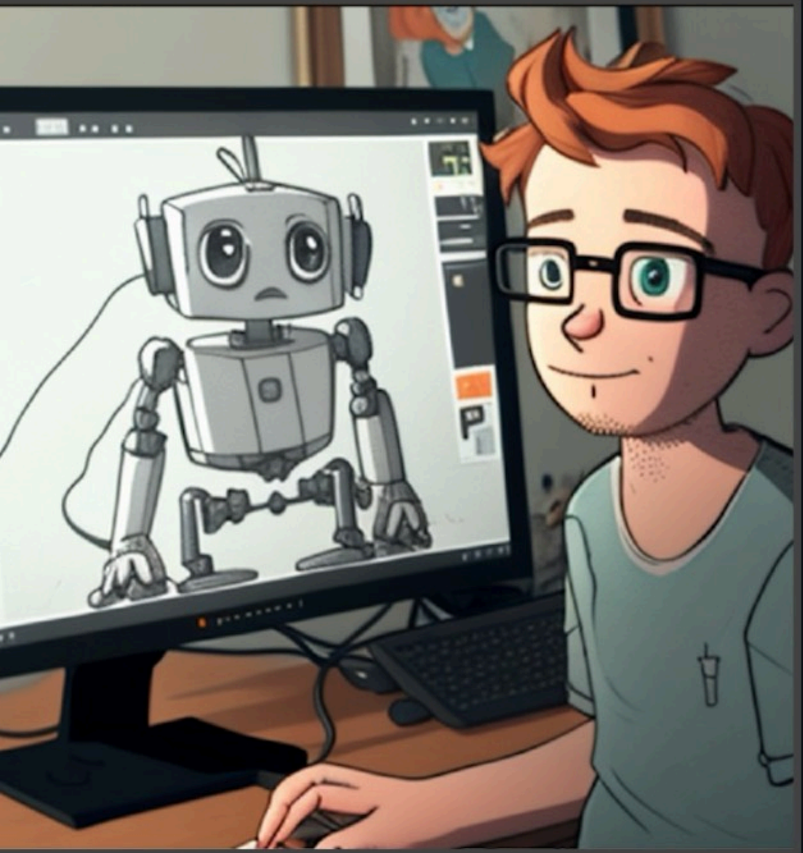
STOCHASTISCHER PAPAGEI.
Bender 2023

IK


Prompt
engineering.

Taylor et al
2006





AI Tutor Personalization Options

This section outlines the various configuration options available to students using the AI Tutor. These options can be modified to customize the learning experience.

Configuration	Options
Depth	1. Surface level understanding 2. Expanded understanding 3. Detailed analysis 4. Practical application 5. Advanced concepts 6. Critical evaluation 7. Synthesis and integration 8. Expert insight 9. Specialization 10. "Cutting-edge research"
Learning Styles	Sensing, Visual* (requires plugins), Inductive, Active, Sequential, Intuitive, Verbal, Deductive, Reflective, Global
Communication	Stochastic, Formal, Textbook, Layman, Storytelling, Socratic, Humorous
Tone Styles	Debate, Encouraging, Neutral, Informative, Friendly
Reasoning Frameworks	Deductive, Inductive, Abductive, Analogical, Casual
Update Rate	Check, Don't check

https://github.com/JushBJJ/Mr.-Ranedeer-AI-Tutor#detailed-documentation

Cold emailing/texting

Potenziale KI-basierter Chatbots*.

"Safe Place" für Üben und Scheitern.

Kontextualisiertes Lernen

Kompetitiver Drill

Sofortiges Feedback

*Schmidt (2015);Ibrahim (2017); Strasser (2023)

Ich möchte über <X> lernen.

Phil

Bitte verfasse ein ehrliches und konstruktives Feedback zu <X>

Ayse

Wie formt man <Grammatik>?

Tanja

Wie funktionieren die Regeln von <Grammatikitem>?

Anabelle

Habe ich <Grammatikitem> richtig gebildet?

