

The Future of Education is Now: ChatGPT



E-Learning, Innovation,
and Teaching Excellence
MONTGOMERY COLLEGE

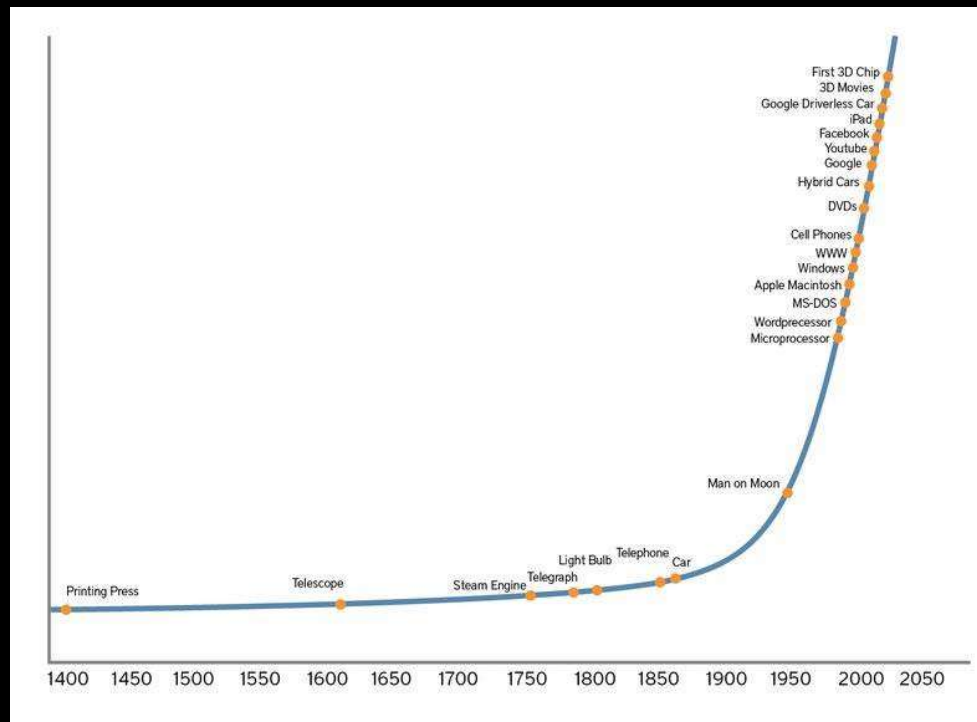
The Future

- Where are we going?
- How are we going to get there?
- How do we know we have arrived?

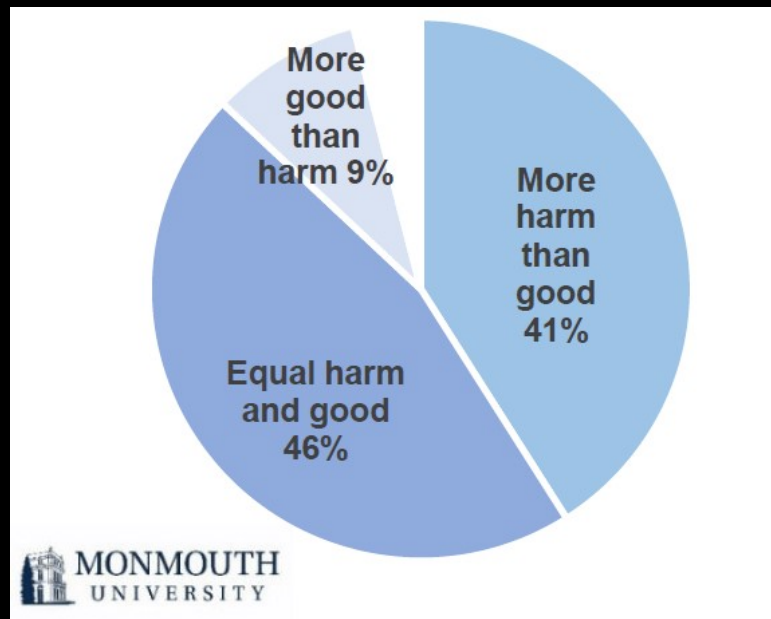
Reflect & Connect

- What do you know about AI?
- How do you feel about AI? Why

Growth in Technology



AI Impacts on Society



(January, 2023)

Good Advice...

