[1. Debate Activity 3](#_Toc199411006)

[**1.1.1. Debate Benefits** 3](#_Toc199411007)

[**1.1.2. Debate Objectives** 3](#_Toc199411008)

[**1.1.3. Student Debate Guidelines** 3](#_Toc199411009)

[**1.1.4. Debate Timetable** 6](#_Toc199411010)

[**1.1.5. Debate Evaluation Criteria** 6](#_Toc199411011)

[**1.1.6. Resources** 8](#_Toc199411012)

[**1.1.7. Examples of Possible Debates by Field of Study** 9](#_Toc199411013)

[2. Video Essay Activity 10](#_Toc199411014)

[**2.1.1. Video Essay Benefits** 10](#_Toc199411015)

[**2.1.2. Video Essay Objectives** 10](#_Toc199411016)

[**2.1.3. Video Essay Guidelines** 11](#_Toc199411017)

[**2.1.4. Timetable** 12](#_Toc199411018)

[**2.1.5. Video Essay Evaluation Criteria** 13](#_Toc199411019)

[**2.1.6. Resources** 14](#_Toc199411020)

[3. Quiz Activity 15](#_Toc199411021)

[**3.1.1. What is a Quiz?** 15](#_Toc199411022)

[**3.1.2. Quiz Benefits** 15](#_Toc199411023)

[**3.1.3. Quiz Objectives** 16](#_Toc199411024)

[**3.1.4. Why Does a Quiz Encourage Academic Integrity?** 16](#_Toc199411025)

[**3.1.5. Why is artificial Intelligence Less Helpful During a Quiz?** 16](#_Toc199411026)

[**3.1.6. Generic Examples of Quiz Questions that Encourage Reflection** 17](#_Toc199411027)

[**3.1.7. How to Grade a Quiz** 18](#_Toc199411028)

[**3.1.8. Resources** 18](#_Toc199411029)

[4. Flipped Classroom Activity 19](#_Toc199411030)

[**4.1.1. What is a Flipped Classroom?** 19](#_Toc199411031)

[**4.1.2. Flipped Classroom Benefits** 19](#_Toc199411032)

[**4.1.3. General Flipped Classroom Objectives** 20](#_Toc199411033)

[**4.1.4. Why Does a Flipped Classroom Encourage Academic Integrity?** 20](#_Toc199411034)

[**4.1.5. Why is Artificial Intelligence Less Helpful in a Flipped Classroom?** 21](#_Toc199411035)

[**4.1.6. Generic Examples of a Flipped Classroom Workshop** 22](#_Toc199411036)

[**4.1.7. How to Assess Student Performance During Workshops in a Flipped Classroom** 23](#_Toc199411037)

[**4.1.8. List of Workshops That Could Be Conducted in a Flipped Classroom Approach** 24](#_Toc199411038)

[**4.1.9. Example of Evaluation Matrix for a Workshop** 26](#_Toc199411039)

[**4.1.10. Resources** 27](#_Toc199411040)

# Debate Activity

Developed by Martine Peters, professor at *Université du Québec en Outaouais*

Collaborators: Faustine André, Alexandre Bédard and Cathy-Anne Boiteau

[**1.1.1. Debate Benefits** 3](#_Toc194590516)

[**1.1.2. Debate Objectives** 3](#_Toc194590517)

[**1.1.3. Student Debate Guidelines** 3](#_Toc194590518)

[**1.1.4. Debate Timetable** 6](#_Toc194590519)

[**1.1.5. Debate Evaluation Criteria** 6](#_Toc194590520)

[**1.1.6. Resources** 8](#_Toc194590521)

[**1.1.7. Examples of Possible Debates by Field of Study** 9](#_Toc194590522)

**Information for Professors**

### **Debate Benefits**

* Easy to evaluate (formative or summative assessment)
* Students can use Ai2 to prepare their arguments
* Active involvement
* Interaction in real time, encouraging authentic communication
* Healthy and constructive competition
* Intellectual and diverse dynamics
* Simple to organize and few resources needed
* Autonomy of participants

### **Debate Objectives**

* Gain knowledge of the topic being debated.
* Improve oral communication by structuring and clearly expressing ideas in a compelling way.
* Develop critical thinking by analyzing and evaluating arguments logically and thoroughly.
* Increase research skills of identifying, synthesizing and using relevant information.
* Organize ideas by structuring arguments coherently and logically.
* Collaborate effectively as a team to develop collective argumentative strategies.
* Manage stress and emotions in a high-pressure public speaking environment.
* Improve mental flexibility by adapting arguments and reacting to unexpected circumstances.
* Develop creativity by generating new ideas or arguments to respond to opposing viewpoints.
* Develop active listening by paying attention to opposing viewpoints and responding to them respectfully.
* Make rapid decisions in formulating and revising arguments during debates.
* Increase persuasion skills to influence and effectively negotiate in an argumentative context.

### **Student Debate Guidelines**

The goal of this activity is to develop your communication, critical thinking and research skills. You will work as a team of four to defend a position on a given topic and to counter arguments from the opposing team in a thorough and respectful way.

The two teams must choose a topic from the proposed list. Following that, teams will choose their position (Team A—For or Team B—Against) by way of a random draw or based on their opinions.

