Transdisciplinary Thinking

Lesson Focus: What ethical constraints should there be on the pursuit of knowledge?

Learning Objectives	Vocabulary	Links with Approaches to Learning (ATL)
- Examine the impact of ethical constraints on the pursuit of knowledge. - Examine how recurring ethical concerns guide or limit the pursuit of knowledge in society.	ethics constraint benefit risk responsibility implication consent duty rights values	**Thinking Skills** - Analyze ethical dilemmas in relation to the pursuit of knowledge and evaluate pros and cons. **Self-management** - Reflect on the ethical implications of various pursuits of knowledge.

Preparation Tasks	Differentiation
- Clone the Kialo discussion What ethical constraints should there be on the pursuit of knowledge? and share it with your students. - For larger groups, you may wish to use Small Group Mode. - Use Tasks to set minimum expectations for students during the session.	**Support:** Use the guiding questions to support students as needed. **Extend:** Encourage students to consider different perspectives by asking them to add counterarguments to another group's scenario.

Introduction

- Snowball discussion activity: What responsibilities do we have as a society when it comes to advancing knowledge through research and technology?
- Give students two minutes to note down their own ideas. They should join with a partner to discuss each other's ideas and add to their notes.
- Then, each pair should join to make a group of four and repeat the discussion and complete their notes.
- Ask each group to feedback one idea in response to the question. They must not repeat ideas that have already been shared.

Main Activity

- Students will participate in the Kialo multi-thesis discussion: What ethical constraints should there be on the pursuit of knowledge?
  - You will need to clone the discussion and share it with your students.
  - For larger groups, you may also wish to use Small Group Mode.
  - Use Tasks to set minimum expectations for students during the session.
- Divide students into four groups and allocate each group one scenario from the discussion.

- - They should examine their scenario by adding pros and cons to the discussion in relation to the main question.
    - Scenario 1: A journal article reports the outcomes of a medical trial for an experimental new drug, with potential to revolutionize treatment for a serious illness.
    - Scenario 2: A research team completes a groundbreaking study on genetic editing, demonstrating the potential to alter human embryos to eliminate hereditary diseases.
    - Scenario 3: Anthropologists conduct a study in a conflict-ridden area, documenting cultural practices of communities living under threat.
    - Scenario 4: A tech company working in mental health diagnostics develops artificial intelligence capable of real-time emotion recognition through surveillance cameras.
- Provide students with these questions to guide students' responses as required:
  - What are the potential benefits of sharing the findings, and how do they compare to the ethical risks involved?
  - How might vulnerable groups be impacted, and what ethical responsibilities do researchers have to protect them?
  - What challenges do researchers face in obtaining informed consent?
  - How do we balance the pursuit of knowledge for the public good with the need to respect individual rights and privacy?
  - What are the potential long-term societal implications of the knowledge gained, and how should researchers account for these in their work?
  - What ethical frameworks can be applied to evaluate the actions and decisions made, and how might they lead to different conclusions?
  - What role should regulatory bodies play in overseeing the research and publication of findings to ensure ethical standards are met?
- When the discussion is complete, ask students to identify common themes, principles, and arguments between the four distinct scenarios that coherently link at least three of them.

Reflection Activity

- Ask students to use the completed discussion to identify points of divergence with respect to themes, principles, and arguments.
  - What potential consequences might arise from adhering strictly to one ethical perspective over another?
  - Is it possible to respect differing ethical views while advancing the pursuit of knowledge?
  - How has this discussion influenced your own understanding of ethical constraints in knowledge pursuit?