THE **ONLY**
THING WE **HAVE**
TO FEAR IS
FEAR
ITSELF

Singularity

Defined as “a future period during which the pace of technological change will be so rapid, its impact so deep, that human life will be irreversibly transformed.” (Kurzweil, 1993)



Myths

- AI will replace all jobs
- AI will outpace human intelligence
- AI Technologies Can Understand and Solve Any New Problems Like the Human Brain Does

Perspective



Reflect & Connect

What are some examples of how AI supports our daily lives?

CBAM: Levels of Use



Remember...

**IT'S ALL ABOUT
COEXISTENCE -
VIDEO DIDN'T KILL
THE RADIO STAR,
AFTER ALL.**

QUOTEHD.COM

Ashley Highfield

ChatGPT & Education

Benefits

- ChatGPT can provide personalized assistance or tutoring for students who are struggling with concepts.
- It's a nice source for ideas and inspiration to give students a place to start.
- Instructor productivity can be improved as they lean on ChatGPT for lesson plan creation, assessment question design, prompt generation, work examples, and more.
- Chatbots are adaptable and their use can be modified as needed to meet the changing needs of students and instructors.
- Teaching students to work WITH new technologies like AI and chatbots, will prepare them for the future of school and work. Teachers can demonstrate appropriate use and ways to leverage the tools for better outcomes.

Challenges

- Some instructors may struggle to prevent inappropriate use of the tool, e.g. using it to complete assignments or assessments. Each response is original and therefore may not be flagged by plagiarism detectors.
- It'll be important to build awareness and skills around identifying biased or inaccurate information produced by the chatbot.
- Institutions will need to determine whether to allow or block ChatGPT from their network, and understand that it may still be accessible with personal devices.
- Support and training should be provided to teachers in order to overcome challenges and find ways to use ChatGPT in positive ways.

ChatGPT & Cheating

To avoid ChatGPT being used for cheating, there are a few different steps that educators and institutions could take. For example, they could:

- Educate students and educators on the ethical use of AI technology, including ChatGPT, in academic settings.*
- Develop guidelines and policies for the use of ChatGPT in academic work, and make sure that students and educators are aware of and follow these guidelines.*
- Monitor the use of ChatGPT in academic settings, and take appropriate action if it is used for cheating or other unethical purposes.*
- Use ChatGPT in ways that support learning and academic achievement, rather than as a replacement for traditional forms of assessment. For example, ChatGPT could be used to provide personalized feedback and support to students, rather than as a tool for generating entire papers or exams.*
- Incorporate critical thinking and ethical reasoning into the curriculum, to help students develop the skills and habits necessary to use ChatGPT and other AI technology responsibly.*

ChatGPT & Copyright

As a language model, I do not have the ability to grant permission for use of my answers. It is generally considered plagiarism to republish someone else's work without proper attribution and permission. If you want to use my responses in your blog post, it would be best to paraphrase them and provide proper attribution to indicate that the information comes from me, a language model trained by OpenAI. Plagiarism is a serious offense and can have serious consequences, so it is important to properly credit the sources of any information that you use in your work.

7 Education Use Cases

(Dilmegani, 2023)

Content Creation

- Generate Ideas
- Generate Lesson Plans
- Generate Activities for Students
- Generate Projects that Align with Specific Learning Objectives/Outcomes

Please create a quiz for a high school class on cellular biology.

Quiz: High School Cellular Biology

1. Which of the following statements is NOT part of the cell theory?
 - a) All living organisms are composed of cells.
 - b) Cells are the basic unit of life.
 - c) All cells come from pre-existing cells.
 - d) All cells contain a nucleus.
2. What is the primary difference between prokaryotic and eukaryotic cells?
 - a) The presence or absence of a cell membrane
 - b) The presence or absence of a nucleus
 - c) The presence or absence of ribosomes
 - d) The presence or absence of mitochondria
3. Which cellular organelle is responsible for the synthesis of proteins?
 - a) Endoplasmic reticulum
 - b) Golgi apparatus
 - c) Ribosome
 - d) Mitochondria
4. What is the primary function of the cell membrane?
 - a) To produce energy for the cell
 - b) To regulate the passage of substances in and out of the cell
 - c) To synthesize proteins
 - d) To store genetic material
5. Which process is used by cell to regenerate response to the form of ATP?

