AI Tools & Resources

YOUR COMPANION FOR
INTEGRATING AI IN THE CLASSROOM

By Med Kharbach, PhD

Author's Note

Over the past six months, I have poured a tremendous amount of time into reading, researching, and writing a wide variety of resources on AI in education. These guides, toolkits, and reflections are designed for teachers, school leaders, and researchers who want to make sense of AI and put it to meaningful use in classrooms and professional practice. All of this work is shared free of charge. Why?

Because I am an educator first. After more than twelve years of teaching across K–12 settings, I know the hard work teachers do, and I also know the frustration that comes when professional development around new technologies feels rushed or disconnected from daily classroom realities.

The interest has been overwhelming. I have received countless requests for AI tool recommendations, lesson ideas, and policy guidance. Rather than placing this knowledge behind a paywall, I wanted to make it open to everyone. What has kept me motivated are the messages from teachers around the world—from Singapore to Marrakech—sharing how these resources have supported them and, in turn, their students. Those stories confirm that the many hours of preparation and careful research have been worth it.

I recognize there are already many resources on AI in education. My aim has been to make mine distinctive by grounding them in teacher-tested practices and backing them with scholarly references. None of this is content hastily generated by a chatbot; every guide reflects sustained reading, reflection, and synthesis. I also welcome feedback, as I see this work as a collaborative effort to improve how we approach AI in our profession.

If you are a teacher, educator, or school leader wrestling with AI integration and would like tailored support, whether for your classroom, school, or professional development sessions, please feel free to reach out to me at med@educatorstechnology. I am always happy to help.

We are all navigating AI together, and my hope is that these resources make the journey a little clearer, more practical, and ultimately more empowering for you and your students.

Med Kharbach, PhD
Montreal, Canada, Sep 3, 2025

Best AI Tools for The New School Year

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Chatbots	ChatGPT/Claude/Gemini/Perplexity Use them to brainstorm lessons, generate practice questions, draft rubrics, and summarize articles
Napkin AI	Turns messy notes, text, or data into clean visuals like flowcharts, mind maps, and infographics
Canva	Best teacher-friendly design tool out there. Use to create posters, presentations, charts, interactive worksheets, and more
Quizizz AI	Best creating AI-generated practice questions, adaptive quizzes, and gamified assessments.
Brisk Teaching	Makes it easy to create lesson plans, resources, Google Form quizzes, exemplars, and so much more.
MagicSchool	Offers dozens of AI tools for lesson planning, rubric creation, IEP support, parent communication, and more.
Eduaide	A versatile planning assistant that generates lesson ideas, assessments, feedback, and enrichment activities
School AI	Easily tailor teaching plans and more, automatically aligned with standards and objectives. Personalize learning in real-time
NotebookLM	A research assistant from Google that lets you upload documents and then ask questions, generate summaries, or build outlines directly from your sources.
Curipod	Lets teachers create interactive lessons, polls, and presentations in seconds, turning static content into engaging, student-driven learning experiences.
TeachAid	Helps create adapted materials and supports teachers in designing resources that meet diverse learning needs.

Poe	A platform that gives you access to multiple AI models (including Claude, GPT-4, and others) in one place, making it easy to compare responses.
FigJam	A collaborative whiteboard by Figma where students and teachers can brainstorm, map ideas, and co-create projects in real time.
Snorkl	A tool that captures students' thought processes through audio explanations, giving teachers deeper insight into reasoning and making formative assessment easier.
Padlet	A collaborative online board where teachers and students can post notes, images, videos, or links to brainstorm, share resources, and build projects together.
MyLens	An AI-powered tool that helps you visualize your ideas and content through interactive visuals.
ElevenLabs	A text-to-speech tool that generates realistic voices, useful for creating audio versions of lessons, accessibility supports, or storytelling activities.
Synthesia AI	Creates professional-looking instructional videos with AI avatars and voiceovers, making it easy to produce explainer content without needing cameras or editing skills.
Twee	Twee generates warm-up questions, texts, vocabulary activities, and discussion prompts for engaging language lessons.
Diffit	Quickly transforms any text into multiple reading levels, summaries, and comprehension questions
Slidesgo	Provides ready-made, customizable slide templates teachers can adapt for lessons, presentations, or student projects
Khanmigo	Helps students with personalized tutoring and gives teachers lesson support, grading help, and class management insights.

