Applying AI Principle 2

Deja Murray
EDLI6770OL1: Info Tech Schl Libr Media Ctrs

Original Lesson

YouTube Recommendations: Who's Steering Your View? (Project Look Sharp, High School)

View original lesson (Project Look Sharp)

Students read three real-life articles about YouTube's recommendation algorithm. This includes a 2017 *Medium* post by former YouTube engineer Guillaume Chaslot, a 2018 *New York Times* opinion piece by Zeynep Tufekci, and a 2019 *Wired* piece by Tom Simonite. A constructivist media decoding process, the teacher leads the analysis using a bank of provided Social Studies, ELA, and Media Literacy questions along with follow-up evidence probes, and provides model answers as a benchmark. The questions are about author perspective, persuasive technique, and Internet provider responsibility (30–60 minutes; aligned to C3 Social Studies and Common Core ELA standards).

AI Tool and Prompt

AI tool used:

Gemini

Prompt Provided

> I'm differentiating a high school digital citizenship lesson called "YouTube Recommendations: Who's Steering Your View?" Students read and analyze three online articles (blog post, editorial, and informational text) about how YouTube's recommendation algorithm influences viewers, then discuss/write about the impact.
>
> I need to differentiate this for a student with the following profile:
>
> • IEP under Specific Learning Disability
>
> • Independent reading and writing skills significantly below grade level
>
> • Processes auditory information at or above grade level
>
> • Needs support completing multi-step tasks
>
> • Benefits from graphic organizers, pictograms, and visual schedules
>
> • Has strong peer connections and excellent collaboration skills
>
> Please suggest specific differentiation strategies for the reading/text analysis portion, the writing/response portion, and the overall task structure. Include a sample graphic organizer layout and a visual schedule for the lesson steps. I have attached the Lesson Plan, Student Handout, and How to Use document.

Differentiation Suggested by the AI Tool

To differentiate the **"YouTube Recommendations: Who's Steering Your View?"** lesson for this student while maintaining high-level critical thinking and leveraging their strong auditory processing and social skills, you can implement the following strategies across the task structure, reading, and writing components.

1. Overall Task Structure & Lesson Workflow

- **Visual Activity Schedules:** Provide a explicit, visual step-by-step agenda on their desk so they can monitor progress and anticipate transitions.
- **Leverage Peer Collaboration:** Pair the student with a supportive peer partner. Capitalize on their strong collaboration skills by having them process ideas together through structured dialogue (e.g., Think-Pair-Share).
- **Chunked Multi-Step Instructions:** Break the lesson into smaller, sequential segments. Provide one step at a time via auditory explanations and clear pictograms/icons.

2. Text Analysis & Reading Support

- **Text-to-Speech (TTS) & Audio Formats:** Utilize screen readers or pre-recorded audio so the student can listen to the three articles (Medium blog, NYT editorial, Wired article) while following along.
- **Graphic/Data-First Entry Point:** Begin with Guillaume Chaslot's bar graphs on page 1 of the handout. Visual bar charts comparing search vs. recommendation percentages are accessible entry points for visual/auditory learners to grasp the concept of algorithm bias before diving into dense text.
- **Targeted Guided Decoding:** Use constructivist, open-ended oral questioning while decoding the visual media together:
    - *"Looking at the Flat Earth graph, what bar is the longest?"*
    - *"Why do you think YouTube recommendations show more conspiracy videos than regular Google search?"*

3. Writing & Response Differentiation

- **Speech-to-Text (Dictation):** Allow the student to use dictation software or audio recording (e.g., voice notes) to capture their critical thoughts without being blocked by written mechanics.
- **Scribe Option with Peer Partner:** Have the peer partner scribe the student's oral answers onto a shared graphic organizer during group discussions.
- **Sentence Frames & Pictograms:** Provide sentence starters paired with visual icons to scaffold written or oral responses:
    - 📊 *The graph shows that YouTube recommendations...*
    - 💡 *The author Zeynep Tufekci believes algorithms...*

- 🛑 *I think Google should change recommendations because...*

4. Visual Schedule Layout

Provide the student with a personalized visual checklist at the start of the class:

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┌──────────────────────────────────────────────────────────────────────────┐
│                    TODAY'S LESSON STEPS                                  │
├──────────────────────────────────────────────────────────────────────────┤
│ [ 🔊 ] Step 1: Watch & Listen                                            │
│       • Listen to class introduction & review visual vocabulary.         │
├──────────────────────────────────────────────────────────────────────────┤
│ [ 📊 ] Step 2: Graph Analysis (Partner Work)                             │
│       • Look at the YouTube vs. Google bar graphs with your partner.     │
│       • Discuss: Which bar is biggest? What does it mean?                │
├──────────────────────────────────────────────────────────────────────────┤
│ [ 🎧 ] Step 3: Article Audio Decoding                                    │
│       • Listen to text-to-speech for Article 1, 2, or 3.                 │
│       • Fill in your Visual Organizer using Speech-to-Text.              │
├──────────────────────────────────────────────────────────────────────────┤
│ [ 💬 ] Step 4: Group Discussion & Wrap-Up                                │
│       • Share 1 thought with your table using your sentence frames.      │
└──────────────────────────────────────────────────────────────────────────┘
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5. Sample Graphic Organizer Layout

A structured matrix paired with icons allows the student to process auditory content and record ideas efficiently:

YouTube Recommendation Organizer: Who's in Control?

