

Welcome back! What would you like to chat about?

I would like to create a lesson plan for 3rd year university students enrolled in an education program. The lesson plan will introduce students to what generative AI is and how to use it in a higher education context. At some point during the activity, students should gain some hands-on experience with prompt engineering to learn how to create an effective prompt. The lesson plan should suggest a few options for how to assess students at the end of the lesson. My class is 1 hour and in-person.

Here is a possible lesson plan for your class:

**Topic:** Generative AI and its applications in higher education

**Learning objectives:** By the end of this lesson, students will be able to:

- Define what generative AI is and how it works
- Identify some examples of generative AI tools and their uses in education
- Evaluate the benefits and challenges of using generative AI in education
- Practice prompt engineering skills to generate different types of content with generative AI

**Lesson outline:**

- Introduction (10 minutes): The instructor will introduce the topic of generative AI and explain its basic principles and mechanisms. The instructor will also show some examples of generative AI tools, such as ChatGPT, DALL-E, and LessonPlans.AI, and how they can create various types of content, such as text, images, and lesson plans. The instructor will ask the students to share their initial thoughts and questions about generative AI and its applications in education.
- Group activity (20 minutes): The instructor will divide the students into small groups and assign each group a different generative AI tool to explore. The instructor will provide each group with a laptop or tablet with internet access and a set of instructions on how to use the tool. The groups will have 20 minutes to experiment with the tool and generate some content related to their field of study or interest. The groups will also discuss the following questions:
  - What are some possible uses of this tool in education?
  - What are some advantages and disadvantages of using this tool in education?
  - What are some ethical and social implications of using this tool in education?
- Class discussion (15 minutes): The instructor will invite each group to share their findings and experiences with the rest of the class. The instructor will facilitate a class discussion on the following topics:
  - How can generative AI enhance teaching and learning in higher education?
  - What are some challenges and limitations of using generative AI in higher education?
  - How can educators and students use generative AI responsibly and ethically in higher education?

- Prompt engineering practice (10 minutes): The instructor will explain what prompt engineering is and why it is important for using generative AI effectively. The instructor will demonstrate how to create a good prompt for a generative AI tool, such as ChatGPT, by following some best practices, such as providing clear instructions, specifying the desired output format, adding examples, and using keywords. The instructor will then ask the students to practice creating their own prompts for ChatGPT to generate different types of content, such as poems, essays, articles, letters, etc. The instructor will provide feedback and suggestions on the students' prompts.
- Assessment (5 minutes): The instructor will assess the students' learning outcomes by using one or more of the following options:
  - A short quiz on the key concepts and terms related to generative AI
  - A reflection paper on their learning experience with generative AI
  - A portfolio of the content they generated with generative AI
  - A peer review of the content they generated with generative AI

I hope this lesson plan helps you achieve your teaching goals. 😊

Learn more:

[1. teaching.ucla.edu](https://teaching.ucla.edu)[2. lessonplans.ai](https://lessonplans.ai)[3. techemergent.com](https://techemergent.com)[4. theresanaiforthat.com](https://theresanaiforthat.com)+2 more

This is a good plan. Can you generate a short 5 question quiz to assess students at the end of this lesson. It should be multiple choice.

Sure, I can generate a short quiz for you. Here are some possible questions and answers:

1. What is generative AI?
  - A) Artificial intelligence that can create new content or data
  - B) Artificial intelligence that can learn from existing content or data
  - C) Artificial intelligence that can analyze existing content or data
  - D) Artificial intelligence that can optimize existing content or data
  - **Answer: A**
2. Which of the following is an example of a generative AI tool?
  - A) ChatGPT
  - B) Google Translate
  - C) Grammarly
  - D) Wolfram Alpha
  - **Answer: A**
3. What are some benefits of using generative AI in education?
  - A) It can enhance creativity and innovation
  - B) It can provide personalized and adaptive learning
  - C) It can save time and resources
  - D) All of the above
  - **Answer: D**
4. What are some challenges of using generative AI in education?
  - A) It can be unreliable or inaccurate
  - B) It can raise ethical and social issues
  - C) It can require technical skills and knowledge

- D) All of the above
  - **Answer: D**
5. What is prompt engineering?
- A) The process of designing and testing prompts for generative AI tools
  - B) The process of evaluating and improving prompts for generative AI tools
  - C) The process of creating and modifying prompts for generative AI tools
  - D) All of the above
  - **Answer: D**

I would like a 5 question multiple choice quiz that asks students to apply the concepts learned in this lesson. The quiz should include case studies and examples.