Grammar and Writing

- Proofreading and editing
- Providing feedback to students
- Teaching writing skills

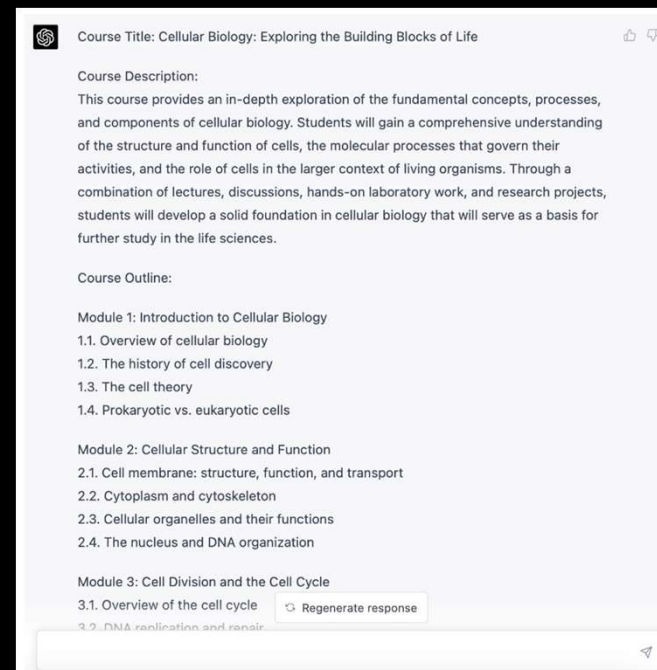


Grading

ChatGPT can assist teachers in reviewing and grading student essays by analyzing the content, structure, and coherence of the writing. The AI can provide feedback on grammar, spelling, punctuation, and syntax, as well as assess the quality of the argument or analysis presented. However, it is important to not rely merely on ChatGPT while grading. Rather, teachers can use ChatGPT for determining the rubric for grading.

Course Development

- Preparing course objectives and goals
- Topic generation
- Lesson planning
- Identifying and curating relevant resources and materials for the course



The screenshot displays a course development interface with the following content:

Course Title: Cellular Biology: Exploring the Building Blocks of Life

Course Description:
This course provides an in-depth exploration of the fundamental concepts, processes, and components of cellular biology. Students will gain a comprehensive understanding of the structure and function of cells, the molecular processes that govern their activities, and the role of cells in the larger context of living organisms. Through a combination of lectures, discussions, hands-on laboratory work, and research projects, students will develop a solid foundation in cellular biology that will serve as a basis for further study in the life sciences.

Course Outline:

- Module 1: Introduction to Cellular Biology**
 - 1.1. Overview of cellular biology
 - 1.2. The history of cell discovery
 - 1.3. The cell theory
 - 1.4. Prokaryotic vs. eukaryotic cells
- Module 2: Cellular Structure and Function**
 - 2.1. Cell membrane: structure, function, and transport
 - 2.2. Cytoplasm and cytoskeleton
 - 2.3. Cellular organelles and their functions
 - 2.4. The nucleus and DNA organization
- Module 3: Cell Division and the Cell Cycle**
 - 3.1. Overview of the cell cycle
 - 3.2. DNA replication and repair

At the bottom of the interface, there is a text input field and a button labeled "Regenerate response".

Student Uses...

Help with homework

- Answering questions
- Problem-Solving
- Concept Reinforcement
- Improving Writing Skills

Research

- Topic selection
- Background information about the topic
- Identifying relevant resources
- Organizing research
- Citation assistance

Language Learning

As you learn...

Don't go for the “moonshot” - look for the
“low-hanging fruit”

The AI Advantage" by Thomas H. Davenport and Rajeev

ChatGPT SWOT Analysis

Strengths

- Fun and easy to use
- Massive and growing dataset

Weakness

- Output is only as good as dataset
- Questionable depth of depth of knowledge and accuracy
- Doesn't provide resources to verify accuracy

Opportunities

- New ecosystem of solution providers seeking to manage the information it generates
- Higher value on human-generated content
- Could make complex processes easier to understand

Threats

- May increase the volume and velocity of information
- Easy to plagiarize
- Could make cybercrime easier (phishing and social engineering)
- Knowledge workers' skill sets may need to transform

ChatGPT Limitations

1. Understanding context
2. Trouble generating long-form, structured content
3. Handling multiple tasks at one time
4. Potentially biased responses
5. Limited knowledge
6. Accuracy problems or grammatical problems
7. Need for fine tuning
8. Computational costs and power

(Forbes, 2023)

Digital Literacy Skills

Digital literacy is an individual's ability to find, evaluate, and communicate information by utilizing typing or digital media platforms.