**Team Composition**

 Each team is composed of four people. Each member must actively participate by presenting at least one argument or by responding to counter-arguments.

**Roles:**

* Moderator: This is a student who is not on a team, but who monitors time.
* Head Coach: Introduces the team’s position, presents key arguments.
* Assistant Coaches (2 members): Develop and refine central arguments.
* Rebutter: Responds to the opposing team’s arguments and concludes the debate.

**Debate Sequence (number of minutes may vary):**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part of Sequence** | **Role** | **Tasks** | **Time** |
| Introduction | Moderator | Presents topic and mentions timing rules | 1 minute |
| Round 1 | Team A Head Coach | Presents arguments for | 3 minutes  |
| Team B Head Coach | Presents arguments against | 3 minutes  |
| Teams A and B | Team discussion | 3 minutes |
| Round 2  | Team A Assistant Coaches | Refines arguments for | 3 minutes |
| Team B Assistant Coaches | Refines arguments against | 3 minutes |
| Teams A et B | Team discussion | 3 minutes |
| Round 3 | Team A Rebutter | Responds to opposing arguments | 2 minutes |
| Team B Rebutter | Responds to opposing arguments | 2 minutes |
| Teams A et B | Team discussion | 3 minutes |
| Conclusion | Team A Rebutter | Brief summarizing conclusion | 2 minutes |
| Team B Rebutter | Brief summarizing conclusion | 2 minutes |
| Large-group discussion, with a vote to decide the winning team | 10 minutes |
| Total time | 40 minutes |

**Debate Rules:**

1. Respect for time: Each intervention must respect the allotted time. A signal will be given one minute before the time expires.
2. Taking turns: Each team must wait its turn to speak. Interruptions or interjections are not allowed.
3. Justification of arguments: Each team must support its arguments with facts, examples and reliable sources.

**Rules of Conduct**

* Respect and courtesy: The debate must be carried out in an atmosphere of mutual respect. Interruptions and personal attacks are forbidden.
* Plagiarism: All borrowed ideas or information from external sources must be properly cited. Students who plagiarize will be severely penalized.
* Use of IA: Artificial intelligence can be used to prepare your arguments, but the team’s job is to agree on the choice and development of arguments. Remember to be transparent about use of AI and please disclose it, because an evaluation criterion concerns this aspect.

**Preparation**

Research: You are required to conduct in-depth research on the assigned topic. Remember to use reliable and well documented academic sources.

**Team Strategy**

* Discuss as a team how to coordinate your interventions and structure your arguments. All members must fully understand their roles.
* Anticipation of counter-arguments: Try to predict the opposing team’s arguments and prepare strong counter-arguments.
* Each team member must be equally and actively involved in presentation of arguments and rebuttals.

**Helpful Tips**

* Time management: Practice respecting the time allotted for your interventions.
* Active listening: Be attentive to opposing arguments so you can effectively respond to them.
* Argumentation: Do not just give opinions; support your statements with concrete evidence and relevant examples.
* Taking notes: While the opposing team is speaking, take notes so you can better structure your rebuttals.

**Possible Variation for an Online Class**

Simultaneous online debate

* Put the various groups who are debating in different classrooms.
* Divide the spectators among those groups.
* Ask the moderator to record the debate (so the teacher can watch it).
* Spectators can also participate in evaluation.

### **Debate Timetable**

|  |  |
| --- | --- |
| Tasks | Week |
| Present guidelines and evaluation matrix (course plan) | 1 |
| Present teams and topic choices | 2 |
| Random draw for team presentation dates | 2 |
| Submission by each team of plan containing arguments and counter-arguments (formative assessment) | 4 |
| Team 1 against Team 2Team 3 against Team 4 | 6 |
| Team 5 against Team 6Team 7 against Team 8 | 7 |
| Team 9 against Team 10Team 11 against Team 12 | 8 |
|  |  |

### **Debate Evaluation Criteria**

|  |  |
| --- | --- |
| Evaluation Criteria | Criteria Definition |
| Content Criteria |
| Clarity of arguments | Ability to formulate ideas in an understandable, logical and concise way. |
| Quality of evidence | Relevance, reliability and diversity of evidence (scientific, professional, blogs, etc.) provided to support arguments. |
| Rebuttal of opposing arguments | Ability to respond effectively to opposing team’s arguments and to suggest strong counter-arguments. |
| Creativity of arguments | Originality of ideas; evidence of personal reflection. |
| Structural and Organizational Criteria |
| Structure and organization | Clarity and logic in idea organization; fluidity of transitions. |
| Quality of conclusion | Ability to summarize arguments and conclude the debate in an impactful way. |
| Academic Integrity Criteria |
| Citation of sources  | Thoroughness and clarity in use and mention of sources. |
| Transparency in use of sources | Relevance and reliability of sources during the debate. |
| Behaviour and Performance Criteria |
| Respect of time | Respect of time allotted for each intervention. |
| Respectful interaction | Respect toward opposing team, demonstrated by absence of interruptions or personal attacks. |
| Engagement and participation | Level of involvement of each team member in the debate. |
| Transparency and AI Use Criteria |
| Transparency in AI use | Remarks in text about AI use, to explain which tool was used, how and where in the activity. |

