



Task Title: AI and Human Cognition

OALCF Cover Sheet – Practitioner Copy

Learner Name: _____

Date Started: _____

Date Completed: _____

Successful Completion: Yes ☐ No ☐

Goal Path: Employment ☐ Apprenticeship ☐

Secondary School ☐ Post Secondary ☐ Independence ☐

Task Description: The learner will read two articles about the impacts of Artificial Intelligence (AI) on human thinking, and write opinion paragraphs.

Main Competency/Task Group/Level Indicator:

- Find and Use Information/Read continuous text/A1.3
- Communicate Ideas and Information/Write continuous text/B2.3

Materials Required:

- Pen/pencil and paper and/or digital device
- Computer

Learner Information

Artificial Intelligence (AI) is a rapidly growing tool for learning and working. Many people are interested in how AI can help them with school, work, or other pursuits. In addition to its benefits, studies are beginning to show that overreliance on AI may have harmful effects.

Read “The Dark Side of AI Tracking the Decline of Human Cognitive Skills”:

<https://www.forbes.com/sites/chriswestfall/2024/12/18/the-dark-side-of-ai-tracking-the-decline-of-human-cognitive-skills/>

and

“ChatGPT May Be Eroding Critical Thinking Skills According to a New MIT Study”:

<https://time.com/7295195/ai-chatgpt-google-learning-school/>

Work Sheet

Task 1: List five (5) concerns about AI that are addressed in one or both of the articles.

Answer:

Task 2: The Forbes article distinguishes between tools like Excel spreadsheets and the use of AI. In your own words, explain why the authors believe AI tools have a different effect on human thinking.

Answer:

Task 3: The conclusion of the Forbes article is: “By maintaining a careful balance between technological advancement and cognitive skills, we can ensure that AI enhances, rather than diminishes, our human potential”. Write an opinion paragraph of at least 10 sentences explaining why you believe it is possible, or not possible, to maintain this “careful balance”.

Answer:

Answers

Task 1: List five (5) concerns about AI that are addressed in one or both of the articles.

Answer: Any five of

- ChatGPT users had lower brain engagement than those not using Chat CPT, as measured by an EEG
- ChatGPT users consistently underperformed at neural, linguistic and behavioural levels
- Over the course of several months, ChatGPT users got lazier with each subsequent essay, often resorting to copy-and paste by the end of the study
- The more time users spend talking to ChatGPT, the lonelier they feel
- EEGs showed low executive control and attentional engagement
- Students relying on AI show poorer performance on tests and demonstrate poorer critical thinking skills (e.g. problem-solving abilities)
- "AI-induced skills decay" refers to the over-reliance on AI tools and the erosion of skills humans typically rely on to solve problems. This can lead to mental atrophy
- Over-reliance on AI can lead to poor judgment, as decisions are delegated to AI
- Writing using AI does not encode into memory the same way that writing without it does; this leads writers to remember little of their own writing when it was completed with AI assistance

Task 2: The Forbes article distinguishes between tools like Excel spreadsheets and the use of AI. In your own words, explain why the authors believe AI tools have a different effect on human thinking.

Answer: The authors' observation is that previous tools (such as Excel) assist with things like calculations and analysis, but they still rely on human thinking to determine which formulas to use or which information to analyze. There is a level of comprehension and decision-making that is undertaken by the user. In contrast, AI tools are effectively "outsourcing" human thinking and do not require us to understand what we are calculating or analyzing. There is concern that, over time, reliance on AI tools will weaken our cognitive skills.

Task 3: The conclusion of the Forbes article is: "By maintaining a careful balance between technological advancement and cognitive skills, we can ensure that AI enhances, rather than diminishes, our human potential". Write an opinion paragraph of at least 10 sentences explaining why you believe it is possible, or not possible, to maintain this "careful balance".

Answers will vary.

Performance Descriptors

Levels	Performance Descriptors	Needs Work	Completes task with support from practitioner	Completes task independently
A1.3	integrates several pieces of information from texts			
	manages unfamiliar elements (e.g. vocabulary, context, topic) to complete tasks			
	identifies the purpose and relevance of texts			
	begins to recognize bias and points of view in texts			
	infers meaning which is not explicit in texts			
	compares or contrasts information between two or more texts			
	uses organizational features, such as headings, to locate information			
	follows the main events of descriptive, narrative, informational and persuasive texts			
B2.3	writes texts to present information, summarize, express opinions, present arguments, convey ideas or persuade			

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B2.3 cont'd	manage unfamiliar elements (e.g. vocabulary, context, topic) to complete tasks			
	selects and uses vocabulary, tone and structure appropriate to the task			
	organizes and sequences writing to communicate effectively			
	uses a variety of vocabulary, structures and approaches to convey main ideas with supporting details			

This task: Was successfully completed ☐ Needs to be tried again ☐

Learner Comments:

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Instructor (print):

Learner (print):