AI Tools to Boost Teacher Workflow

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Lesson Planning

- MagicSchool
- Curipod
- Eduaide
- Twee
- Almanack
- Diffit

Teaching Materials

- Diffit
- Khanmigo
- NotebookLM
- Quill
- ChatGPT Study Mode
- Edcafe

Assessment

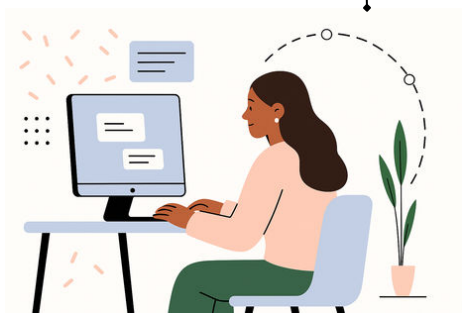
- Writable
- School AI
- Quizizz
- MagicSchool
- Scribbr
- Quizlet

Productivity

- Reclaim AI
- TeachMate
- Brisk Teaching
- Notion
- Otter.ai
- Perplexity

Creativity

- AITutor.AI
- D-ID.com
- Fireflies
- Ideogram
- Elevenlabs
- Slidesgo
- NapkinAI



Top Productivity Tools for Teachers

www.educatorstechnology.com

Planning Tools

Lesson Planning
- ChatGPT
- MagicSchool
- Eduaide

Resource Curation
- Wakelet
- Flipboard
- Instapaper

Calendar and Scheduling
- Google Calendar
- Calendly
- Trello

Organization Tools

Digital File Management
- Google Drive
- OneDrive
- Dropbox

Note-Taking Systems
- Obsidian
- Notion
- Evernote

Workflow Automation
- Zapier
- Asana
- Monday.com

Communication Tools

Parent Communication
- Remind
- ClassDojo
- Google Classroom

Virtual Meetings
- Zoom
- Google Meet
- Microsoft Teams

Newsletters & Announcements
- Canva
- PiktoChart
- Freepik

Engagement Tools

Gamification & Interactivity
- Kahoot
- Quizizz
- Socrative

Digital Storytelling
- ChatGPT
- Canva
- StoryboardThat

Student Polls and Quizzes
- Plickers
- Mentimeter
- Google Forms

Assessment Tools

Formative Assessment
- Quizlet
- Socrative
- Gimkit

Rubric Generators
- Canva
- Eduaide
- Brisk Teaching

Exit Tickets
- Google Forms
- Quizalize
- Quizizz

Professional Development

Professional Learning Communities
- linkedIn
- X(Twitter)
- Facebook Groups

Online Courses & Webinars
- Coursera
- Skillshare
- TED

Reflective Practice
- Google Docs
- Notion
- Journal App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Educators Technology

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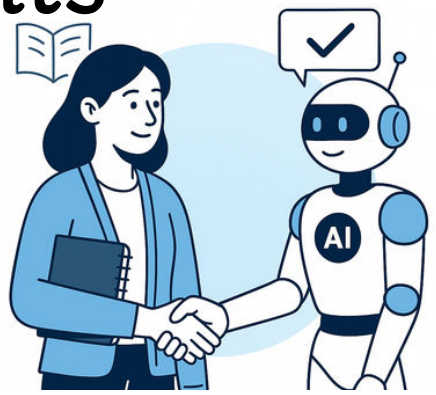
24 Best AI Teaching Assistants

By Kharbach Med, PhD

www.educatorstechnology.com



What is An AI Teaching Assistant?

It is An AI-powered platform that helps teachers with a wide variety of tasks such as lesson planning, grading, content creation, student feedback, and classroom management. It also streamlines routine work, offers real-time support, and enhances instruction through automation, personalization, or conversational interaction.

AI Chatbots

Ideal for planning, feedback, explanations, and quick classroom ideation.

Monica

All-in-one AI assistant for writing, coding, and research—right in your browser.

Brisk teaching

Chrome tool for instant lesson plans, quizzes, and feedback inside Google Docs

MagicSchool AI

Teacher-first platform that creates plans, rubrics, and accommodations in seconds.

Twee

Quickly generates EFL lessons, prompts, and discussions with minimal input.

Khanmigo

Khan Academy's AI assistant for rubrics, hooks, assessments, and student help.

Eduaide

Lesson planning and resource generation tailored to classroom differentiation.

TeacherMatic

Automates admin work: quizzes, lessons, and assessments—so you can teach.

Notion AI

Built into Notion for quick brainstorming, summarizing, and lesson structuring.