| **Criteria** | **Level 1: Weak** | **Level 2: Fair** | **Level 3: Good**  | **Level 4: Excellent**  |
| --- | --- | --- | --- | --- |
| Clarity of arguments | Vague arguments; difficult to understand | Understandable arguments, but sometimes confusing or underdeveloped | Well structured arguments, but sometimes a lack of specificity | Very clear, logical and well-articulated arguments throughout the debate |
| Quality of evidence | Little or no evidence to support arguments | Some evidence, but often unreliable or not very relevant | Evidence generally reliable and relevant, but lacking diversity | Strong and varied evidence, always relevant to support each argument |
| Rebuttal of arguments | Unable to rebut opposing arguments | Limited rebuttal; lack of compelling counter-arguments | Good rebuttal, but some weaknesses in responses to counter-arguments | Effective and relevant rebuttals; clear and compelling responses to counter-arguments |
| Creativity of arguments | Arguments copied or mainly inspired by external sources without modification | Arguments not very original or mainly taken from other sources with a few modifications, without personal analysis | Mainly original arguments, with some elements borrowed from external sources and well adapted | Completely original arguments, clearly thought out, with personal input based on in-depth research |
| Structure and organization | Lack of clear structure; ideas presented in an unorganized way | Structure evident, but awkward transitions or very little organization of ideas | Structure generally well defined, with some hesitations | Clear and fluid structure; well organized and logically connected ideas |
| Quality of conclusion | Missing or very weak conclusion; lack of summarization | Conclusion given, but incomplete or not very compelling | Good conclusion; well summarizes main points, but somewhat lacking in impact | Strong and compelling conclusion; perfectly summarizes main points and their impact |
| Citation of sources  | No citation or sources not very reliable, non-verifiable | Some sources cited, but in an incomplete or questionable way | Proper citations of reliable sources, but sometimes lacking diversity | Accurate, complete and varied citations from reliable academic sources |
| Transparency in use of sources | Sources unmentioned or hidden, possible plagiarism | Sources partly mentioned, but lack of transparency in their use | Proper use of sources, mentioned in a transparent and explicit way | Sources clearly mentioned and integrated transparently throughout arguments |
| Respect of time | Allotted period frequently exceeded; or interventions that were too short | Partial respect of time with allotted period sometimes exceeded; or lack of content | Respect of time, but interventions sometimes too fast or slow | Complete respect of time, well-balanced interventions |
| Respectful interaction | Disrespectful interactions; frequent interruptions or personal attacks | Some disrespectful behaviours or interruptions | Overall respectful interaction; some minor interruptions | Respectful interaction; no interruption or personal attack |
| Engagement and participation | Very little involvement or active participation | Limited participation; unequal involvement of members | Good involvement; active participation by most members | Very strong involvement; active and balanced participation by all members |
| Transparency in AI use / Criteria not applicable if AI not used | No remarks to indicate which AI tool was used, how and where  | Remarks that give few details about the tool and how and where it was used | Remarks that indicate which AI tool was used, with some details about how and where | Remarks that indicate which AI tool was used, with all details about how and where |

### **Resources**

Bauschard, S. (2023). Debating in the World of AI. *Education Disrupted: Teaching and Learning in An AI World*. <https://stefanbauschard.substack.com/p/debating-in-the-world-of-ai?utm_source=post-email-title&publication_id=1673728&post_id=138620336&utm_campaign=email-post-title&isFreemail=true&r=2fm3lf&utm_medium=email>

Bauschard, S. (2025). Speech & Debate: The Ultimate Training for an AI-Augmented World. *Education Disrupted: Teaching and Learning in An AI World*. <https://stefanbauschard.substack.com/p/speech-and-debate-the-ultimate-training?utm_source=post-email-title&publication_id=1673728&post_id=156602138&utm_campaign=email-post-title&isFreemail=true&r=2fm3lf&triedRedirect=true&utm_medium=email>

### **Examples of Possible Debates by Field of Study**

* Economics: Does cryptocurrency represent the future of global financial systems?
* Law: Should surrogate motherhood be legalized in every country?
* Sociology: Does social media foster social cohesion or isolation of individuals?
* Political Science: Is direct democracy a better form of government than representative democracy?
* Psychology: Is psychometric testing a reliable tool to assess human intelligence?
* Education: Can online learning replace in-person learning in universities?
* Medicine: Should euthanasia be legalized for all terminal medical conditions?
* Environment and Ecology: Is sustained economic growth possible without harming the environment?
* Computer Science: Does artificial intelligence represent a large-scale threat to employment?
* History: Has colonization had positive effects on colonized nations, beyond its negative impact?
* Physics: Is research into nuclear fusion the ultimate solution to the global energy crisis?
* Biology: Should genetic modification of humans (CRISPR) be allowed to prevent hereditary diseases?
* Chemistry: Does nanotechnology in consumer goods pose environmental and health risks?
* Mathematics: Is mathematics a universal language or just a human tool to describe reality?
* Astronomy: Should colonization of Mars be a scientific and economic priority for humanity?
* Geology: Should seabed mining be prohibited to protect marine ecosystems?
* Environmental Science: Can renewable energy really meet long-term global energy needs?
* Neuroscience: Is neuroenhancement (by way of implants or cognitive drugs) ethical in a non-medical context?
* Material Sciences: Are biodegradable plastics the best solution to plastic pollution?
* Oceanography: Are oceans an untapped resource for solving global energy challenges, through technologies such as tidal energy?
* Arts Management: Should GAFAM do more to increase discoverability of Quebec creations?

