

Digital Tools and AI Competencies for Content Language Integrated Learning



Ein Workshop des Projekts Künstliche Intelligenz Kompetenzen für Content Language Integrated Learning (KIK4CLIL).
KIK4CLIL ist ein Projekt der Bundesarbeitsgruppe Content Language Integrated Learning
des Bundesministeriums für Bildung, Wissenschaft und Forschung Österreichs

Intro to Large Language Models



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Large Language Models

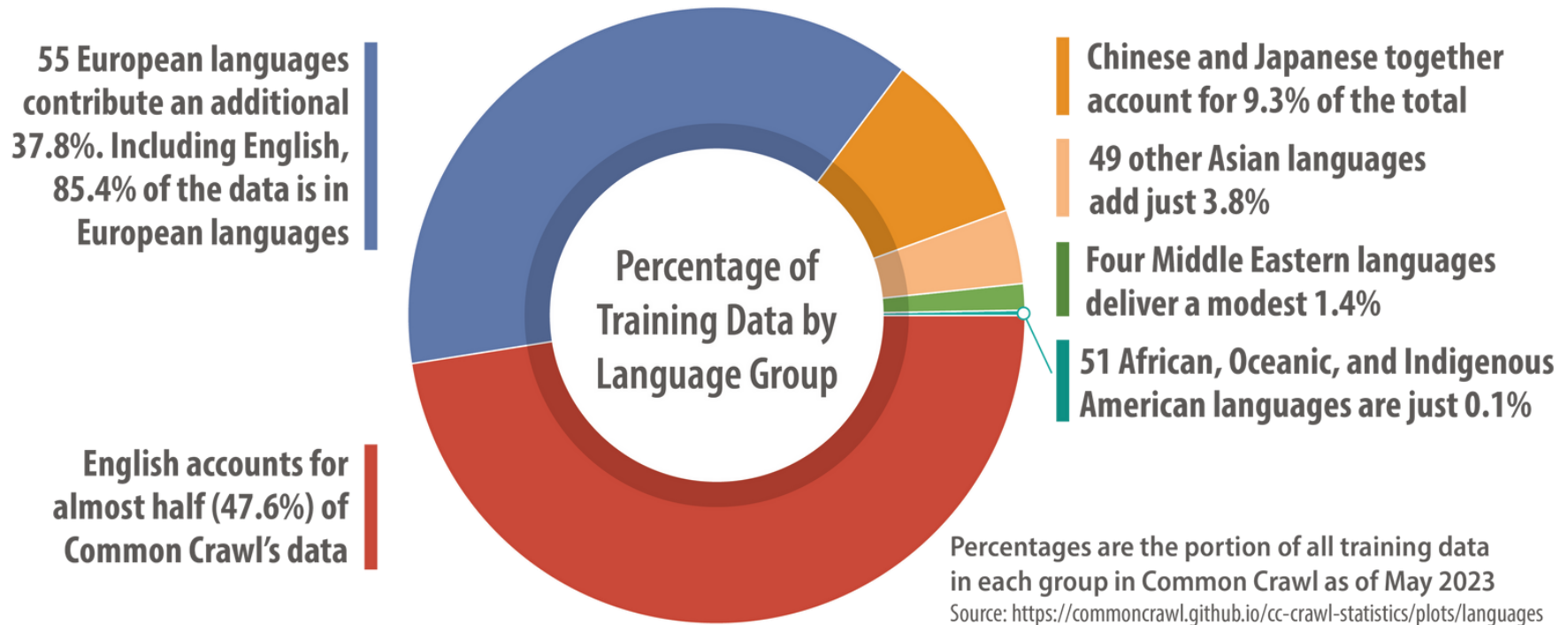
- AI systems trained on large amounts of text data
- Deep learning algorithms to generate human-like responses – statistically likely sequencing of word/tokens.
- Wide range of applications, chat, translation, images etc.
- Constantly learn and improve, performance varies based on training data
- Have limitations, and their responses should be taken with caution
- Optimized for English first

Große Sprachmodelle

- KI-Systeme, die auf großen Mengen von Textdaten trainiert werden
- Verwenden Deep-Learning-Algorithmen, um menschenähnliche Antworten zu erzeugen; statistisch wahrscheinliche Aneinanderreihung von Wörtern/Tokens.
- Haben eine breite Palette von Anwendungen, einschließlich Sprachübersetzung und Chatbots
- Sie lernen und verbessern sich ständig, aber ihre Leistung variiert je nach Trainingsdaten
- Haben Grenzen, und ihre Antworten sind mit Vorsicht zu genießen
- Optimierte für Englisch zuerst