Okay, I can generate another quiz for you. Here are some possible questions and answers that ask students to apply the concepts learned in this lesson:

1. You are a history teacher who wants to use ChatGPT to generate a summary of the main events of World War II. What is a good prompt to use for this task?
  - A) Write a summary of the main events of World War II in less than 300 words.
  - B) World War II was a global conflict that lasted from 1939 to 1945. It involved the major powers of the world, such as Nazi Germany, Japan, the United States, and the Soviet Union. Some of the main events of World War II were:
  - C) Summarize World War II
  - D) World War II summary
  - **Answer: A**
2. You are a music teacher who wants to use DALL-E to generate an image of a guitar with wings. What is a good prompt to use for this task?
  - A) Guitar with wings
  - B) A flying guitar
  - C) An acoustic guitar that has feathered wings attached to its body
  - D) A winged guitar
  - **Answer: C**
3. You are a math teacher who wants to use LessonPlans.AI to generate a lesson plan on fractions for grade 4 students. What is a good prompt to use for this task?
  - A) Fractions lesson plan for grade 4
  - B) Lesson plan on fractions for grade 4 students. The lesson plan should include learning objectives, materials, activities, and assessment.
  - C) How to teach fractions to grade 4 students
  - D) Grade 4 fractions
  - **Answer: B**
4. You are an English teacher who wants to use generative AI to provide feedback on your students' essays. What are some benefits and challenges of using generative AI for this purpose?
  - A) Benefits: It can save time and provide consistent and personalized feedback. Challenges: It can be inaccurate or biased and require human supervision and verification.

- B) Benefits: It can improve grammar and spelling and provide suggestions for improvement. Challenges: It can be expensive and require internet access and technical skills.
  - C) Benefits: It can enhance creativity and originality and provide examples and references. Challenges: It can be unreliable or plagiarized and raise ethical and social issues.
  - D) All of the above
  - **Answer: D**
5. You are a biology teacher who wants to use generative AI to create a quiz on the human digestive system. What are some ethical and social implications of using generative AI for this purpose?
- A) It can affect the quality and validity of the assessment and the learning outcomes of the students.
  - B) It can affect the privacy and security of the data and the identity of the students.
  - C) It can affect the fairness and equity of the assessment and the opportunities of the students.
  - D) All of the above
  - **Answer: D**

I liked your suggestion to assess students at the end of the lesson with a reflection paper. What sort of prompts or questions could i give students to work on this assignment?

I'm glad you liked my suggestion. A reflection paper is a good way to assess students' learning and critical thinking skills. Here are some possible prompts or questions you could give students to work on this assignment:

- What did you learn about generative AI and its applications in higher education from this lesson?
- How did using generative AI tools enhance your creativity and innovation skills?
- What are some benefits and challenges of using generative AI in your field of study or interest?
- How do you evaluate the quality and reliability of the content generated by generative AI tools?
- How do you use generative AI tools responsibly and ethically in your academic work?
- How do you plan to use generative AI tools in your future teaching or learning activities?

Perfect! Now I would like a rubric to assess this reflection paper. Identify 5 criteria by which to assess this reflective paper on generative AI and create a rubric.

Okay, I can generate a rubric for you. Here are some possible criteria and levels by which to assess the reflection paper on generative AI:

<b>Criteria</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>
<b>Content</b>	The paper demonstrates a limited or superficial understanding of generative AI and its applications in higher education. The paper provides few or irrelevant examples of generative AI tools and their uses in education.	The paper demonstrates a basic or general understanding of generative AI and its applications in higher education. The paper provides some or vague examples of generative AI tools and their uses in education.	The paper demonstrates a clear or detailed understanding of generative AI and its applications in higher education. The paper provides several or specific examples of generative AI tools and their uses in education.	The paper demonstrates a comprehensive or in-depth understanding of generative AI and its applications in higher education. The paper provides multiple or relevant examples of generative AI tools and their uses in education.
<b>Creativity</b>	The paper shows little or no evidence of creativity and innovation skills. The paper does not explore new or original ideas or perspectives on generative AI and its applications in higher education.	The paper shows some or minimal evidence of creativity and innovation skills. The paper explores few or common ideas or perspectives on generative AI and its applications in higher education.	The paper shows considerable or moderate evidence of creativity and innovation skills. The paper explores several or novel ideas or perspectives on generative AI and its applications in higher education.	The paper shows extensive or high evidence of creativity and innovation skills. The paper explores multiple or unique ideas or perspectives on generative AI and its applications in higher education.
<b>Evaluation</b>	The paper does not evaluate the benefits and challenges of using generative AI in higher education. The paper does not provide any criteria or evidence to support the evaluation.	The paper evaluates the benefits and challenges of using generative AI in higher education in a simplistic or biased way. The paper provides weak or	The paper evaluates the benefits and challenges of using generative AI in higher education in a balanced or critical way. The paper provides reasonable or adequate criteria or evidence to	The paper evaluates the benefits and challenges of using generative AI in higher education in a nuanced or sophisticated way. The paper provides strong or relevant criteria or evidence