# Video Essay Activity

Developed by Martine Peters, professor at *Université du Québec en Outaouais*

[**2.1.1. Video Essay Benefits** 10](#_Toc199411050)

[**2.1.2. Video Essay Objectives** 10](#_Toc199411051)

[**2.1.3. Video Essay Guidelines** 11](#_Toc199411052)

[**2.1.4. Timetable** 12](#_Toc199411053)

[**2.1.5. Video Essay Evaluation Criteria** 13](#_Toc199411054)

[**2.1.6. Resources** 14](#_Toc199411055)

### **Video Essay Benefits**

* Simple to organize and few resources needed
* Students can use Ai2 to prepare their arguments
* Develops autonomy of participants

### **Video Essay Objectives**

* Gain knowledge of the essay topic.
* Improve written communication by structuring and expressing ideas clearly, consistently and logically.
* Defend an argument: Develop and justify a viewpoint with evidence and examples.
* Offer personal reflection rooted in experience and knowledge.
* Develop critical thinking by analyzing and evaluating arguments logically and thoroughly.
* Increase information research skills in finding reliable sources to explain the analysis.
* Synthesize information: Combine diverse ideas and perspectives into a clear and consistent text.

### **Video Essay Guidelines**

Carefully read the topic and make sure you completely understand it. You will need to identify the key concepts. Reword the topic in the form of questions to guide your reflection and help you conduct your information research.

**Your video essay must have three sections.**

1. **Introduction** — Clear and concise
* Hook: Presentation of the topic and issues to grab attention. You must also add a personal reflection on the topic, based on an experience you have had, direct observation, or a specific local situation (this reflection must be integrated throughout the essay to convey your arguments).
* Definition of key terms: Explain important concepts related to the topic.
* Problematic and presentation of outline: Introduce the central issue you will deal with and briefly present the structure of your essay.
1. **Development** — With argumentation that follows a logical structure
	* Main idea: Explain the central idea or argument of the section.
	* Support the idea with evidence and practical examples from your reflection, facts and scientific references.
	* Make a transition from this section to the next section to show the logic of your argumentation and ensure fluidity in your text.
	* Present the next idea of your argumentation and so on. You should have at least two main ideas and no more than four.
2. **Conclusion** — This must briefly and effectively summarize your main arguments. You must provide a clear response to the central issue that was presented in the introduction. Do not introduce new ideas in the conclusion. However, you can open the door for other reflections.

You absolutely must use at least three scientific sources. You must properly cite your sources. If you have used an author’s idea or words, you must give the complete reference in your text and also at the end in a bibliography.

**Part 1 of Task (formative)**

Find a video on a topic connected to the course. Do a brief rhetorical analysis of techniques used in the video to convince and/or explain. Also make a connection between the video and what has been presented in class (content). Prepare for a discussion in class of your video, its techniques and its content.

**Part 2 of Task**

Create your own video (6–10 minutes) on another topic, using techniques that have been discussed in class. Make sure you reflect on the goal of your video, its intended audience, its context and its genre. You absolutely must make connections between your topic and what has been discussed in the classroom. You must also make connections with recent or local events.

Your video can contain animations or still images, as well as an audio recording of your voice that explains the content of your essay. You can also display text on the screen to follow or replace part of the audio narration. Music or sound effects can also be combined with the audio. This is where you get to demonstrate your creativity!

When you record your video, be sure to use an appropriate, clear and formal language level, without colloquial speech or language that is too personal.

### **Timetable**

|  |  |  |
| --- | --- | --- |
| **To be submitted** | **Week** | **Weight** |
| Viewing of a video before class and discussion in class | 1 | - |
| Email with a short description of the topic of your essay for approval | 2 | 1 point |
| Email to indicate three scientific references that will be used, with two sentences for each to justify their relevance to the video essay | 3 | 1 point |
| Storyboard (plan) of the video essay arguments (maximum one page) | 4 | 3 points |
| Presentation of a draft of the video in groups of three for constructive feedback | 6 | 5 points |
| Submission of video essay | 8 | 25 points |
| Total | 35 points |

Any late submission may result in a penalty. However, in exceptional situations, you may request an extension.

