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AI Across Disciplines

Calculator, Lightbulb, Admin. Assistant

Agenda

Introducing Inconsistency

Comparing the Calculator

Leveraging the Lightbulb

Adopting the Assistant

Theorizing Thought

Introducing Inconsistency

- Everyone is still learning!
- Everyone has different needs!
- Everyone should be careful!

A Brief History of AI

1950s

The idea that machines can think comes to fruition, but the technology is too slow and unwieldy to gain traction.

1970s-1980s

Machine learning catches up to theory (faster and cheaper). Deep learning motivates funding for logic programming.

Early 2000s

Computer storage and processing speed doubles, but learning is still choppy and led by big data only.

Present

Artificial intelligence is increasingly adapted through training data, but still has not achieved Theory of Mind.

"Why is a raven like a writing desk?"

Walt Disney's Alice in Wonderland [Film] (1951)

Comparing the Calculator

Is spellcheck omnipresent?

Does that make spelling tests obsolete?

Are training wheels useful?

At what point does a tool become a crutch?

Should calculators be allowed in elementary school?

Have fundamental literacies and competencies changed over time?

Examples of Problem-Solving

Professionally

- Estimating the amount of supplies needed for an event or project.
- Drafting a company-wide email about holiday closures.
- Visualizing expenditure data for a board meeting.

Academically

- Large-Scale Papers and Projects: generating outlines, synthesizing literature/data, drafting, formatting
- Participation and Studying: generating flash cards, building study guides, drafting discussion posts, summarizing rubrics

Why should AI be considered "cheating" (or not)?

"Ideas are so much wilder than memories."

The Invisible Life of Addie LaRue
[Novel] (2020)

Fifth Grade
Introduction to Poetry
Brainstorming

High School Junior
Persuasive Essay
Generating Counterarguments

College Senior
Creative Nonfiction
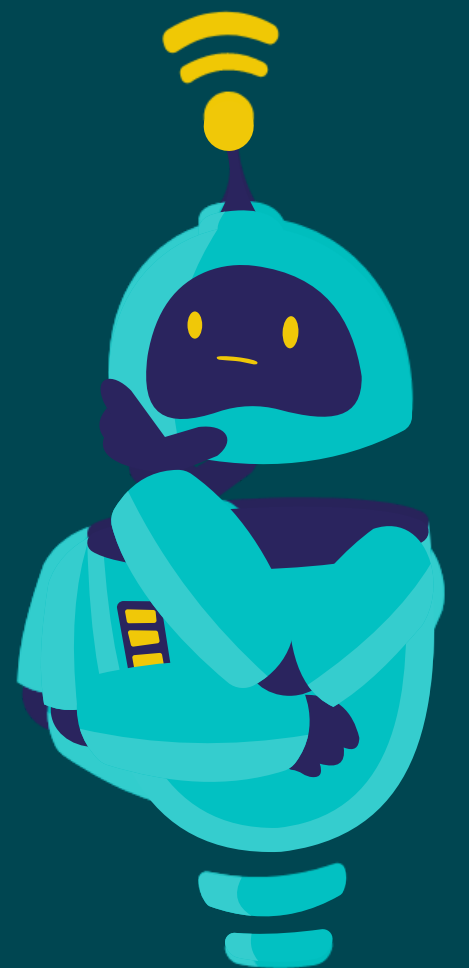Writing from a Child's Perspective

Leveraging the Lightbulb

IDEA GENERATION

Business, Marketing, Art, Writing, Planning

IDEA REFINEMENT

Research, Communication, Sciences, Adapting

"Email: where you spend 10 minutes crafting the perfect 1-minute read."

ChatGPT [Software] (2024)

Adopting an Administrative Assistant

Self-Promotion
- Editing Projects
- Creating Support Materials
  - Elevator Pitches
  - Website Building

Scheduling and Organization

Productivity and Development

Tedious Office Communications
- Writing Emails
  - Large Group Announcements
  - Personal Correspondence
- Writing Policy Language

Summary: AI Uses Across Disciplines

From Point A to Point B

IN THE ARTS
Expand vocabulary, proofread, search for similar content creators, and set prices.

IN THE SCIENCES
Solve equations, perform risk assessments, and verify calculations.

IN THE HUMANITIES
Standardize grades, simulate environments, and visualize data.

IN BUSINESS AND MARKETING
Calculate costs, profit margins, demographics, and purchasing trends.

When Words Fail

IN THE ARTS
Brainstorm titles, translate works to different mediums, and get inspiration.

IN THE SCIENCES
Put together lab reports and summarize findings for stakeholders.

IN THE HUMANITIES
Clarify ideas, brainstorm events, summarize research, and fill gaps.