Ideogram

Turns text prompts into sharp, classroom-ready visuals.

Diffit

Instantly turns any content into leveled readings, questions, and activities.

Canva

Create slides, worksheets, and visuals fast with built-in AI design tools.

Curipod

Turns any topic into interactive slides with polls, prompts, and visuals.

NotebookLM

Summarizes, explains, and quizzes from your docs—like a custom tutor.

School AI

AI assistant for students, staff, and admins, handles Q&A, scheduling, and more.

Quizizz

Gamified quizzes and interactive lessons that make assessment engaging and fun.

Text Blaze

Create smart text templates to eliminate repetitive typing and automate responses with precision.

TeachMate AI

Teacher-designed assistant that streamlines prep, planning, and feedback

Snorkl

Grades spoken, handwritten, and drawn student responses.

Almanack

Generates full lesson plans with slides, worksheets, and custom activities in minutes.

Edcafe

Builds student-centered discussion activities to spark collaboration and critical thinking.

Flint AI

Custom AI tutors and assessors that adapt to your learning objectives and materials.

Class Companion

AI tutoring & instant feedback on student work, supports retakes & boosts engagement.

Conker

Create standards-aligned quizzes instantly

Best AI Tools for PhD Students

www.educatorstechnology.com

Doing a PhD is a marathon, not a sprint. Here are some AI tools that can help you stay organized, productive, and focused!

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www.educatorstechnology.com

1 Build a Networked Note-Taking System

Don't scatter your ideas across random files. Use tools that let you build a connected knowledge network:

Obsidian · Notion

2 Manage Your References Like a Pro

Don't repeat my mistake of leaving references to the last minute. Organize from the start:

Zotero · Endnote · Mendeley

3 Master the Art of Literature Search

Don't waste hours hunting for papers. Use these tools to dig deeper and find what really matters:

ResearchRabbit · Scite · Litmaps · Connected Papers

4 Active Reading for Deep Understanding

Don't just skim, read with purpose. Use these tools to synthesize ideas and make deeper connections:

NotebookLM · Elicit · Consensus · ChatGPT

5 Write with Clarity and Precision

When it's time to write, don't let a blank page slow you down. Use these tools to draft, polish, and refine your work:

ChatGPT Claude · Google Docs · Paperpal · Jenni

AI-Powered Presentation Tools For Teachers

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www.educatorstechnology.com

www.educatorstechnology.com

AI Presentation Tips

Start with a plan,
Paste your lesson into tools like Curipod or Gamma. They'll auto-generate a slide deck structure.

Control slide structure
Specify how many slides and what types (title, content, quiz).

Refine text for your class
Edit vocabulary and tone to match your students' level and your teaching style.

Use AI slides as lesson kickstarters
Even partial decks can inspire discussions or complement your existing materials.

www.educatorstechnology.com

Add your own activities
Insert tasks, reflections, or partner work. AI won't know your teaching flow

Export and edit
Download slides into Google Slides or PowerPoint for last-minute tweaks.

Keep one reusable prompt
Save a general prompt format (e.g., "Create a 6-slide presentation for Grade 5 on [topic], include visuals, 1 quiz slide, and student-friendly language") and just swap topics.

AI-Powered Presentation Tools

Curipod
Transform your lessons into interactive slides with AI.

Brisk Teaching
Generate presentations directly from online content and videos.

Almanack
Create slide decks with images from URLs, files, or videos.

Google Slides
Create and collaborate on presentations in real time; integrates with Docs, Drive, and AI-powered add-ons.

Canva
Design visually appealing slides effortlessly.

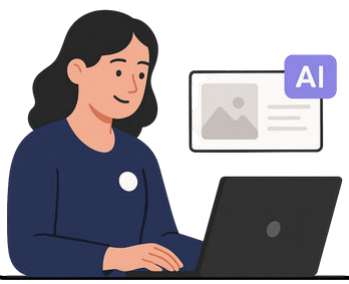
MagicSlides
Convert YouTube videos, PDFs, and more into PowerPoint presentations.

Gamma
Generate sleek, modern presentations from outlines using AI; excellent for storytelling and reports.

Beautiful AI
Create clean, professional presentations with AI-assisted design logic.

Visme
Build engaging slide decks with visuals, infographics, and AI templates.

SlidesGo
Create customized presentations with various styles and tones.



Eduaide
Generate slide outlines with ideas and check-in questions.

Diffit
Turn detailed lesson resources into interactive slides.