### **Video Essay Evaluation Criteria**

| **Criteria** | **Unsatisfactory** | **Satisfactory** | **Good** | **Excellent** |
| --- | --- | --- | --- | --- |
| Understanding of topic | Insufficient understanding or off-topic | Limited understanding; lack of depth in analysis | Good understanding with relevant, but standard, interpretation | In-depth and nuanced understanding; original and clear interpretation |
| Clarity of arguments | Confusing, inconsistent or missing arguments | Arguments present, but not very clear or poorly structured | Arguments strong overall, but some inconsistencies | Logical and well-structured arguments, justified by relevant examples |
| Quality of visual and audio content | Low-quality video; visuals and audio do not contribute to arguments | Satisfactory visual and audio content, but lack of relevant integration | Good quality overall, but some possible improvements to sound or visuals  | High-quality video, with clear sound and visuals used well to convey arguments |
| Creativity | Absence of creativity in addressing the topic | Little creativity in presentation; limited use of multimedia elements | Relevant approach, but not very creative; use of media in a traditional way | Creative approach to the topic; innovative use of multimedia elements |
| Use of sources and references | Absence of adequate citations; lack of integration of sources | Superficial or incomplete use of sources; limited citations | Good use of sources, but some citations could be more accurate | Clear audio or visual citations that are well integrated; relevant academic sources |
| Clarity and accuracy of oral presentation | Presentation difficult to follow, unclear or inappropriate | Understandable presentation, but lack of clarity or accuracy | Clear presentation, but some hesitations or repetitions | Fluid, well-articulated and compelling presentation; vocabulary suitable for topic |
| Video structure | Absence of consistent structure or logical transitions | Structure present, but sometimes confusing or disorganized | Clear structure, but some transitions could be improved | Well defined and logical introduction, development and conclusion  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Unsatisfactory** | **Satisfactory** | **Good** | **Excellent** |
| Interaction with audience | No effort to engage spectators; monotone or inappropriate tone | Little effort to engage with spectators; unsuitable tone or rhythm | Good engagement, but sometimes too monotone or too fast | Strong engagement with spectators; use of suitable tone and rhythm |
| Respect of technical guidelines | Several technical guidelines not respected | Some guidelines not respected | Technical guidelines respected overall, with some minor errors | Video respects all technical guidelines (length, audio/video quality, format) |
| Respect of academic integrity | Serious violations of integrity policies (plagiarism, missing sources) | Some minor violations of academic standards | General respect of integrity standards, with some minor errors | Complete respect of academic integrity standards (sources explicitly mentioned during and at end of video) |

### **Resources**

Brancato, M. and Kopp, N. (2024, September 27). Want Your Students to Write Better? Assign Video Essays. The Chronicle of Higher Education. <https://www.chronicle.com/article/want-your-students-to-write-better-assign-video-essays>

# Quiz Activity

Developed by Martine Peters, professor at *Université du Québec en Outaouais*

[**3.1.1. What is a Quiz?** 15](#_Toc199748691)

[**3.1.2. Quiz Benefits** 15](#_Toc199748692)

[**3.1.3. Quiz Objectives** 16](#_Toc199748693)

[**3.1.4. Why Does a Quiz Encourage Academic Integrity?** 16](#_Toc199748694)

[**3.1.5. Why is artificial Intelligence Less Helpful During a Quiz?** 16](#_Toc199748695)

[**3.1.6. Generic Examples of Quiz Questions that Encourage Reflection** 17](#_Toc199748696)

[**3.1.7. How to Grade a Quiz** 18](#_Toc199748697)

[**3.1.8. Resources** 18](#_Toc199748698)

### **What is a Quiz?**

A quiz is a flexible, interactive and efficient assessment activity designed to test student knowledge, skills or comprehension on a specific topic. A quiz is much shorter than an exam, having a limited number of questions that do not take much time to answer. It has little impact on the final course grade, because it usually has a low weight of 5–10%. Several types of questions can be asked in a quiz, including multiple-choice, true/false, matching, or even short-answer questions. A quiz can be graded rapidly, sometimes even during class with students. A quiz can be administered in paper form, online or even with certain software apps.

### **Quiz Benefits**

* Dynamic experience that allows for active engagement of students
* Rapidly completed and graded, often with immediate feedback
* Motivating, since it can be administered in a fun or competitive way
* Flexible, since it can be adapted to almost any field or context
* Formative or summative assessment
* Can be adapted to different levels
* Offers measurable results to identify gaps and areas which need improvement
* Valued by students as a learning tool (see Raftery (2023) text)

### **Quiz Objectives**

The objectives of a quiz are as follows (variable depending on its context and use).

|  |  |
| --- | --- |
| Assess knowledge | Make learning fun and engaging |
| Reinforce learning | Validate skills |
| Identify gaps | Stimulate critical reflection |
| Motivate participants | Encourage revision |
| Track progress | Facilitate information retention |

### **Why Does a Quiz Encourage Academic Integrity?**

Here are some reasons why a quiz can encourage academic integrity:

* Regular and constant evaluation, which reduces the temptation to cheat by making assessments more frequent and less concentrated into one critical moment
* Diversity of questions, which makes cheating more difficult
* Personalized or random questions for each student
* Immediate feedback that allows students to see where they were mistaken and correct their errors, which encourages them to adopt an honest and proactive learning approach (see Woldai, Henne, Fersch, Kamath Barkur et Schacht (2023) text)
* Reduction of pressure, since regular quizzes spread workload and assessments over a longer period
* Focus on understanding, since well-designed quizzes are designed to test comprehension and ability to apply concepts
* Self-assessment and self-teaching by students, who develop better awareness of their own progress and gaps

### **Why is artificial Intelligence Less Helpful During a Quiz?**

* Limited time, which forces students to work quickly, thereby reducing time available to consult external sources or collaborate with others
* Absence of AI contextual comprehension, which requires students to modify any AI-generated text
* Time gap between assessments, especially when there is a series of quizzes in which each builds on preceding quizzes, since students using AI will not have learned quiz content
* Rusinovich et Rusinovich (2024) suggest integrating study of quiz content before allowing students to take the quiz
* Chahna (2023) suggests using images, videos or charts in the questions, which will make using artificial intelligence more difficult.