Criteria	Level 1	Level 2	Level 3	Level 4
		insufficient criteria or evidence to support the evaluation.	support the evaluation.	to support the evaluation.
Ethics	The paper does not address the ethical and social implications of using generative AI in higher education. The paper does not acknowledge any potential risks or responsibilities associated with using generative AI in higher education.	The paper addresses the ethical and social implications of using generative AI in higher education in a superficial or incomplete way. The paper acknowledges few or vague potential risks or responsibilities associated with using generative AI in higher education.	The paper addresses the ethical and social implications of using generative AI in higher education in a clear or comprehensive way. The paper acknowledges several or specific potential risks or responsibilities associated with using generative AI in higher education.	The paper addresses the ethical and social implications of using generative AI in higher education in a thoughtful or insightful way. The paper acknowledges multiple or relevant potential risks or responsibilities associated with using generative AI in higher education.
Reflection	The paper does not reflect on the learning experience with generative AI tools. The paper does not identify any strengths, weaknesses, challenges, or opportunities for improvement related to using generative AI tools.	The paper reflects on the learning experience with generative AI tools in a descriptive or superficial way. The paper identifies few or vague strengths, weaknesses, challenges, or opportunities for improvement related to using	The paper reflects on the learning experience with generative AI tools in a critical or detailed way. The paper identifies several or specific strengths, weaknesses, challenges, or opportunities for improvement related	The paper reflects on the learning experience with generative AI tools in a meaningful or insightful way. The paper identifies multiple or relevant strengths, weaknesses, challenges, or opportunities for improvement related

Criteria	Level 1	Level 2	Level 3	Level 4
		generative AI tools.	to using generative AI tools.	to using generative AI tools.

I hope this rubric helps you assess your students' reflection papers effectively. 😊

review your work, in other words, review this rubric using a constructivist education lens. And produce a better one based on what you find.

I will review the rubric using a constructivist education lens and produce a better one based on what I find. Here is my response:

[According to constructivist learning theory, knowledge is constructed from a base of prior knowledge and learning is an active and social process that involves making sense of information and experiences in authentic contexts<sup>12</sup>](#). Therefore, a rubric that assesses a reflection paper on generative AI and its applications in higher education should reflect these principles and criteria. Based on my review, I suggest the following improvements for the rubric:

- **Content:** The rubric should not only assess the understanding of generative AI and its applications in higher education, but also the connection of this topic to the prior knowledge and experiences of the students. The rubric should also encourage the students to explore different perspectives and sources of information on generative AI and its applications in higher education.
- **Creativity:** The rubric should not only assess the creativity and innovation skills of the students, but also the application of these skills to their own field of study or interest. The rubric should also encourage the students to generate new or original ideas or products with generative AI tools.
- **Evaluation:** The rubric should not only assess the evaluation of the benefits and challenges of using generative AI in higher education, but also the justification and evidence for the evaluation. The rubric should also encourage the students to compare and contrast different generative AI tools and their uses in higher education.
- **Ethics:** The rubric should not only assess the address of the ethical and social implications of using generative AI in higher education, but also the analysis and evaluation of these implications. The rubric should also encourage the students to propose solutions or recommendations for addressing these implications.
- **Reflection:** The rubric should not only assess the reflection on the learning experience with generative AI tools, but also the integration of this experience with their own learning goals and plans. The rubric should also encourage the students to seek feedback and collaboration from their peers or instructors.

Here is a possible revised rubric based on these suggestions:

Criteria	Level 1	Level 2	Level 3	Level 4
Content	<p>The paper demonstrates a limited or superficial understanding of generative AI and its applications in higher education. The paper provides few or irrelevant examples of generative AI tools and their uses in education. The paper does not connect this topic to their prior knowledge or experiences. The paper does not explore different perspectives or sources of information on this topic.</p>	<p>The paper demonstrates a basic or general understanding of generative AI and its applications in higher education. The paper provides some or vague examples of generative AI tools and their uses in education. The paper connects this topic to their prior knowledge or experiences in a simplistic or superficial way. The paper explores few or common perspectives or sources of information on this topic.</p>	<p>The paper demonstrates a clear or detailed understanding of generative AI and its applications in higher education. The paper provides several or specific examples of generative AI tools and their uses in education. The paper connects this topic to their prior knowledge or experiences in a clear or meaningful way. The paper explores several or novel perspectives or sources of information on this topic.</p>	<p>The paper demonstrates a comprehensive or in-depth understanding of generative AI and its applications in higher education. The paper provides multiple or relevant examples of generative AI tools and their uses in education. The paper connects this topic to their prior knowledge or experiences in a comprehensive or insightful way. The paper explores multiple or unique perspectives or sources of information on this topic.</p>
Creativity	<p>The paper shows little or no evidence of creativity and innovation skills. The paper does not apply these skills to their own field of study or interest. The paper does not generate new or original ideas or</p>	<p>The paper shows some or minimal evidence of creativity and innovation skills. The paper applies these skills to their own field of study or interest in a basic or general way. The paper generates few or common ideas or</p>	<p>The paper shows considerable or moderate evidence of creativity and innovation skills. The paper applies these skills to their own field of study or interest in a clear or detailed way. The paper generates several</p>	<p>The paper shows extensive or high evidence of creativity and innovation skills. The paper applies these skills to their own field of study or interest in a comprehensive or in-depth way. The paper generates multiple or unique ideas or</p>



Criteria	Level 1	Level 2	Level 3	Level 4
	products with generative AI tools.	products with generative AI tools.	or novel ideas or products with generative AI tools.	products with generative AI tools.
Evaluation	The paper does not evaluate the benefits and challenges of using generative AI in higher education. The paper does not provide any justification or evidence for the evaluation. The paper does not compare and contrast different generative AI tools and their uses in higher education.	The paper evaluates the benefits and challenges of using generative AI in higher education in a simplistic or biased way. The paper provides weak or insufficient justification or evidence for the evaluation. The paper compares and contrasts few or vague generative AI tools and their uses in higher education.	The paper evaluates the benefits and challenges of using generative AI in higher education in a balanced or critical way. The paper provides reasonable or adequate justification or evidence for the evaluation. The paper compares and contrasts several or specific generative AI tools and their uses in higher education.	The paper evaluates the benefits and challenges of using generative AI in higher education in a nuanced or sophisticated way. The paper provides strong or relevant justification or evidence for the evaluation. The paper compares and contrasts multiple or relevant generative AI tools and their uses in higher education.
Ethics	The paper does not address the ethical and social implications of using generative AI in higher education. The paper does not analyze or evaluate these implications. The paper does not propose any solutions or	The paper addresses the ethical and social implications of using generative AI in higher education in a superficial or incomplete way. The paper analyzes or evaluates these implications in a simplistic or biased	The paper addresses the ethical and social implications of using generative AI in higher education in a clear or comprehensive way. The paper analyzes or evaluates these	The paper addresses the ethical and social implications of using generative AI in higher education in a thoughtful or insightful way. The paper analyzes or evaluates these implications in a nuanced or sophisticated way.

Criteria	Level 1	Level 2	Level 3	Level 4
	recommendations for addressing these implications.	way. The paper proposes few or vague solutions or recommendations for addressing these implications.	implications in a balanced or critical way. The paper proposes several or specific solutions or recommendations for addressing these implications.	The paper proposes multiple or relevant solutions or recommendations for addressing these implications.
Reflection	The paper does not reflect on the learning experience with generative AI tools. The paper does not integrate this experience with their own learning goals and plans. The paper does not seek feedback or collaboration from their peers or instructors.	The paper reflects on the learning experience with generative AI tools in a descriptive or superficial way. The paper integrates this experience with their own learning goals and plans in a basic or general way. The paper seeks feedback or collaboration from their peers or instructors in a minimal or passive way.	The paper reflects on the learning experience with generative AI tools in a critical or detailed way. The paper integrates this experience with their own learning goals and plans in a clear or meaningful way. The paper seeks feedback or collaboration from their peers or instructors in a moderate or active way.	The paper reflects on the learning experience with generative AI tools in a meaningful or insightful way. The paper integrates this experience with their own learning goals and plans in a comprehensive or insightful way. The paper seeks feedback or collaboration from their peers or instructors in an extensive or proactive way.

I hope this revised rubric helps you assess your students' reflection papers more effectively and aligns with the constructivist learning theory principles. 😊

Learn more:

[1. educationaltechnology.net](https://www.educationaltechnology.net)[2. waldenu.edu](https://www.waldenu.edu)[3. bing.com](https://www.bing.com)[4. simplypsychology.org](https://www.simplypsychology.org)[5. en.wikipedia.org](https://en.wikipedia.org)[6. en.wikipedia.org](https://en.wikipedia.org)[7. theconversation.com](https://www.theconversation.com)+6 more