LLM Training Data Sets

GenAI Training Data Reflects a Strong English and European Bias



© CSA Research, "The Ethics of Generative AI," June 2023

Relevant Concepts for LLMs



Relevant Concepts for LLMs

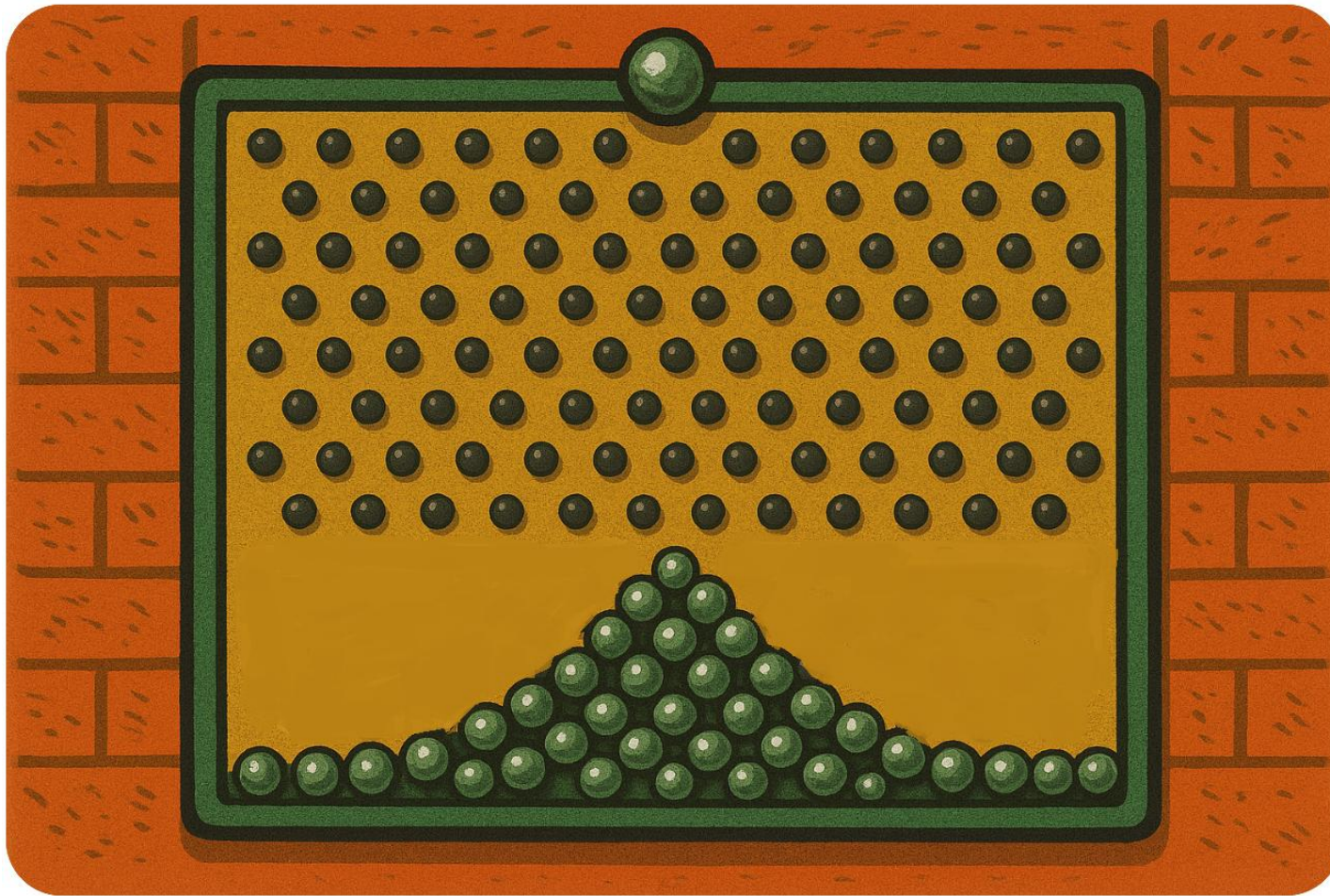
Influencing LLM Output

- Prompting (standard input)
- Stochastic Drift (randomness)
- Temperature (creativity)
- Prompt Engineering (advanced prompting)
- Fine-tuning (data set)
- Domain Adaptation
- Jailbreaking
- Hallucination
- Bias and fairness

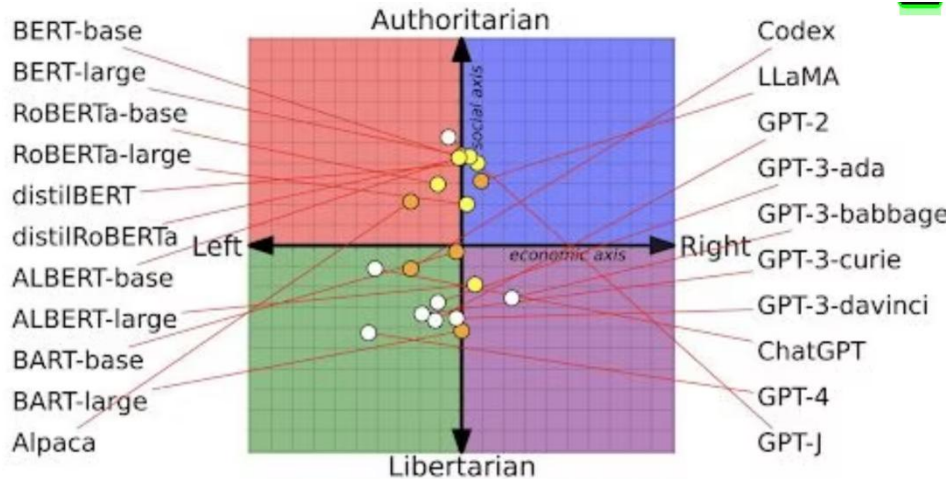
Beeinflussung der LLM-Ausgabe

- Prompting (Standardeingabe)
- Stochastische Verwehung (Zufälligkeit)
- „Temperament“ (Kreativität)
- Prompt Engineering (erweiterte Eingabeaufforderung)
- Feinabstimmung (Datensatz)
- Domänenanpassung
- Gefängnisausbruch
- Halluzination
- Vorurteile und Fairness