### **Generic Examples of Quiz Questions that Encourage Reflection**

Questions are divided into two phases: the first where the correct answer is requested, and the second where the correct response must be justified.

Examples of questions:

In Chemistry: Which gas is primarily responsible for the greenhouse effect?

a) Oxygen

b) Methane

c) **Carbon dioxide**

d) Nitrogen

Why is this gas primarily responsible for the greenhouse effect?

In Biology: What is the main function of red blood cells?
a) Produce antibodies
b) **Carry oxygen**
c) Fight infection
d) Regulate body temperature
What would be the consequences of altering this function?

In Art: Who painted The Starry Night?

a) Salvador Dalí

b) **Vincent van Gogh**

c) Claude Monet

d) Pablo Picasso

How is this work representative of the unique style of this artist?

In Education: What is the main goal of differentiated instruction?

a) Assess students in an identical way

b) **Adapt teaching to individual student needs**

c) Enhance learning by repetition

d) Use a single type of teaching method

How does differentiated instruction contribute to improving learning?

In Nursing: What is the first step in the nursing process?

a) Diagnosis

b) Planning

c) Assessment

d) **Data collection**

Explain why this step is crucial in the nursing process and how it influences the other steps.

### **How to Grade a Quiz**

In the previous sample questions, students receive 0.25 points for the correct answer and 0.75 points for justifying the correct answer. This way of grading answers encourages understanding of a concept or phenomenon, rather than just encouraging memorization of the correct answer without understanding.

### **Resources**

Chahna, G. (2023). On ChatGPT: what promise remains for multiple choice assessment? *Journal of Learning Development in Higher Education* (27). doi: 10.47408/jldhe.vi27.1009Repéré à <http://dx.doi.org/10.47408/jldhe.vi27.1009>

Raftery, D. (2023). Will ChatGPT pass the online quizzes? Adapting an assessment strategy in the age of generative AI. *Irish Journal of Technology Enhanced Learning, 7*. <http://dx.doi.org/10.22554/ijtel.v7i1.114>

Rusinovich, Y. and Rusinovich, V. (2024). Prevention of Artificial Intelligence (AI) Misuse in Online Medical Education. *ML in Health Science, 1*(1). doi: <https://doi.org/10.62487/8ny3zh09>

Woldai, B., Henne, S., Fersch, M.-L., Kamath Barkur, S. et Schacht, S. (2023). *A Qualitative Evaluation of an AI-Supported Quiz Application to Assess Learning Progress.* Communication presented at The Paris Conference on Education 2023 IAFOR, Paris. Repéré à <https://papers.iafor.org/wp-content/uploads/papers/pce2023/PCE2023_70567.pdf>

# Flipped Classroom Activity

Developed by Martine Peters, professor at *Université du Québec en Outaouais*

[**4.1.1. What is a Flipped Classroom?** 19](#_Toc199748909)

[**4.1.2. Flipped Classroom Benefits** 19](#_Toc199748910)

[**4.1.3. General Flipped Classroom Objectives** 20](#_Toc199748911)

[**4.1.4. Why Does a Flipped Classroom Encourage Academic Integrity?** 20](#_Toc199748912)

[**4.1.5. Why is Artificial Intelligence Less Helpful in a Flipped Classroom?** 21](#_Toc199748913)

[**4.1.6. Generic Examples of a Flipped Classroom Workshop** 22](#_Toc199748914)

[**4.1.7. How to Assess Student Performance During Workshops in a Flipped Classroom** 23](#_Toc199748915)

[**4.1.8. List of Workshops That Could Be Conducted in a Flipped Classroom Approach** 24](#_Toc199748916)

[**4.1.9. Example of Evaluation Matrix for a Workshop** 26](#_Toc199748917)

[**4.1.10. Resources** 27](#_Toc199748918)

### **What is a Flipped Classroom?**

A flipped classroom is a pedagogical approach in which traditional learning activities are reversed: theoretical content is studied at home, often with videos or readings, while time in class is devoted to practical activities, discussions and knowledge application.

### **Flipped Classroom Benefits**

* Personalization of learning
* Active engagement
* Reinforcement of teacher-student interaction
* Better use of class time
* Stimulation of collaboration
* Encouragement of critical reflection
* Flexibility, because of different formats of pedagogical content are used
* Reinforcement of autonomy

### **General Flipped Classroom Objectives**

The following objectives are for the general pedagogical approach. It goes without saying that each learning activity in the flipped classroom format will have its own objectives.

* Increase active involvement by students
* Encourage autonomy and responsibility
* Stimulate in-depth examination of concepts in class
* Customize teaching
* Promote collaboration
* Improve usage of teaching time
* Develop critical thinking and problem-solving skills
* Integrate educational technologies
* Improve knowledge retention

### **Why Does a Flipped Classroom Encourage Academic Integrity?**

The structure and pedagogical method used by a flipped classroom foster academic integrity because they encourage:

* student empowerment and accountability, which requires them to actively engage in their learning;
* deep understanding and knowledge application in new contexts, which reduces temptations of plagiarism and cheating;
* collaboration, helping each other and sharing ideas to solve problems, which reduces unhealthy competition between students;
* regular and personalized teacher feedback, which creates a feeling of belonging to the group and encourages students to correct their errors and make honest progress;
* a creative process, due to practical and authentic activities that require in-depth personal work and make it difficult to resort to cheating or plagiarism.

