Summer School EduGAME

AI in the Classroom: Your New Teaching Assistant

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Meet Your Workshop Facilitators

Your experts that will guide you through this workshop on AI in education.

Pr. Habib SMEI is a Professor, PhD, Agrégé, and Engineer in Computer Science and Embedded Systems, specializing in the **Codesign of Internet of Things (IoT)**. With over **30 years of experience** in teaching, research, and academic leadership, he has significantly contributed to advancing higher education and emerging technologies.

He is a **founding member** of the professional Master's programs in *Mobile Application Development (MPDAM)* at ISET Radès and *Free and Open-Source Software (MP2L)* at the Virtual University of Tunis. He has also led key national initiatives, including serving as **Head of the e-Learning Department** of the ISET Network, overseeing 25 institutes, and coordinating the **skills-based curriculum reform program** across Tunisia.

An accomplished **author, researcher, and ICT consultant**, Dr. Smei has published textbooks, supervised PhD candidates, chaired international conferences, and contributed to national and international projects focused on educational innovation and the integration of cutting-edge technologies in higher education.

Kamel Sellaoui, CPA, master's degree in accounting information systems

CEO of Polygon University and President of the IIBA Tunisia Chapter.

A leader in AI-driven higher education, he has pioneered innovative programs linking academia, industry, and global networks.

He is also actively shaping education and digital transformation across Africa and beyond.

He is also a former International Systems Auditor at Millicom (a Telco NYSE listed company). He worked at Ernst & Young in Assurance services line and is experienced in financial audit, transaction services and IT Risk assessment. He is an Experienced IFRS Trainer and Trainer of trainers in Data Analytics, and assessed IT Risks for E&Y clients from different industries (Banking, Distribution and retail , ICT , Automotive, Oil & Gas).

Workshop Outline

Icebreaker

Let's Talk About AI

AI for Augmenting Your Entire Workflow

AI Assistant can help you in all creation course phases

Prompts

Crafting Your Unit Blueprint wBuilding rubrics and quizzes

AI for Augmenting Your Entire Workflow

AI Assistant can help you in all creation course phases

GEMENI for Education

Training your AI assistant

NotebookLM

A personal research assistant that saves you time, keeps you organized, and helps you learn

Today's goal: You'll leave with a complete unit plan, content materials, and assessment tools for your classroom.

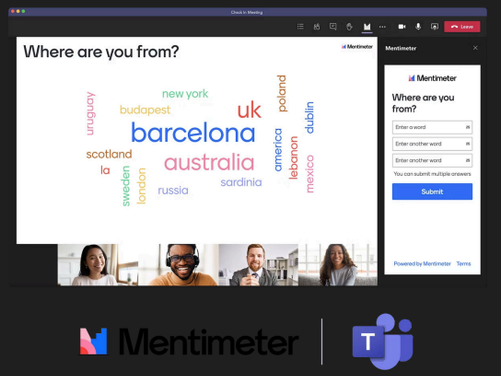
Icebreaker

Let's Talk About AI

Poll Questions - Go to :

1. https://www.menti.com / Code : 5710 4547

2. scan the QR Code



Q1. What's the first word that comes to mind when you hear "**AI in the classroom**"?

Q2. Cite one AI tool that you use **in your Classroom**?

Q3. Your area of specialization?

Let's explore our collective thoughts and feelings about bringing AI into our teaching practice.

YOUR TEAMS

Faculty of Arts & Humanities

- Literature
- History
- Philosophy
- Languages
- Fine Arts

Faculty of Social Sciences

- Sociology
- Political Science
- Psychology
- Economics
- Anthropology

Faculty of Natural Sciences

- Physics
- Chemistry
- Biology
- Environmental Science
- Mathematics

Faculty of Engineering & Technology

- Civil Engineering
- Computer Science
- Electrical Engineering
- Mechanical Engineering
- Software Engineering

Faculty of Business & Management

- Marketing
- Finance
- Human Resources
- Operations Management
- Entrepreneurship

Faculty of Health Sciences

- Medicine
- Nursing
- Public Health
- Pharmacy
- Dentistry

Faculty of Education

- Curriculum & Instruction
- Educational Leadership
- Special Education
- Early Childhood Education
- Educational Psychology

Faculty of Law

- Constitutional Law
- Criminal Law
- International Law
- Commercial Law
- Environmental Law

AI-Integrated Course Framework

1- Faculty of Arts & Humanities

AI in Creative Arts & Digital Storytelling

- Analyze AI's role in artistic creation and expression.
- Utilize AI tools for generating literary and visual content.
- Evaluate ethical considerations of AI in humanities research.