Source / Article	Key Icon / Visual Focus	What is the main problem with YouTube's algorithm?	What does the author think should be done?
Article 1: Guillaume Chaslot (Blog & Graphs)	📊 *(Bar Charts)*	Recommendations show far more false/unproven ideas (like Flat Earth) than search.	Measure and report how much false information is being recommended.
Article 2: Zeynep Tufekci (Editorial)	🍟 *(Junk Food Analogy)*	Feeds viewers increasingly extreme videos to keep them watching longer for ad money.	Stop letting companies profit from radicalizing viewers.
Article 3: Tom Simonite (Informational)	⚖️ *(Balancing Recommendations)*	Recommendation systems push clickbait and conspiracy theories.	Give users control over their feeds and build ethical systems.

Key Discussion Prompt for Synthesis

> **Reflection:** *"If YouTube recommendations are like serving fast food to keep us sitting at the table longer, how can users take back control of what they watch?"*

Reflection

Working with Gemini on this differentiation task provided real strengths alongside some very meaningful gaps, both in the pedagogy underneath the response and in how it was actually delivered.

On overall task structure and lesson workflow, Gemini's explicit visual agenda and its choice to name Think-Pair-Share specifically for a constructivist-based lesson, rather than just "pair with a peer," were both solid, concrete suggestions. I was glad it provided a named collaborative

structure, providing an educator something specific to implement rather than a vague instruction to differentiate. Delivering instructions one step at a time rather than all at once is also well-matched to a student who needs support completing multi-step tasks. But the structure stopped short of addressing what happens within a step. There's no mention of how transitions between steps are cued for a student who might get absorbed in one part and miss the shift to the next and no check-in built into a step if the student gets stuck partway through. It also says to use both audio and pictograms, but lack specificity other than a line on task list of “Listen to class introduction & review visual vocabulary.”

The visual schedule with icons for each step is strong and an explicit, literal structure this student would benefit from. But looking closer, one step actually undercuts the whole point of chunking. Step 3 says to listen to text-to-speech for Article 1, 2, or 3 and fill in the organizer using speech-to-text, all as one single step. They are supposed to read all articles to compare and contrast. If I handed this to a student as written, they'd hit that step and still have to figure out on their own that it actually means "do this three separate times." Writing suggestions built in a "scribe option," where the peer partner writes down the student's oral answers directly onto the shared organizer, which leans further into the student's collaboration strength than simply pairing them for discussion and also gave a speech-to text option when working alone. Unfortunately, the schedule lacks clarity for the student here. It should state when in group work, the peer is the scribe, when working alone, use speech-to text. The whole point of a visual schedule like this is to make the steps explicit, so having steps lack clarity feels like a real miss.

The format was its own issue on top of that. Gemini gave me the visual schedule as plain text, built out of dashes and pipes to look like a table. The second I pasted it anywhere else, it just fell apart into a jumble of symbols. What I actually got was a description of a good visual tool, not something I could hand to a student as is. I'd have to rebuild the whole thing as a real table before it was usable in a classroom at all, which is a good amount of extra work for something meant to save time.

On text analysis and reading support, the combination of text-to-speech with the print text alongside it is a strong suggestion. Plus the graph-first entry point as a way to view data, gives this student a visual way into the lesson before independent reading, though guided by audio, potentially becomes a barrier. But the graphs are at the start of the 1st article to begin with, making this feel it may already be pre-built by the lesson designer to put the article with this entry point first as an organizer for all students. There also wasn't any vocabulary preview for terminology before the audio starts, which felt like a missed step. If the student hits an unfamiliar word early in the listening, that could throw them off before they even get to an organizer.

I think the graphic organizer is not meant to be pre-filled, but if so, then why and how is the logic behind these visuals there. Visuals for the schedule make sense - audio means listen, a group of students could mean group work etc.

If I was working further with Gemini, I'd ask for the visual materials in an actual usable format (table, not plaintext), specifically ask it to leave organizer answer cells blank with sentence-starter/icon scaffolds only, and prompt it to build in a gradual-release structure across the three articles rather than uniform support.I might also ask for the thin-pair-share to be

developed as add an activation step connecting the topic to the student's own platform use before the graphs are introduced. Further, I can see where some change to the lesson structure for the whole class would better support multiple differentiations with group and solo work, asking Gemini to give time structure and specifics for roll out, such as in a Case Based Active Learning modality. This would give the educator more ability to time and roll out differenciations better.

Since I am focused on curriculum development, I think for how to apply Principle 2 in my setting as instructional design support is to think of the ways to support educators in how to create with the AI. The AI response was a good reminder that "differentiated" and "constructivist" aren't automatically compatible outputs from an AI tool, even with materials added and a strong prompt. This activity reinforced why Principle 2 frames AI as a tool to scale personalized support rather than a replacement for educator judgment as the value only shows up when a teacher stays close enough to the output to catch where it quietly does the thinking for a student instead of guiding them toward it.

As I think about building AI-assisted differentiation guidance into curriculum materials, I'd think about designing an explicit checklist for reviewing AI output: confirm any visual actually renders as a stable table/image, confirm organizer prompts scaffold thinking rather than supply it, and confirm scaffolding fades across a lesson rather than staying flat. This comparison itself feels like something worth using in curriculum development training, beyond using for this assignment. Showing facilitators or curriculum writers a real example where an AI tool's output looked complete but quietly bundled steps or gave away answers might be more convincing than telling them to "double check AI output." Potentially seeing what other AI tools come up with may be interesting as well and providing solid examples of supports this could generate, like student study materials (flash cards, games for reviewing items, assistive tool integration). I'd like to build something like this into a visual graphic or short training tool eventually, a real example next to the fix, rather than just a warning that may deter any potential benefits of using an AI tool to support a student.