Academic integrity is also promoted in the flipped classroom, due to varied formative assessments that have fewer issues than traditional exams. Finally, frequent discussions and active participation in class allow the professor to get to know students better, which makes it easier to identify work that does not match a student’s usual level or style.

### **Why is Artificial Intelligence Less Helpful in a Flipped Classroom?**

It can be more difficult to conduct workshops in a flipped classroom using artificial intelligence, for several reasons connected to the very nature of artificial intelligence and to the dynamics of a workshop.

1. Flipped classroom workshops are often designed to encourage critical thinking, creativity and human interaction, which all rely on the ability to fully understand the context and nuances of a question.
2. The goal of flipped classroom workshops is to develop student autonomy, to force them to apply their knowledge and collaborate to find solutions. This teamwork is not as suitable for the use of artificial intelligence.
3. Students must understand that the purpose of the flipped classroom is the development of practical skills. They must understand that if they delegate some of these tasks to IA, they run the risk of not fully developing these skills that are crucial for their future.

### **Generic Examples of a Flipped Classroom Workshop**

**Before Class (at home)**

Students must watch a video or read a text on a specific topic. They must take notes and answer a Moodle questionnaire (automated grading) which has been prepared by the professor (2%). Only a small percentage should be attributed to this questionnaire, because students may help each other; the goal is to ensure that all students prepare for the class.

The Moodle questionnaire will allow the professor to see if students have fully understood basic concepts, and whether there are elements that need to be clarified with them in class.

**During Class (in person)**

|  |  |  |
| --- | --- | --- |
| **Workshop** | **Explanation** | **Time** |
| Discussion and clarification | Question-answer period, possibly one team that questions other students or the professor | 15–30 minutes |
| Collaborative or individual activity | Various possible formats: case study, critical analysis, role play, simulation, or creation of a diagram or model | 45–60 minutes |
| Sharing and presentation (optional) | In a large group, share conclusions, analyses or solutions, so everyone benefits from different ideas and approaches | 30–45 minutes |
| Teacher feedback | Constructive feedback on elements successfully accomplished and areas of improvement;Appropriate time to make connections between theoretical knowledge and practical applications observed during the activity;Presentation of assignments for the following week | 30 minutes |

**Follow-up After Class (optional)**

Students can write a reflection on what they have learned, how they have applied concepts and what they have learned from them. This allows them to consolidate knowledge they have acquired.

### **How to Assess Student Performance During Workshops in a Flipped Classroom**

The flipped classroom approach works well when several workshops are scheduled during the session. Consequently, all workshops combined could be worth 40–45% of the final grade. For example, if each workshop is worth 5%, there could be 8 during the session. Another possibility is to have one or two workshops that are spread out over two or three classes and are each worth 10–15% of the final grade. Obviously, it is possible to have a mix of short and long workshops. Then, students accumulate points for each activity. In order to reduce grading time, there are different ways to assess activities, which vary depending on the workshop.

|  |  |  |
| --- | --- | --- |
| **Type of evaluation** | **How to conduct evaluation** | **Grading** |
| Observation | Walk around the class and take notes about groups or individuals who work well; ask questions. | Pass — Fail  |
| Collaborative or individual activity | The document (mini-report, questionnaire, diagram, etc.) created during the activity must be submitted and is used to do a summative assessment of the workshop. | 3–5% for a short workshop10–15% for a long workshop |
| Oral presentation | While students are presenting, they can be assessed for their presentation of the work they have done. | 3–5% |
| Peer evaluation | Students are assessed by a peer in the group. | 3–5% |
| Self-evaluation | Students must write a reflection on what they learned during the workshop. | 3–5% |
| Quiz | At the end of the workshop, students must complete a Moodle quiz individually or as a team (automated grading). | 3–5% |

### **List of Workshops That Could Be Conducted in a Flipped Classroom Approach**

| **Workshop** | **Description** | **Example** |
| --- | --- | --- |
| Case study | Students work on a real or fictitious case study in their field of study, analyze the issue, identify solutions and offer recommendations. | Analysis of a struggling business, an environmental problem, a technological incident or a complex historical situation |
| Problem solving | Students are presented with a practical problem and must use knowledge acquired at home to offer solutions. | Solve an advanced mathematical problem; create an engineering plan; or solve an ethical dilemma |
| Role play | Students play roles of different actors in a given situation (business leaders, politicians, stakeholders, etc.) to solve a conflict or make a decision. | Simulation of a commercial or diplomatic negotiation; or resolution of a crisis with a student in class |
| Collaborative projects | Students work in small groups to develop a project that can include creation of prototypes, writing reports or preparation of presentations. | Creation of a website; development of a marketing campaign; or design of a sustainable city plan |
| Debate in class | Students are divided into teams to debate a controversial topic. They must prepare their arguments from readings done at home. | Debate on regulation of artificial intelligence, pros and cons of renewal energy, or economic policies |
| Design workshop | Students use their knowledge to design something in class (architectural drawing, innovative product, awareness campaign, etc.). | Design of a scale model of an eco-friendly building, a new mobile app or a medical device |
| Data analysis | Students work on a set of data and must analyze it and draw conclusions. | Analysis of economic, climate or demographic data to interpret trends or develop strategies |
| Creation of multimedia content | Students create multimedia content in class (video, podcast, infographic) to explain or examine a topic. | Production of an explanatory video about a scientific concept; creation of a podcast about a hot topic; or development of an awareness campaign |
| Scientific or technical experiment | Students conduct an experiment or practical demonstration in class. | Chemistry or physics experiment; test of technological prototypes; or construction of an electronic circuit |