2- Faculty of Social Sciences

AI for Social Data Analysis & Policy Impact

- Apply AI techniques to analyze large social datasets.
- Assess the societal impact and biases of AI systems.
- Formulate evidence-based social policies using AI insights.

3- Faculty of Natural Sciences

AI in Scientific Discovery & Data Modeling

- Employ AI algorithms for complex scientific data analysis.
- Develop AI models to simulate natural phenomena.
- Interpret AI-driven insights in experimental design.

4- Faculty of Engineering & Technology

Advanced AI System Design & Implementation

- Design and develop robust AI systems for real-world applications.
- Implement machine learning models with various programming frameworks.
- Optimize AI solutions for performance and scalability.5-

5- Faculty of Business & Management

AI-Powered Business Strategy & Analytics

- Integrate AI into business operations for strategic advantage.
- Conduct predictive analytics and market forecasting using AI.
- Analyze AI-driven customer insights to inform business decisions.

6- Faculty of Health Sciences

AI in Healthcare Diagnostics & Personalization

- Apply AI tools for medical image analysis and disease diagnosis.
- Design AI models for personalized patient treatment plans.
- Address ethical and privacy concerns in AI-driven healthcare.

7- Faculty of Education

AI for Personalized Learning & Educational Innovation

- Develop AI-enhanced curricula for adaptive learning experiences.
- Utilize AI to assess student performance and provide targeted feedback.
- Explore the implications of AI on educational equity and access.

8- Faculty of Law

AI and Legal Ethics in the Digital Age

- Analyze the legal and ethical frameworks governing AI development.
- Assess AI's impact on legal research, practice, and justice systems.
- Formulate policy recommendations for AI regulation and compliance.

YOUR TEAM CREDENTIALS AND YOUR COURSE LEARNING OUTCOMES

go.polygon.tn/ipen

Teams Access Credentials

Here are the essential links and team credentials for your reference.

Important Links

- Google Classroom
- Gamma App
- notebooklm.google.com

Team Credentials

Please use the following credentials for team access:

IPEN1@POLYGON.TN – Password: Polygon$2026

IPEN2@POLYGON.TN – Password: Polygon$2026 IPEN3@POLYGON.TN – Password: Polygon$2026 IPEN4@POLYGON.TN – Password: Polygon$2026 IPEN5@POLYGON.TN – Password: Polygon$2026 IPEN6@POLYGON.TN – Password: Polygon$2026 IPEN7@POLYGON.TN – Password: Polygon$2026 IPEN8@POLYGON.TN – Password: Polygon$2026

Introduction:

Your New Assistant is Here. Time to Train It.

The AI Assistant:

🤖 **Brilliant & Fast** - Can process vast amounts of information in seconds

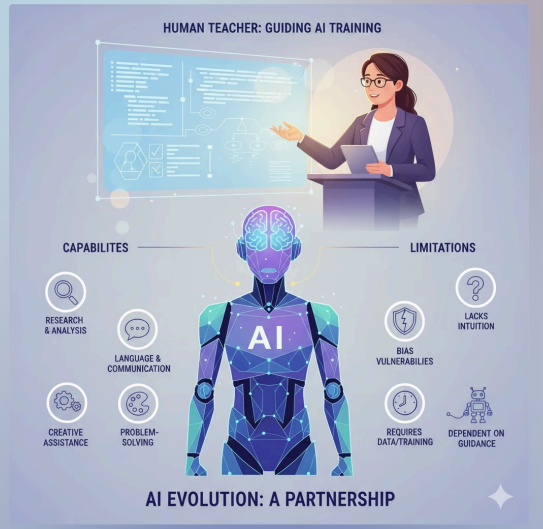
❓ **No Context** - It answers only based on the prompt, without awareness of the bigger picture or unspoken background details.

❤️ **No Empathy** - While it can simulate warmth or politeness, it does not genuinely understand or feel emotions.