Fredrik

Mache/erstelle/schreibe/... <kreativer Katalysator>

Rachel

Substitution vs. Augmentation

Schock oder
Chance?

Lehrender UND KI

Klare Rollen im Unterricht.

Lehrende

1:1 Kommunikation

Empathie

Menschliche Interaktion

Kontextspezifische Planung

Klassenzimmermanagement

Verankerung wissenschaftlicher Agenden in der Praxis

Bildungsprojekte

KI

Personalisierter Inhalt

Performanzdaten kontinuierlich analysieren

Lehrende werden über Bedarfe der Lernenden informiert

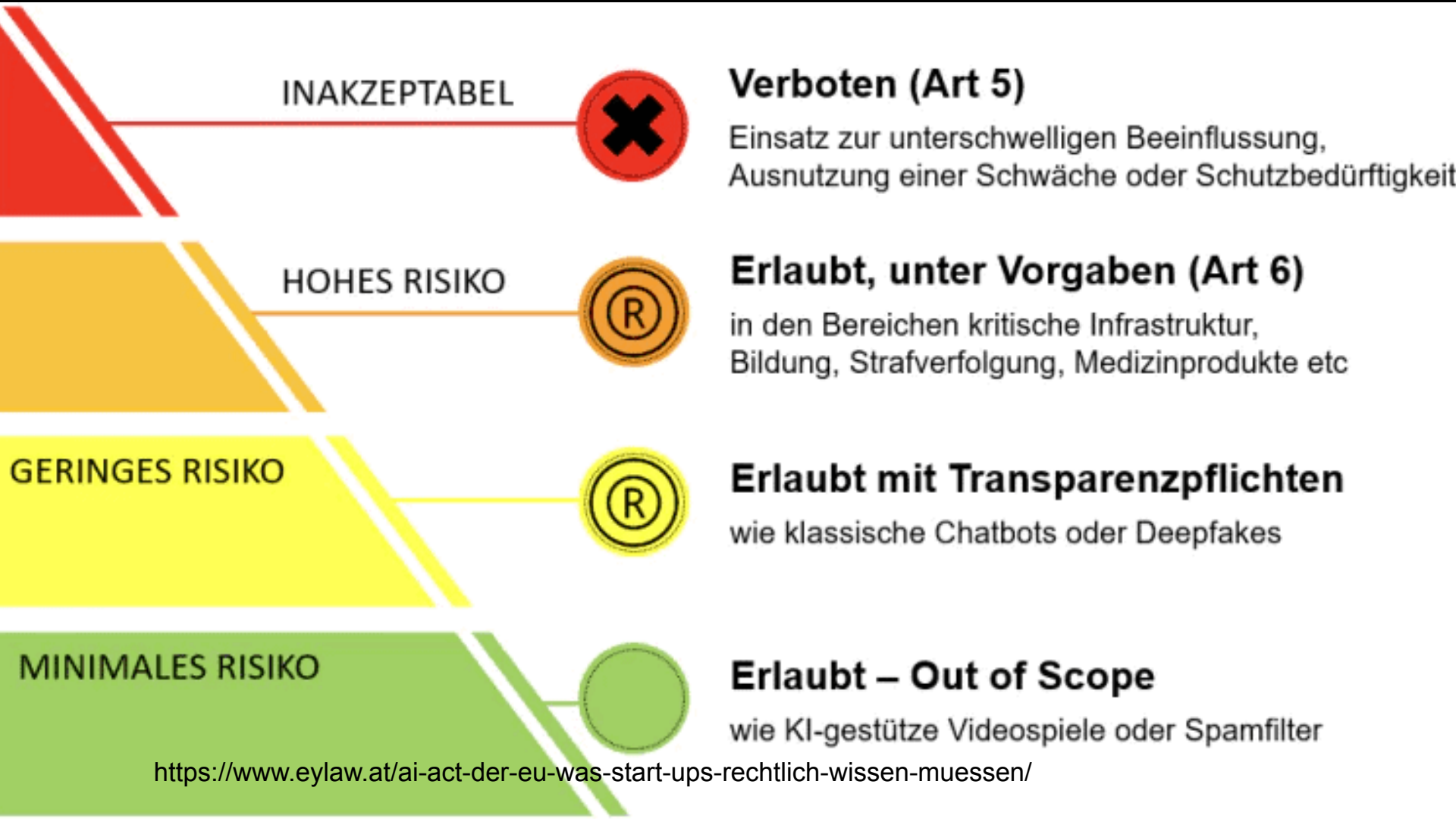
Automatisiertes basale Feedback

Basale Benotungsperformanzen