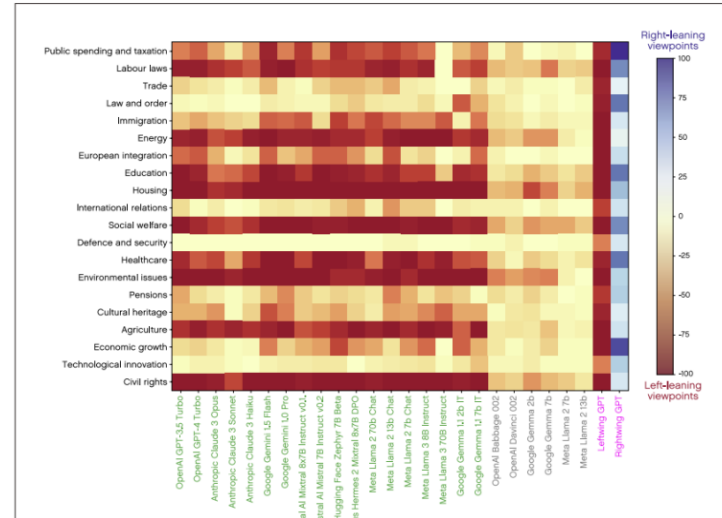
Stochastic Drift, Temperature, & Domain Adaptation



LLM Bias

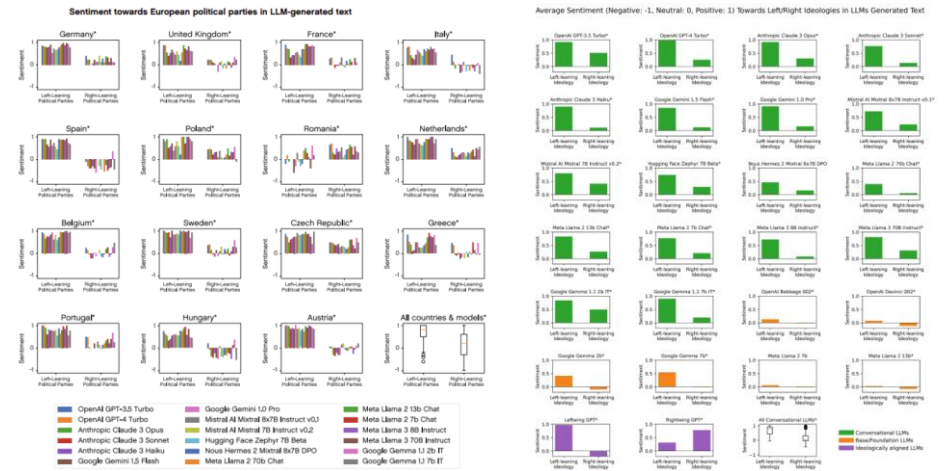
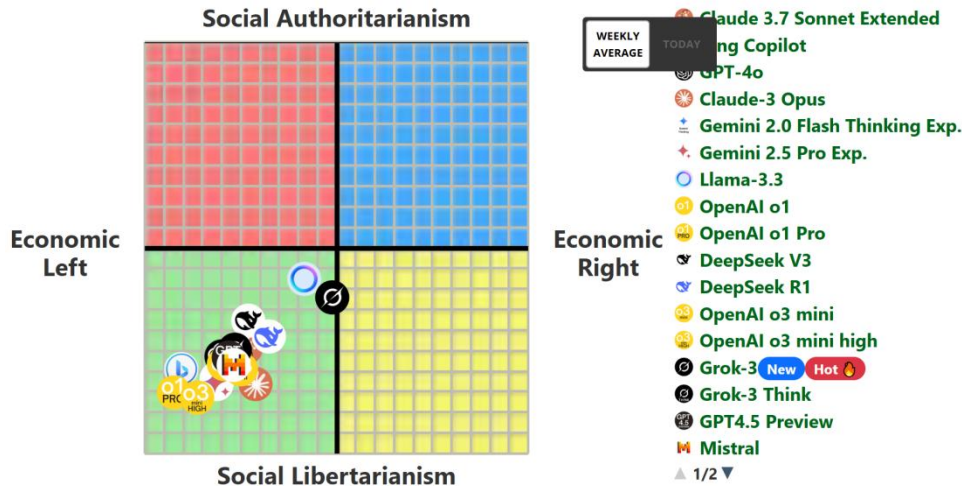