IN BUSINESS AND MARKETING
Draft logos, promotional materials, and social media posts.

Work Smarter, Not Harder

IN THE ARTS
Generate synopses/descriptions and websites to promote creative works.

IN THE SCIENCES
Check for coding errors, schedule experiments, and organize data.
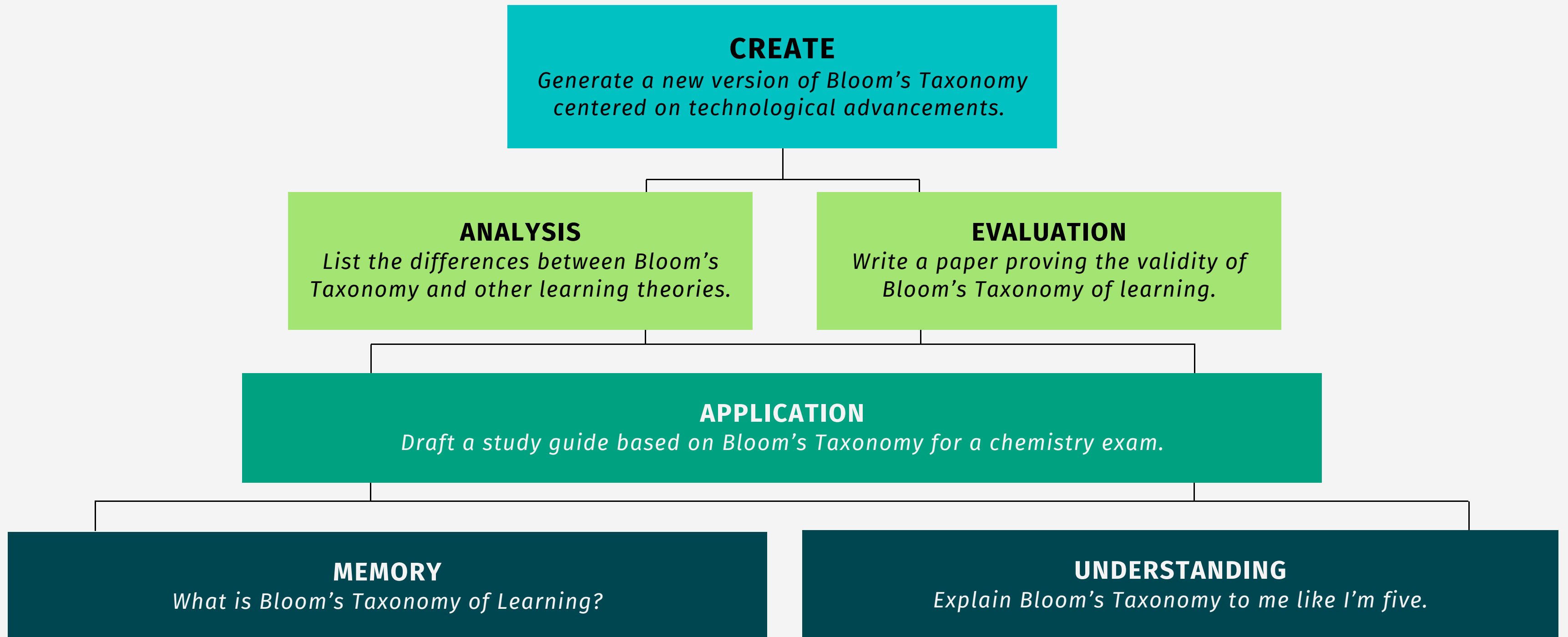
IN THE HUMANITIES
Perform literature reviews and generate exhibit/presentation materials.

IN BUSINESS AND MARKETING
Improve customer service, automate inventory, and design websites.

Food for Thought: ChatGPT and Learning

CREATE
Generate a new version of Bloom's Taxonomy centered on technological advancements.

ANALYSIS
List the differences between Bloom's Taxonomy and other learning theories.

EVALUATION
Write a paper proving the validity of Bloom's Taxonomy of learning.

APPLICATION
Draft a study guide based on Bloom's Taxonomy for a chemistry exam.

MEMORY
What is Bloom's Taxonomy of Learning?

UNDERSTANDING
Explain Bloom's Taxonomy to me like I'm five.

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Thank You!

"Hello, IT, have you tried turning it off and on again?"
The IT Crowd [TV Show] (2006)

Resources

"**The History of Artificial Intelligence**"
Rockwell Anyoha (2017)

"**The Current Status of Artificial Intelligence**"
AllTech Magazine (2024)

"**Bloom's Taxonomy of Learning**"
Charlotte Ruhl (2024)

"**AI Detection in Education is a Dead End**"
Leon Furze (2024)