⚖️ **No Professional Judgment** - it povides information, not expert decisions, and should not replace the critical thinking or responsibility of a trained professional.

The Expert Teacher (YOU):

- 🧭 You Provide Direction (The Prompt)
- ✏️ You Guide & Edit (The Expertise)
- 🎯 You Apply Context (For Your Students)
- ✅ You Give Final Approval



"Think of AI as a teaching assistant, **not a replacement.**"

AI for Augmenting Your Entire Workflow

AI Assistant can help you in all creation course phases.

ANALYZE & DESIGN →

Define Learning outcomes and objectives, learners profile, unit outlines, essential questions.

IMPLEMENT (DELIVER) →

Prepare delivery, activities, classroom integration, simulations, case studies.

DEVELOP (CREATE) →

Build Lesson materials (slides, readings, examples, AI Tools, ...).

EVALUATE (ASSESS) →

Measure learning (quizzes, rubrics, projects, feedback).

IMPROVE (REFLECT) →

Teacher reviews results, adapts for next cycle.

AI can enhance each stage of your teaching process, saving time and improving quality.

Analysis/Design, Development/Creation, Implementation/Delivery, Evaluation, improvement

Your Mission: Build a Unit for Your Class

Task

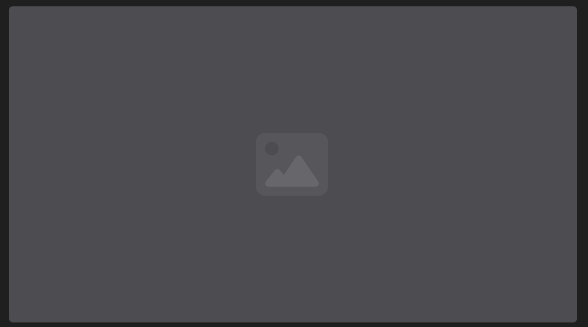
Choose a unit or topic you actually teach

Goal

You will leave with:

- A unit outline
- A piece of content (slides or text)
- An assessment with a rubric

GEMENI for Education



- Gemini for Education is an AI assistant designed to help teachers **save time, create engaging lessons, and differentiate instruction** for every student.

- It generates lesson plans, quizzes, assessments, and learning materials personalized to student needs.

- Students get instant explanations, feedback, and personalized practice quizzes to deepen understanding and confidence.

- **Gemini and NotebookLM** in Classroom enable synthesis of learning sources and creation of interactive assessments, making complex content more accessible.

Gemini's features

Look for these features and learn how you can get started with each one by visiting **g.co/gemini/features**

Prompts - Crafting Your Unit Blueprint with AI

The General Prompt Formula: R + T + F + C

To get the best results from your AI assistant, frame your request using these three key components:

1	2
Role / Persona - Specify the role/persona "Act as an expert **undergraduate biology** teacher..."	**Task / Command** - Describe the task or ask the question "...develop a **2-week** unit outline on **cellular respiration**..."
3	**4**
Format - Define the way that you want the answer "...output the outline as a bulleted list with **4** learning objectives."	**Context** - Background information, audience, constraints, or conditions that guide how the task should be performed. "... For first-year medical students who already studied cell biology basics; focus on clinical applications and use simple diagrams ."

Quick tips to get you started with Gemini for Workspace

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1. Use natural language. Write as if you're speaking to another person. Express complete thoughts in full sentences.

2. Be specific and iterate. Tell Gemini for Workspace what you need it to do (summarize, write, change the tone, create). Provide as much context as possible.

3. Be concise and avoid complexity. State your request in brief — but specific — language. Avoid jargon.

4. Make it a conversation. Fine-tune your prompts if the results don't meet your expectations or if you believe there's room for improvement. Use follow-up prompts and an iterative process of review and refinement to yield better results.

Here is an example

- **Role**: You are a senior software engineer and adjunct professor with 15 years of experience in full-stack development and project-based learning.
- **Task**: Generate 12 end-of-semester project ideas for a second-year "Data Structures and Algorithms" course. The projects must require students to implement and analyze multiple data structures to solve a practical, engaging problem. Each project should be scoped for a team of 3-4 students to complete in 4 weeks.
- **Context**: The students are second-year computere undergraduates who have prior exposure to basic programming (Java/Python/C++) and introductory algorithms. The course emphasizes hands-on, team-based learning, with a balance of technical implementation and analytical reflection. Projects should connect to real-world applications in areas such as gaming, social networks, data visualization, or information management, while remaining achievable within a 4-week timeline.
- **Format**: Provide a numbered list. For each project idea, specify: 1) the project title, 2) a one-sentence problem statement, and 3) the 2-3 core data structures students must implement.