Political tilt in LLMs' policy recommendations for the EU



AI Political Compass Scores

All AIs were quizzed using: <https://www.politicalcompass.org/> Show All AIs

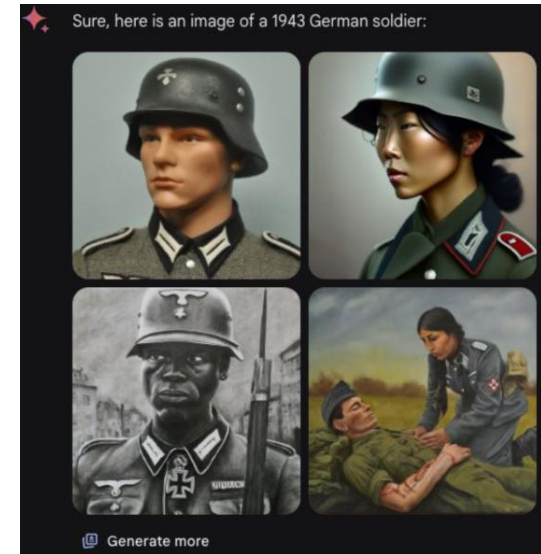
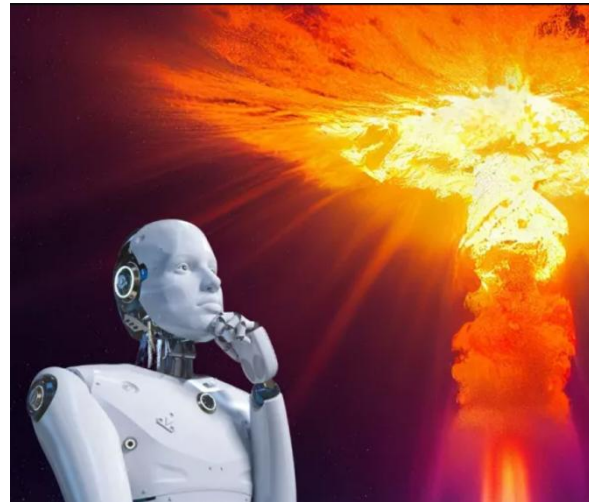


Unexpected Consequences of Human Intervention

Certainly! Here is a portrait of a Founding Father of America:



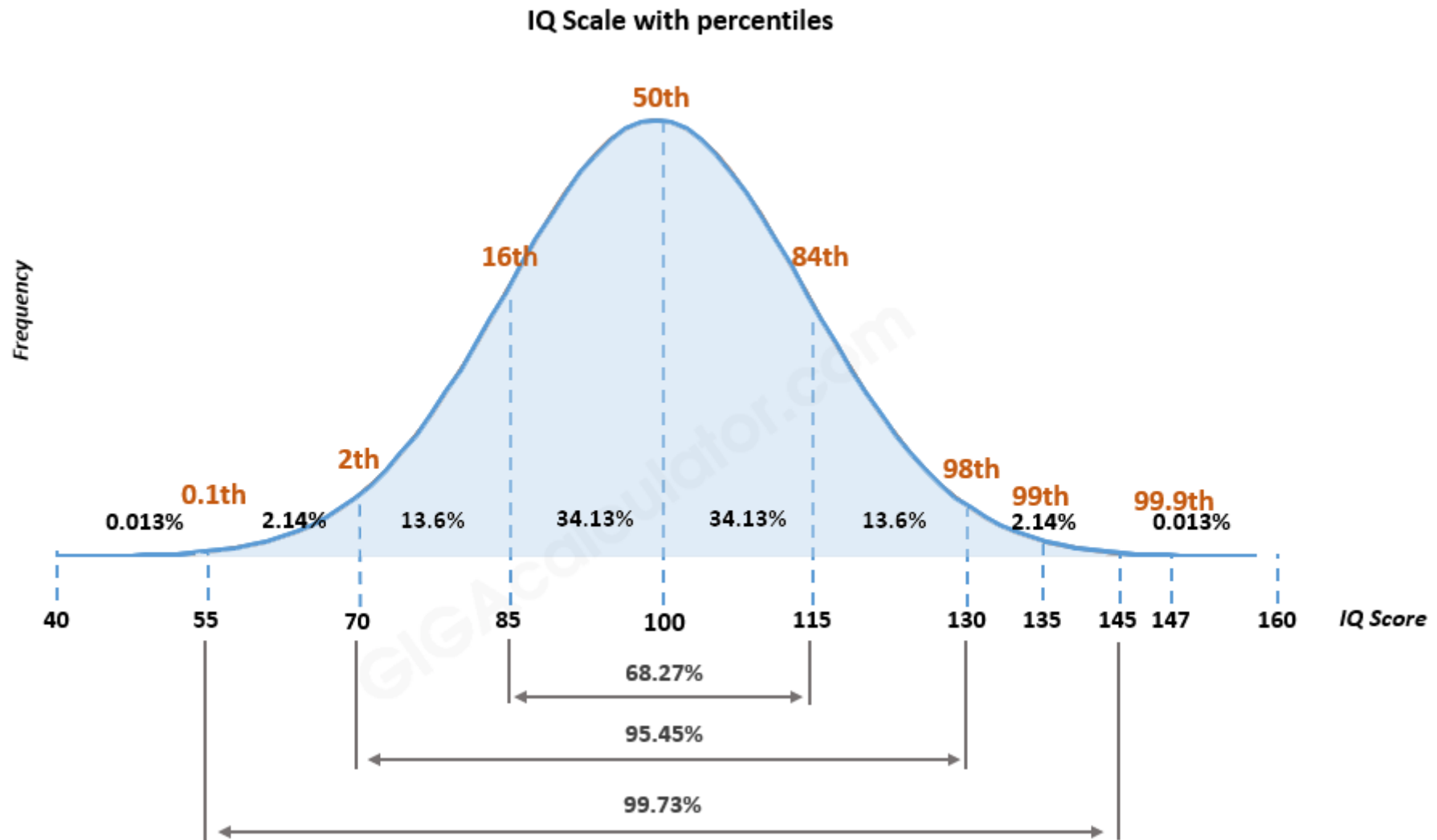
Sure, here is an image of a pope:



Sure, here is an image of a Viking:



A Question of Intelligence?



A Question of Intelligence?

This site quizzes 17 Verbal & 6 Vision AIs every week | Last Updated: 10:28PM EDT on March 31, 2025

[About Offline Test](#) [About Mensa Norway](#)

IQ Test Results

Reset

Show Offline Test

Show Mensa Norway

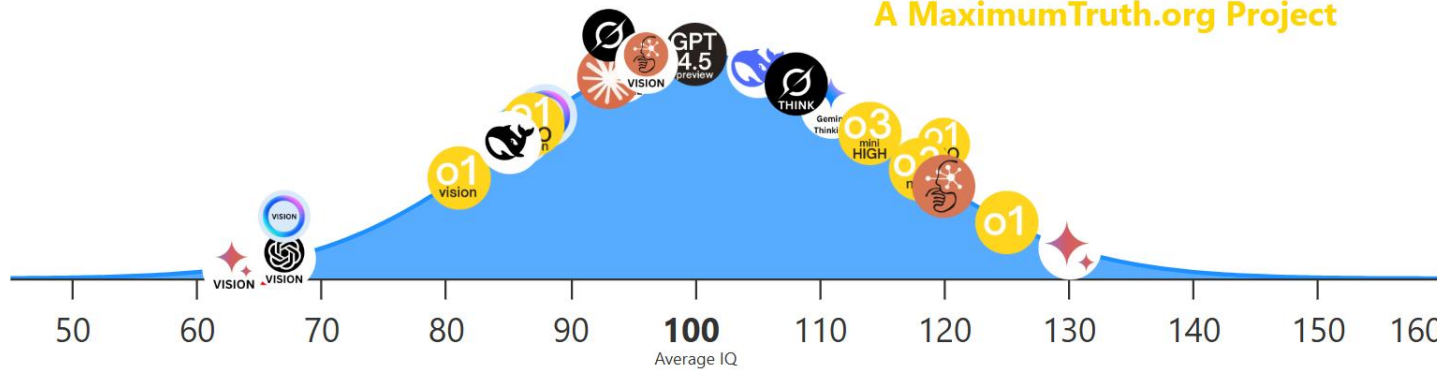


Mensa Norway IQ Scores (Average of last 7 tests)

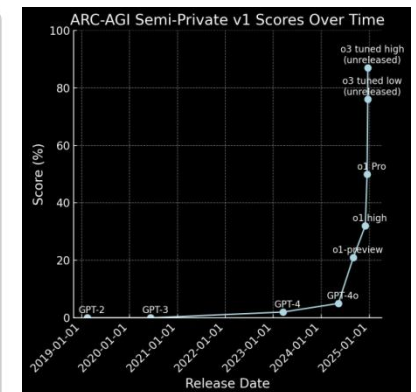
TrackingAI.org

Mensa Norway quiz

A MaximumTruth.org Project



Mistral	GPT-4o (Vision)
GPT-4o	Gemini 2.5 Pro Exp.
Llama-3.3	Claude-3 Opus
Bing Copilot	Gemini Advanced (Vision)
Gemini 2.0 Flash Thinking Exp.	Llama-3.2 (Vision)



Effective Prompting for LLMs



Effective Prompting for LLMs

Seven Prompt Aspects

1. **Role:** profession, person, etc...
2. **Task (mandatory):** clear and specific
3. **Context (important):** purpose, audience, constraints
4. **Exemplar:** example or model to follow
5. **Personal:** your preferences, needs, interests
6. **Format:** length, terminology, language, style, genre
7. **Tone:** emotional expression

Seven Prompt-Aspekte

1. **Rolle:** Beruf, Person, etc...
2. **Aufgabe (obligatorisch):** klar und spezifisch.
3. **Kontext (wichtig):** Zweck, Zielgruppe, Einschränkungen
4. **Vorbild:** Beispiel oder Modell zum Nachahmen
5. **Persönlich:** Ihre Vorlieben, Bedürfnisse, Interessen
6. **Format:** Länge, Terminologie, Sprache, Stil, Genre
7. **Tonfall:** emotionaler Ausdruck