Monotoner Drill = mehr Zeit für Interaktion (Klassenzimmer)

Ethische KI-Leitlinien

für (Sprach)lehrende

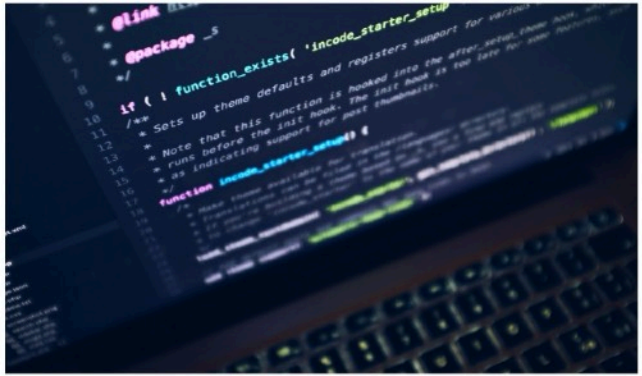


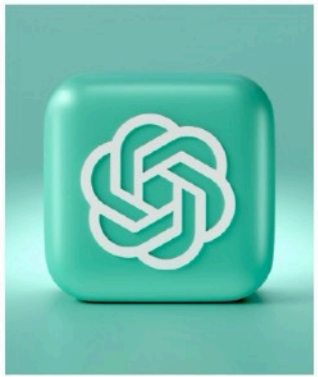
https://www.eylaw.at/ai-act-der-eu-was-start-ups-rechtlich-wissen-muessen/

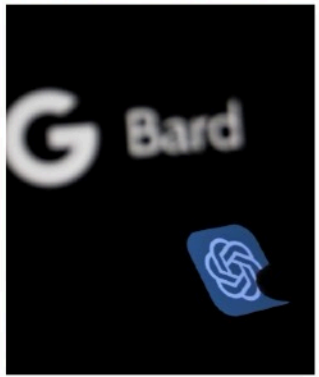
Kerneinsichten aus der Forschung.

EC (2022)

- **KI-Richtlinien für Lehrkräfte**
  Didaktik first.
- **Ent-Technokratisierung**
  Weniger Tech-Buzzwords, mehr Unterrichtsentwicklung
- **Haltung als wissenschaftlicher Begriff mit ethischer Dimension**
  Professionelle Wissen, gepaart mit Reflexionsfähigkeit in einer Kultur der Digitalität.