Examples:

1. Crafting Intended Learning Outcomes (ILOs)

- **Weak Prompt: "Write learning objectives for a class on climate change."**
- **Strong R.T.C.F. Prompt:**

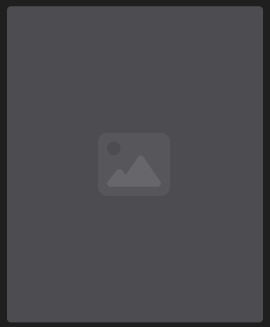
Act as a university pedagogy expert. Generate three learning outcomes (LOs) using Bloom's Taxonomy verbs, focusing on analysis, evaluation, and application of concepts to real-world scenarios. The LOs are for a second-year undergraduate geography course on the social impacts of climate change. Students have already completed an introductory environmental science course.Present the LOs in the style: *"Upon successful completion of this module, students will be able to:"*

- Ensure each outcome is measurable and specific.
- Provide exactly three LOs as a bulleted list.

2. Designing Authentic Assessments

- **Weak Prompt: "Give me a final project idea."**
- **Strong R.T.C.F. Prompt:**

You are an expert in competency-based education assessment. Provide a detailed description for a summative group project and design a corresponding grading rubric with a 4-point scale (Excellent → Poor). The assignment is for a final-year business ethics module. The project must be an authentic task that requires students to analyze a real-world corporate case study, identify an ethical dilemma, and propose a stakeholder-informed solution. Write the project description clearly, as if ready to distribute directly to students.



- Create a grading rubric with four performance levels (Excellent, Good, Fair, Poor).
- The rubric must assess the following criteria: **ethical reasoning, use of evidence, solution creativity, and professional presentation.**
- Each level should have **specific and transparent performance descriptors.**

3. Creating Active Learning Materials

- **Weak Prompt: "Create a case study for nursing students."**
- **Strong R.T.C.F. Prompt:**

Assume the role of a clinical nurse educator with 15 years of experience. Create a brief, nuanced patient case study involving an ethical dilemma related to patient confidentiality. The case study is for a first-year undergraduate nursing fundamentals class. It should be realistic, ethically complex, and encourage debate, without a single obvious answer. Include patient background, clinical presentation, and the specific ethical conflict.

- Append three discussion questions that require students to apply ethical principles and explore multiple perspectives.
- Write in a clear, factual tone.

4. Developing Lesson Plans & Activities

- **Weak Prompt: "Plan a lesson on Shakespeare's sonnets."**
- **Strong R.T.C.F. Prompt:**

Act as a passionate literature professor who uses interactive, student-centered methods. Outline a 90-minute seminar plan for analyzing Shakespeare's *Sonnet 18* (*"Shall I compare thee to a summer's day?"*). The seminar is designed for first-year English majors. The plan must include:

a. A 5-minute hook activity
b. A 20-minute guided close-reading activity in pairs
c. A 30-minute class debate on a provided critical interpretation
d. A 5-minute exit ticket question

- Allocate time for each segment.
- Present the output as a **structured table** with the columns: **Time | Activity | Instructor Role | Student Role**.

Your Turn: Draft Your Unit Outline

- Go to: **https://gemini.google.com/**

- Use **R.T.F.C** framework to create this prompt template:

"Act as an expert **[Your Grade/Subject]** teacher. Develop a **[Timeframe]** unit outline on **[Your Topic]**. Include **[Number]** learning objectives and a day-by-day schedule, formatted as a bulleted list....."