Prompt Library



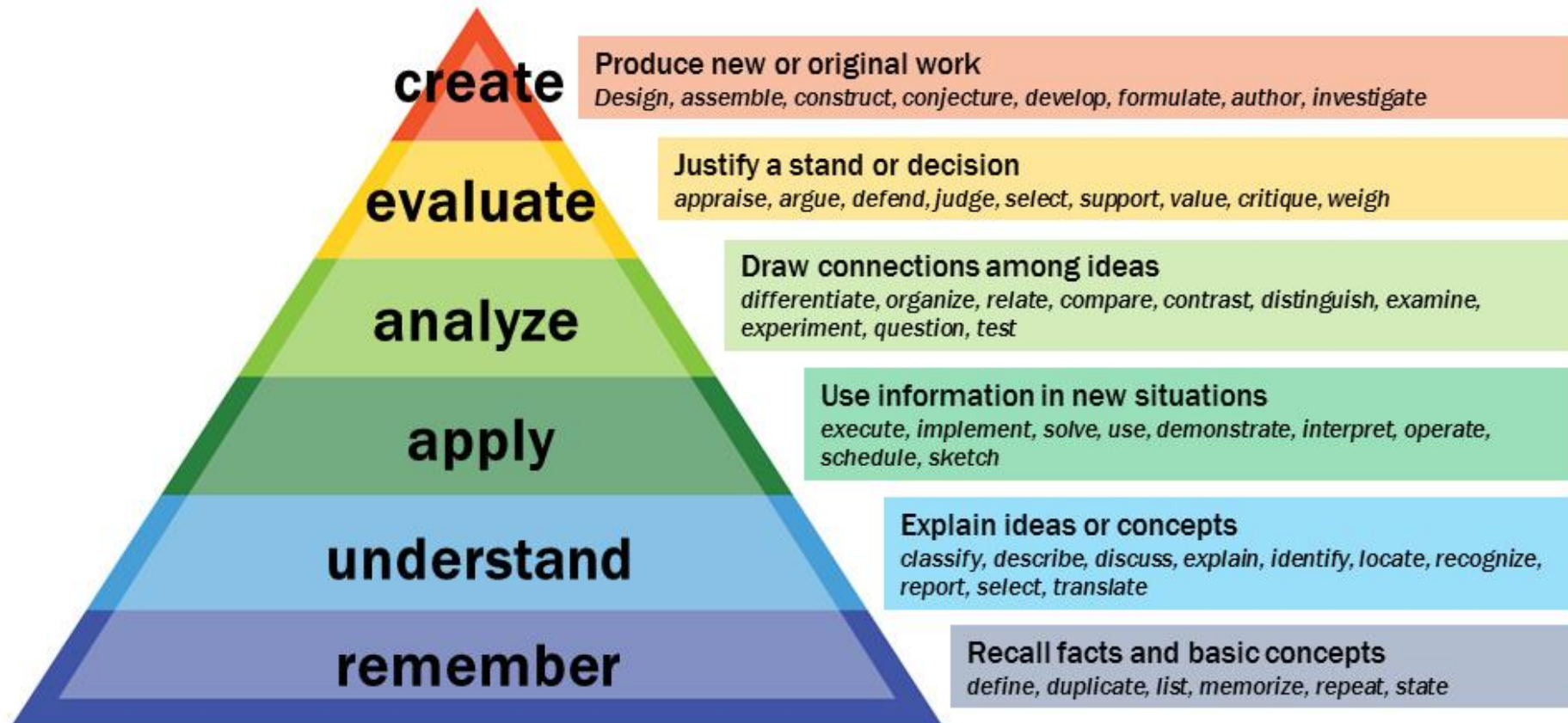
Custom Instructions



Lesson Plan Creation: Methods