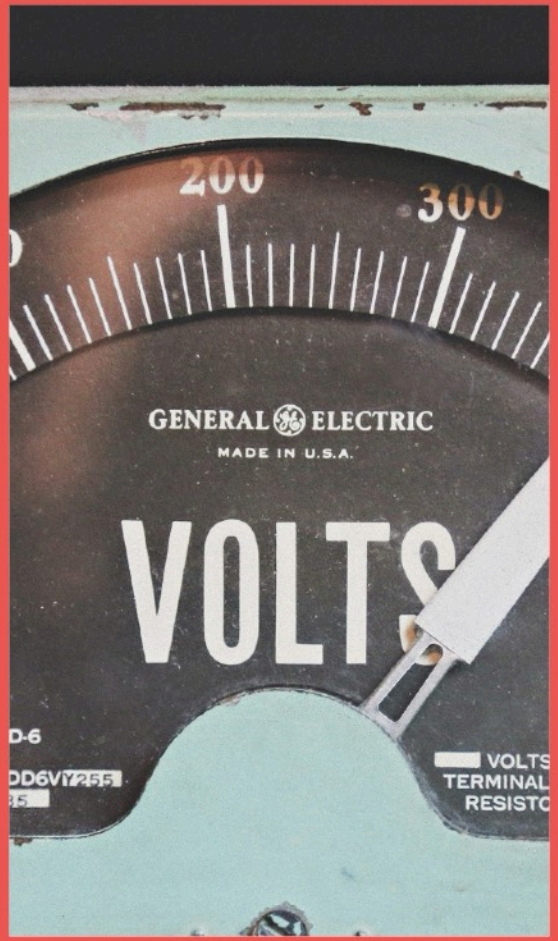






“machine usefulness‘, which emphasizes the ability of computers to augment human capabilities”

Acemoglu & Johnson 2023



{thx}

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References

References

Blume, C. (2020). Games people (don't) play: An analysis of pre-service EFL teachers' behaviors and beliefs regarding digital game-based language learning. *Computer Assisted Language Learning*, *33*(1–2), 109–132. https://doi.org/10.1080/09588221.2018.1552599

Hayward, C., & Fishman, B. (2020). Gameful Learning: Designing with Motivation in Mind. *6/2020, International Society of the Learning Sciences Proceedings*, 1007–1018.

Ibrahim, K. (2017). The Impact of Ecological Factors on Game-Based L2 Practice and Learning. *Foreign Language Annals*, *50*(3), 533–546. https://doi.org/10.1111/flan.12278

Reinhardt, J. (2019). *Gameful second and foreign language teaching and learning*. Springer Berlin Heidelberg.

Schmidt, T. (2015, December 11). *MALL meets Gamification – Möglichkeiten und Grenzen neuer (digitaler) Zugänge zum Fremdsprachenlernen*. https://www.uni-potsdam.de/fileadmin/projects/tefl/documents/Folien_Keynotell_Torben_Schmidt.pdf

Schmidt, T., & Strasser, T. (2022). Artificial Intelligence in Foreign Language Learning and Teaching. A CALL for Intellgent Practice. *Anglistik*, *33*(1), 165–184. https://doi.org/10.33675/ANGL/2022/1/14

Schönbächler, E., Himpsl-Gutermann, K., & Strasser, T. (2023). Vom Chat zum Check. Informationskompetenz mit ChatGPT steigern. *Medienimpulse*, *61*(1), 51 Seiten. https://doi.org/10.21243/mi-01-23-18

Strasser, T. (2023a). Digital tools in foreign language teaching and learning; educational applications. In N. Pachler & A. Redondo (Eds.), *Teaching Foreign Languages in the Secondary School – a Practical Guide. 3rd revised edition* (p. NN). Routledge.

Strasser, T. (2023b). ELT in the Digital Age. We Have Come a Long Way. *AAA-Arbeiten Aus Anglistik Und Amerikanistik*, NN.

Strasser, T. (2023c). Narrow AI-powered Visualization Facilitation Tools in Foreign Language Learning: A visual approach promoting equal opportunities in foreign language grammar teaching. In C. Burkholder, J. Schwab-Cartas, & F. Aladejebi (Eds.), *Facilitating Visual Socialities: Enacting Ethical Practicesin Visual Research Facilitation* (p. NN). Palgrave & Macmillan.

Strasser, T. (2023d). Not another Chat-GPT love song!? Warum der Chatbot nur ein Puzzleteil in der Diskussion ist. *ForumBD Magazin*. https://magazin.forumbd.de/lehren-und-lernen/not-another-chatgpt-love-song/

Strasser, Thomas. (2023). Schwache KIs, starke Performanz? Form und Wirkung von KI-gestützten Erklärvideos im Englischgrammatikunterricht der Unterstufe. *Zeitschrift Für Fremdsprachenforschung, ZFF Themenheft: Digitalisierung*, NN.