|  |  |  |
| --- | --- | --- |
| **Workshop** | **Description** | **Example** |
| Brainstorming activity | Students are directed to brainstorm as a group about an issue or opportunity, and to suggest innovative ideas to meet this challenge. | Reflect on solutions to improve urban life; break new ground in the educational field; or design products of the future |
| Critical analysis of documents | Students analyze texts, articles, artwork or videos in class, discussing implications, viewpoints and relevance of information. | Critical analysis of a political speech, a literary work, an advertising campaign or a documentary film |
| Simulation of a professional environment | Students simulate a work environment (business meeting, law firm, ethics committee, etc.) where they must make important decisions by applying acquired knowledge. | Simulation of a board meeting, business project meeting, or art contest judges panel |
| Collaborative writing | Students work together to draft a document (report, action plan, strategy, etc.), each contributing from skills and acquired knowledge. | Drafting of a business plan, scientific journal article or policy proposal. |
| Creative challenge | Students participate in a contest or challenge where they must develop ideas or innovation creations as a team. | Technological innovation challenge; artistic creation contest; or collaborative writing challenge |
| Educational games or gamification | Use of educational games or gamified simulations in class to reinforce learning through a fun and interactive approach. | Economics simulation game; escape room based on historical theme; or interactive quiz on a scientific topic |

### **Example of Evaluation Matrix for a Workshop**

This evaluation matrix could be used for observation of a workshop or for peer evaluation. The professor could choose some criteria and eliminate others, depending on the workshop.

| **Criteria** | **Level 1: Weak** | **Level 2: Fair** | **Level 3: Good**  | **Level 4: Excellent**  |
| --- | --- | --- | --- | --- |
| Active participation | Does not participate or appears disengaged | Little participation; limited intervention | Regular and active participation | Constant and proactive participation; takes initiative |
| Group Collaboration | Does not cooperate or causes tension in the group | Limited cooperation; difficulty listening or getting involved | Collaborates well with others; listens and shares tasks | Actively collaborates; encourages others’ participation and promotes good group dynamics |
| Understanding of concepts | Does not show any understanding | Partial understanding; frequent errors | Correct understanding with some inaccuracies | In-depth understanding; clear mastery of concepts |
| Knowledge application | Does not apply concepts in a relevant way | Applies concepts in a hesitant or incomplete way | Correctly applies concepts | Applies concepts with confidence and creativity; provides innovative solutions |
| Taking initiative | Never takes initiative | Rarely takes initiative; prefers to follow others | Occasionally takes initiative | Often takes initiative; suggest new ideas or helpful alternatives |
| Problem solving | Unable to solve problems or gives up quickly | Solves problems with help; has difficulty managing challenges | Solves problems with limited help; perseveres through challenges | Resolves problems independently; demonstrates creativity and adaptability |
| Respect of guidelines | Does not respect guidelines or deadlines | Partially respects guidelines; makes omissions or errors | Respects guidelines with few errors; finishes on time | Perfectly respects guidelines and deadlines; demonstrates organizational ability |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Level 1: Weak** | **Level 2: Fair** | **Level 3: Good**  | **Level 4: Excellent**  |
| Communication | Ineffective communication; lack of clarity | Hesitant communication; lack of clarity or difficulty listening | Clear and effective communication; listens to others | Very clear communication; facilitates conversations within group |
| Attitude and behaviour | Negative attitude; lack of respect or frequent disruptions | Fluctuating attitude; some disruptive behaviours | Generally positive attitude; respects others and professor | Very positive attitude; encourages and respects others; contributes to pleasant working atmosphere |
| Critical reflection | Does no reflection or settles for superficial answers | Limited critical reflection; little self-evaluation | Demonstrates critical reflection; suggests relevant areas of improvement | In-depth critical reflection; suggests practical and relevant improvements |

### **Resources**

Bissonnette, S., & Gauthier, C. (2012). Faire la classe à l’endroit ou à l’envers ? *FORMATION PROFESSION*, *20*(1), 23-28. <https://r-libre.teluq.ca/773/>

Guilbault, M., & Viau-Guay, A. (2017). La classe inversée comme approche pédagogique en enseignement supérieur : état des connaissances scientifiques et recommandations. *Revue internationale de pédagogie de l’enseignement supérieur*, *33*(1), <https://doi.org/10.4000/ripes.1193>.

Tardif, S., & Rivard, M. (2021). La classe inversée en mode virtuel : portrait d’une formule gagnante. *Revue hybride de l’éducation*, *4*(6), 15-24. <https://doi.org/10.1522/rhe.v4i6.1220>