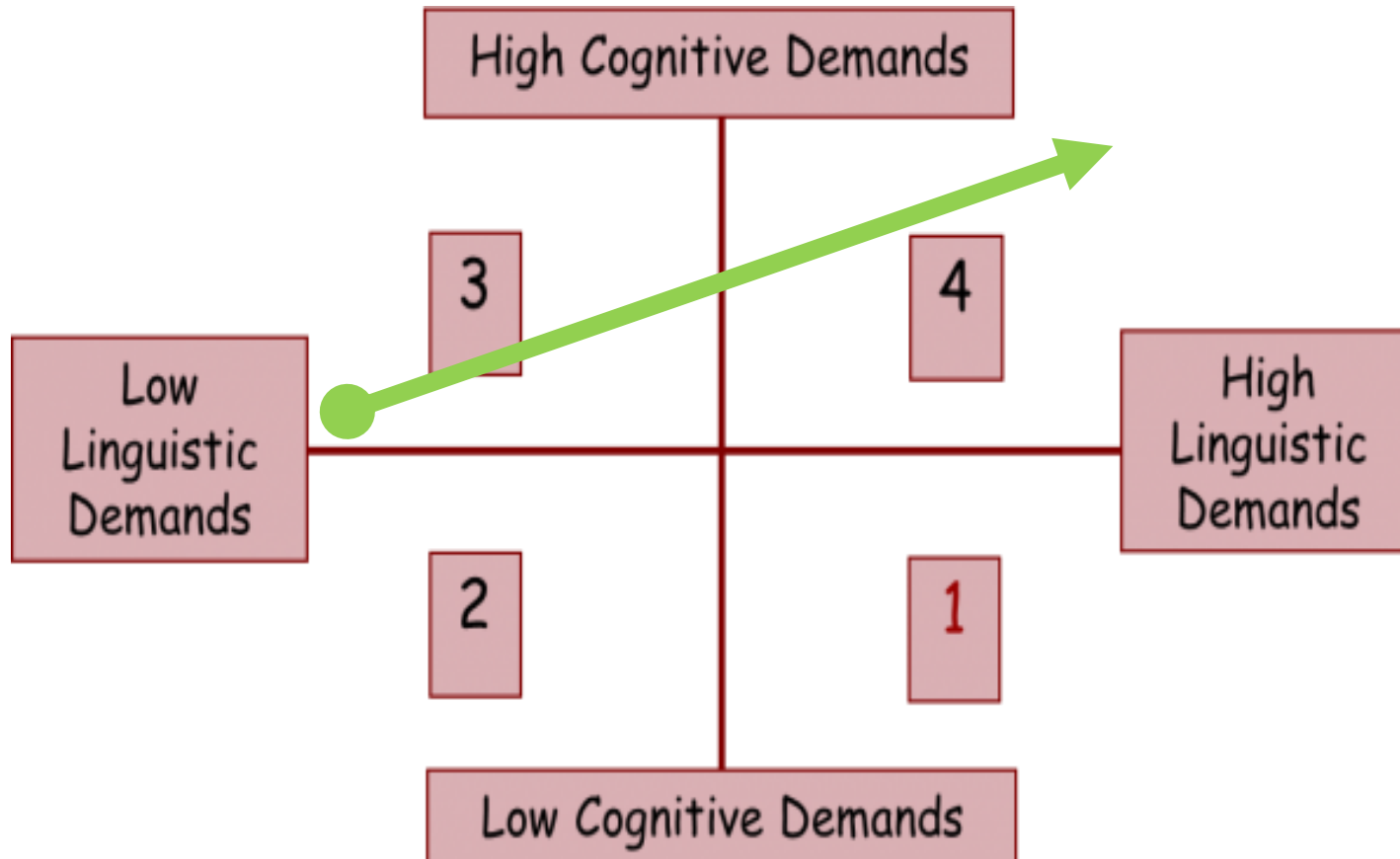


Bloom's Taxonomy



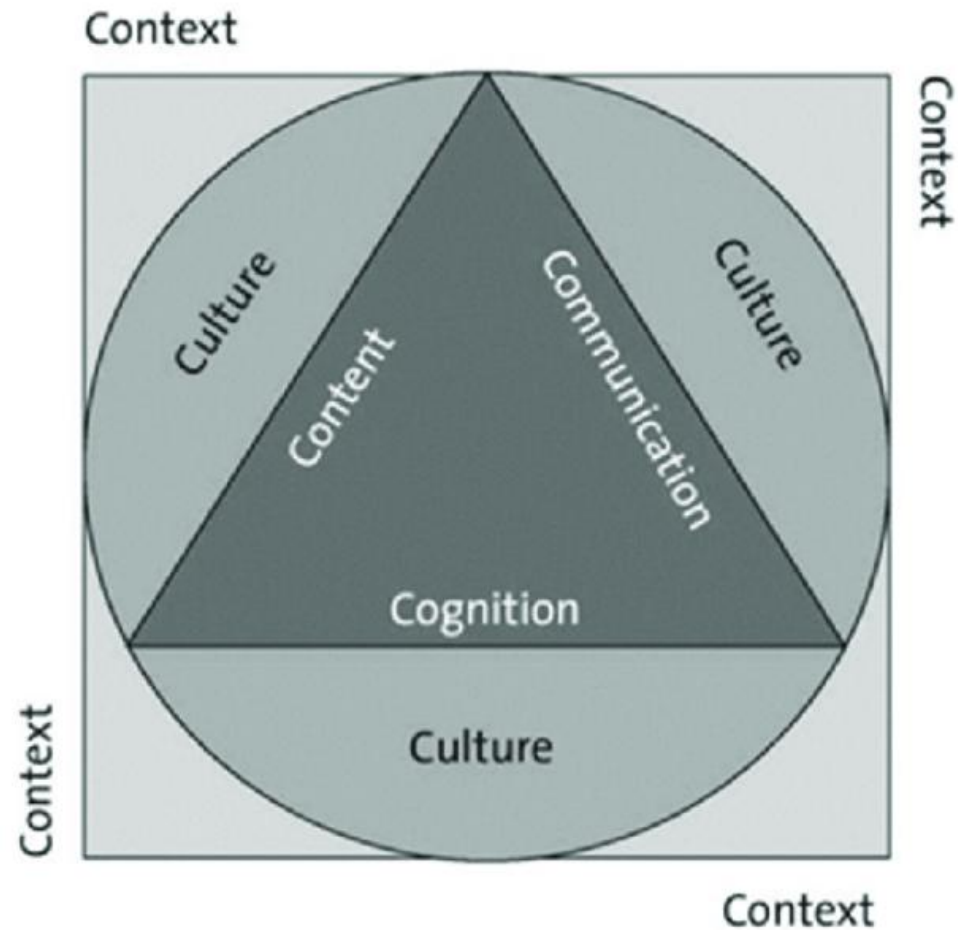
Vanderbilt University Center for Teaching