Rédiger des Acquis d'apprentissages (Learning Outcomes)

- **Prompt faible :** « Rédige des objectifs d’apprentissage pour un cours sur le changement climatique. »
- **Prompt fort R.T.C.F. (Rôle, Tâche, Contexte, Format) :**

Rôle — Tu es **expert· en pédagogie universitaire** (approche par compétences, taxonomie de Bloom).
Tâche — Génère **trois résultats d’apprentissage (RA)**, en mobilisant des **verbes d’action** centrés sur **analyser**, **évaluer** et **appliquer** à des **situations réelles** (études de cas, données locales, politiques publiques).
Contexte — Cours de **géographie, L2**, thème : **impacts sociaux du changement climatique**. Les étudiants ont déjà validé un **cours d’introduction aux sciences de l’environnement**.
Format — Présente sous le libellé :
« **À l’issue de ce module, les étudiants seront capables de :** »
puis **exactement 3** puces, **mesurables et spécifiques** (critères observables, condition de réalisation, degré attendu).

Élaborer des plans de leçon et des activités

- **Prompt faible :** « Planifie une leçon sur les sonnets de Shakespeare. »
- **Prompt fort R.T.C.F. (Rôle, Tâche, Contexte, Format) :**
  Agis comme un·e professeur·e de littérature passionné·e qui utilise des méthodes interactives centrées sur l'étudiant. Propose le **plan d'un séminaire de 90 minutes** pour analyser le **Sonnet 18 de Shakespeare** (« *Shall I compare thee to a summer's day?* »). Le séminaire s'adresse à des **étudiants de première année** (licence de littérature anglaise). Le plan doit inclure :

1. une **activité d'accroche** de **5 minutes** ;
2. une **lecture analytique guidée en binômes** de **20 minutes** ;
3. un **débat de classe de 30 minutes** à partir d'une **interprétation critique fournie** ;
4. une **question "exit ticket"** de **5 minutes**.
   • **Alloue le temps** pour chaque segment.
   • **Présente la sortie sous forme de tableau structuré** avec les colonnes : **Time | Activity | Instructor Role | Student Role**.

-

Concevoir des évaluations authentiques

- **Prompt faible :** « Donne-moi une idée de projet final. »
- Prompt fort R.T.C.F. (Rôle, Tâche, Contexte, Format) :

Tu agis comme un·e expert·e de l'évaluation en approche par compétences. Fournis une **description détaillée** d'un **projet sommative en groupe** et **conçois une grille d'évaluation** correspondante sur **échelle à 4 niveaux** (Excellent → Faible). Le devoir concerne un **module d'éthique des affaires en fin de cycle**. Le projet doit être une **tâche authentique** qui amène les étudiants à **analyser une étude de cas d'entreprise réelle**, à **identifier un dilemme éthique** et à **proposer une solution informée par les parties prenantes**. Rédige la description du projet clairement, **comme si elle était prête à être distribuée aux étudiants**.
• Crée une **grille d'évaluation** avec **quatre niveaux de performance** (Excellent, Bon, Satisfaisant, Insuffisant).
• La grille doit évaluer les critères suivants : **raisonnement éthique**, **usage des preuves**, **créativité de la solution**, **présentation professionnelle**.
• Chaque niveau doit comporter des **descripteurs de performance spécifiques et transparents**.

Créer des ressources d’apprentissage actif

- **Prompt faible :** « Crée une étude de cas pour des étudiants en soins infirmiers. »
- **Prompt fort R.T.C.F. (Rôle, Tâche, Contexte, Format) :**
  Adopte le rôle d’un·e formateur·trice clinique infirmier·ère avec 15 ans d’expérience. Crée une **courte étude de cas nuancée** impliquant un **dilemme éthique lié à la confidentialité des patients**. L’étude de cas est destinée à un **cours de bases en sciences infirmières (1re année de licence)**. Elle doit être **réaliste**, **éthiquement complexe** et **favoriser le débat**, **sans réponse unique évidente**. Inclure : **contexte du patient**, **présentation clinique**, et le **conflit éthique spécifique**.
  • **Ajouter trois questions de discussion** qui obligent les étudiants à **appliquer des principes éthiques** et à **explorer plusieurs points de vue**.
  • Écrire dans un **style clair et factuel**.

Content Creation: Gamma

Gamma: Beautiful Presentations in Minutes

An AI tool that creates presentations, documents, and web pages from a prompt.

- Go to: Gamma.app
- Prompt: "Create a presentation for [Grade Level] about [Concept from your outline]. Include 5 slides with key points and engaging visuals."

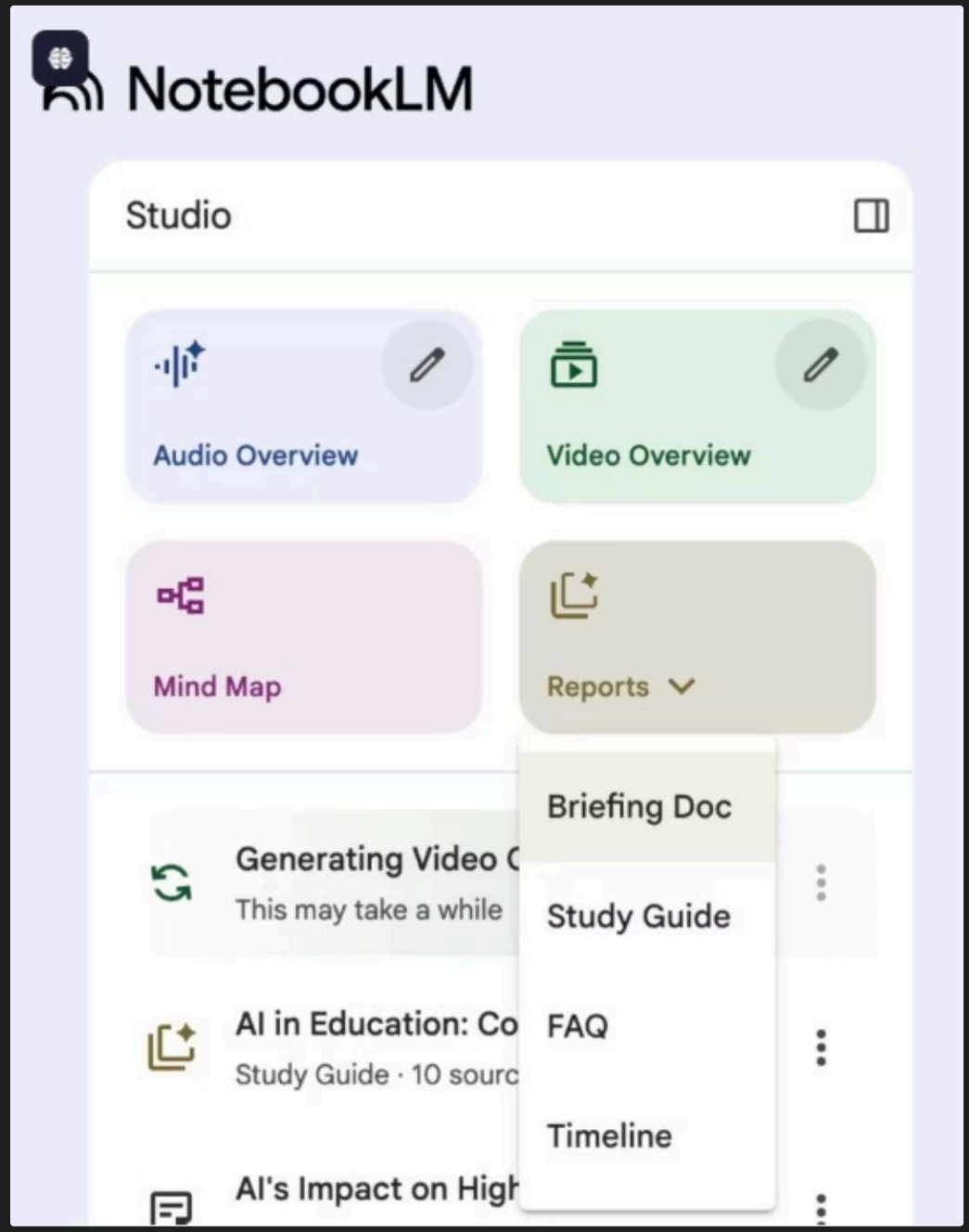
NotebookLM – A personal research assistant that saves you time, keeps you organized, and helps you learn faster.

NotebookLM is Google's AI-powered research assistant that works exclusively with documents you provide.

Unlike ChatGPT, Claude, Deepseek that draw from vast training data, NotebookLM only references the materials you upload: PDFs, notes, or transcripts.