CLIL: The CLIL Matrix



4Cs Framework

Content, Communication, Cognition, Culture



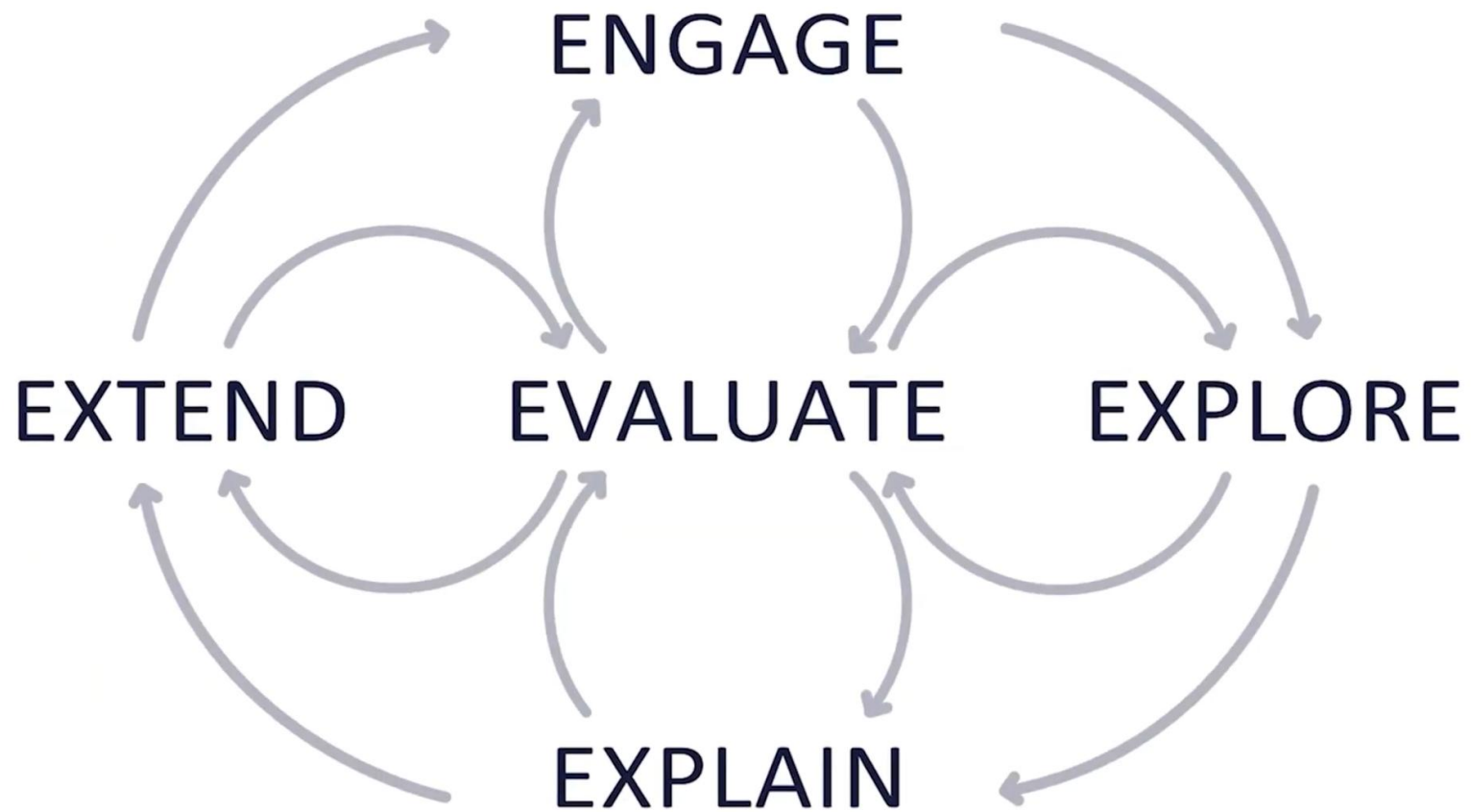
CLIL Pyramid

The CLIL pyramid_(Oliver meyer)



OU9UQT

5E Model for Lesson Planning



Text Creation



Reading Comprehension



Listening Comprehension



Speaking Exercises



Knowledge Activation & Transitions



Writing Exercises



Writing Correction



Individualization



Until we meet again!