NotebookLM

1. **Build personal libraries and run cross-source queries to save hours of manual searching**
    a. Upload notes, docs, or PDFs
    b. Type your question → get a precise answer instantly
2. **Generate book and content summaries**
    a. Drop in long reports, articles, or papers
    b. Get clear, short summaries that save you hours
3. **Create study guides, flashcards and mindmaps**
    a. Create flashcards, study guides, and quizzes from your uploaded materials
    b. Generate FAQs, step-by-step outlines, mindmaps, rubrics,
    c. Organize projects or learning in minutes
4. **Turn documents into audio**
    a. Convert any doc into an audio summary
    b. Listen on your commute, during a walk, or while doing chores
5. **Analyze many sources at once**
6. **Upload dozens of files**
7. **Spot patterns and connections across your material**


NotebookLM
Studio
Audio Overview
Video Overview
Mind Map
Reports
Briefing Doc
Study Guide
FAQ
Timeline
Generating Video
This may take a while
AI in Education: Co
Study Guide · 10 sourc
AI's Impact on High

Tips for Making the Best of NotebookLM

1. Always Verify Output

- Double-check quotes, stats, and claims against original sources.
- Treat NotebookLM as an assistant, not a replacement for critical thinking.

2. Read Your Materials Before Uploading

- Read and annotate materials yourself first.
- Build familiarity to ask better questions and spot errors.

3. Upload Around 10 Documents Per Notebook

- Limit uploads to ~10 documents for accuracy.
- Use multiple themed notebooks for larger projects.

4. Use Specific, Targeted Prompts

- Ask precise questions instead of broad ones.
- Specificity leads to more accurate, useful responses.

5. Organize Sources Thematically

- Create separate notebooks for different topics.
- Improves contextual and relevant responses.

6. Check Citations and Cross-Reference

- Verify citations by clicking through to sources.
- Use them as starting points, not definitive references.

7. Layer Your Queries Progressively

- Start with broad questions, then narrow down.
- Builds a deeper, structured understanding.

8. Combine Multiple Output Formats

- Use text, audio, and video features together.
- Each format offers unique insights.

9. Document Your Limitations

- Track what NotebookLM handles well vs. poorly.
- Helps you adapt its use strategically.

10. Use NotebookLM as a Collaboration Tool, Not a Replacement

- Treat it as a research assistant, not a substitute.
- Best results come from combining AI with your expertise.

Assessment & Classroom Integration

Building Better Rubrics & Quizzes

Try these prompts in Gemini:

Quiz

Act as an experienced instructional designer skilled in creating effective assessments.

Generate a 5-question multiple-choice quiz with an answer key.

The quiz should be based on the learning objective: ***"[paste one here]"***. Ensure that questions assess understanding at the appropriate cognitive level (using Bloom's Taxonomy if relevant).

Provide exactly 5 multiple-choice questions. Each question should have 4 options (A–D). Clearly indicate the correct answer in an **answer key** after the questions.

Rubric

Act as an experienced curriculum designer specializing in project-based learning.

Suggest a project aligned with the learning objective ***"[paste one here]"*** and create a 4-point mastery rubric to assess it.

The project should be authentic, achievable for undergraduate students, and directly measure the stated learning objective. The rubric should clearly define performance levels from **Excellent (4)** to **Poor (1)** across relevant criteria.

Provide a concise project description. Present the rubric as a clear table with 4 performance levels and specific descriptors.

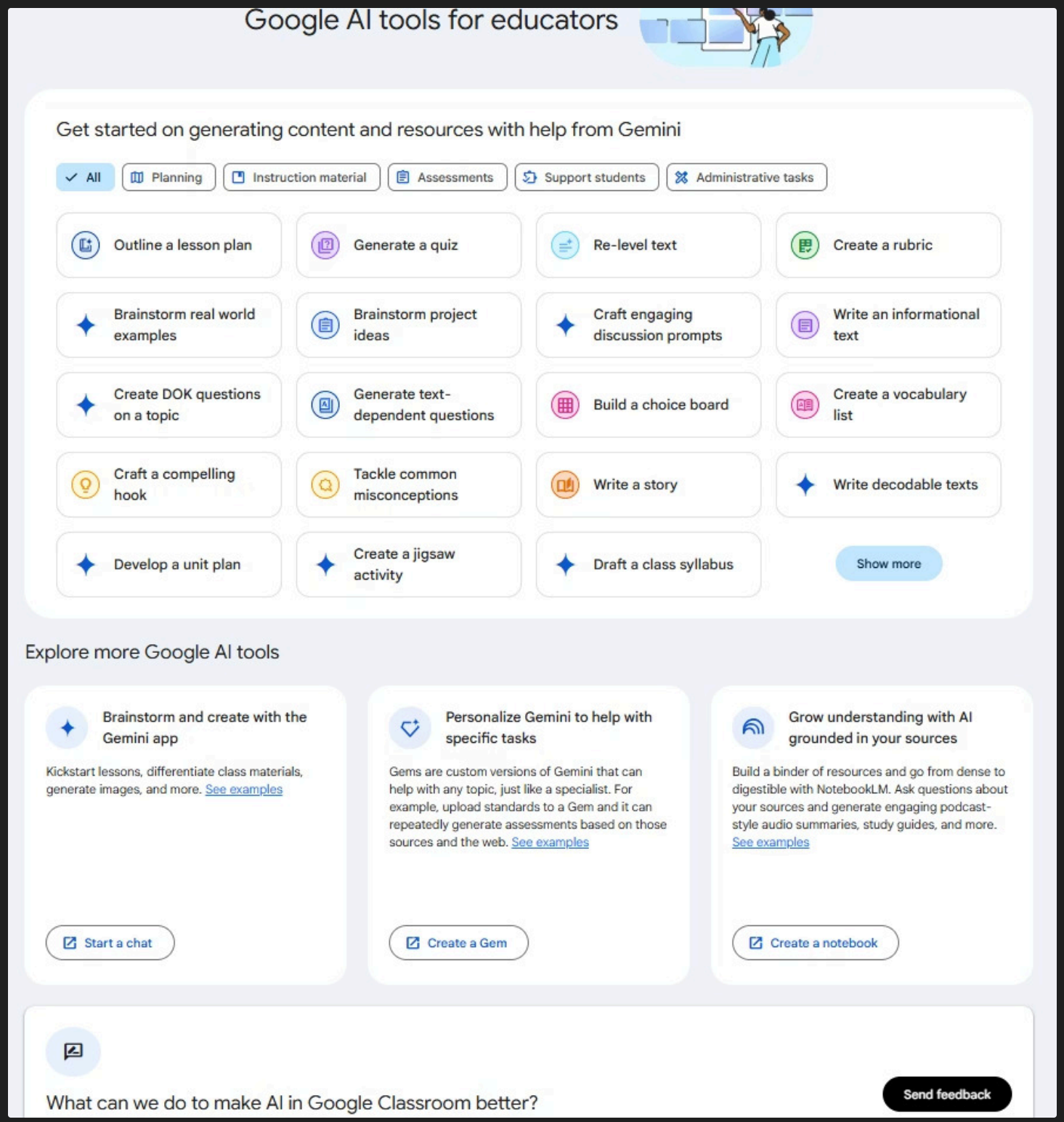
Bringing It All Into Google Classroom

1. **Create Class (if new)**
2. **Post Materials: Add your Gamma presentation and NotebookLM notes as "Materials"**
3. **Create Assignment**
4. **Attach Rubric: Use the built-in rubric tool to input your AI-generated rubric**

Alternatives to NotebookLM

Tool	Description
Paperguide	Academic AI assistant for summarizing, citing, and querying documents. Ideal for literature reviews and assignments.
Scispace	Free tier for reading, annotating, and querying PDFs, widely used in research and student contexts.
Brisk Teaching	Free AI tools for teachers: lesson plans, resources, feedback, and differentiation within Google Docs.
Eduaide.AI	Free plan for teachers to generate lesson ideas, graphic organizers, and educational activities.
Microsoft OneNote	Free collaborative note-taking, supports class notebooks, integrates with Microsoft education tools.

Google classroom (https://classroom.google.com/ai)



Ethics & Your Action Plan

Your AI Commandments

1. You Are The Expert: Always review, edit, and fact-check AI output
2. Protect Privacy: Never input student names, IDs, or sensitive data
3. Promote Transparency: Talk to students about how you use AI
4. Start Small: Choose one task to augment this week