AI Tools to Enhance Design Thinking

Teachers Guide

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Design Thinking Process

1. **Empathize**
   - Observe learners
   - Ask questions
   - Listen closely
   - Sense needs
2. **Define**
   - Pinpoint the challenge
   - Spot patterns
   - Reframe the issue
   - Clarify focus
3. **Ideate**
   - Generate ideas
   - Explore options
   - Mix and match
   - Sketch concepts
4. **Prototype**
   - Draft quickly
   - Test small
   - Tweak often
   - Keep it simple
5. **Test & Refine**
   - Try it out
   - Watch closely
   - Collect feedback
   - Improve & repeat

AI Tools for Each Step of the Process

1 Empathize

Use AI to better understand your students.

- Summarize student feedback or survey results using ChatGPT or Google Forms + AI.
- Ask ChatGPT to generate student personas based on age, background, or learning needs.
- Use ChatGPT to draft questions for class interviews or check-ins.

2 Define

Use AI to clarify what really needs fixing.

- Summarize key student struggles or misconceptions from feedback.
- Identify patterns in survey responses or class discussions with ChatGPT help.
- Ask ChatGPT to reframe the challenge from different angles.

3 Ideate

Use AI to spark fresh, creative ideas.

- Brainstorm lesson plans, prompts, or activities with tools like ChatGPT or Claude.
- Combine concepts from different subjects using Perplexity AI or Gemini.
- Ask AI for unexpected or offbeat ideas to challenge your thinking.

4 Prototype

Use AI to build quick drafts of your ideas

- Create lesson plans with tools like MagicSchool or Brisk Teaching.
- Design visuals and handouts using Canva's AI features.
- Mock up interactive activities with Curipod or generate audio with AI voice tools like Elevenlabs.

5 Test & Refine

Use AI to improve your ideas through feedback

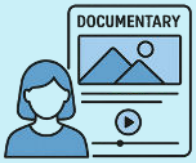
- Use tools like Formative or Edpuzzle to see how students interact with your activity in real time.
- Summarize student input using ChatGPT.
- Ask AI for ways to adjust or improve based on what you learn.

Educators Technology

Digital Storytelling with AI Creative Ideas for Teachers

www.educatorstechnology.com

Med Kharbach, PhD

Classroom Activity	AI Tools
Write a Personal Digital Story Guide students to brainstorm a memory, write a short script with ChatGPT or Claude, then use AI to record and edit the story with visuals and voice. 	Scriptwriting: ChatGPT, Claude Video Editing: Invideo, Descript, Veed, Background Music Soundraw, Epidemic Sound Visual Creation: Canva, Adobe Express Voiceover: ElevenLabs, Speechify
Character Diaries with AI Avatars Students write a diary entry as the character, then record a video using avatar-based AI tools. They can narrate using their own voice or synthetic voice generators. 	Scriptwriting: ChatGPT, Claude Avatar Video: Synthesia, Heygen, Background Music Soundraw, Epidemic Sound Video editing: Descript, Veed Voiceover: ElevenLabs, Speechify
Explainer Videos for Science Concepts Students write a script explaining a scientific process, record using Loom or AI avatars, and polish the video with editing tools. 	Scriptwriting: ChatGPT, Claude Recording: Loom, Synthesia, Heygen Background Music Soundraw, Epidemic Sound Video editing: Invideo, Veed, Camtasia Voiceover: ElevenLabs, Murf AI
Reenact a Historical Event Let students pick a character or role in a historical event, script their narrative, and use AI to turn it into a story-driven video. 	Scriptwriting: ChatGPT, Claude Video creation: Pictory AI, Synthesia Background Music Soundraw, Epidemic Sound Video editing: Descript, Veed Voiceover: ElevenLabs, Speechify
Project-Based Learning Documentary Students work on a project, they gather visuals and reflections. At the end, they assemble everything into a documentary-style video. 	Scriptwriting: ChatGPT, Claude Voiceover: ElevenLabs, Speechify Background Music Soundraw, Epidemic Sound Video editing: Invideo, Canva Video creation: Pictory AI, Loom

Creating Teacher Rubrics

ChatGPT + Canva

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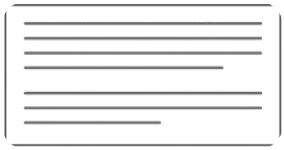
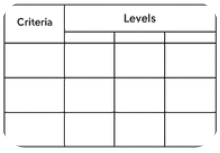
Rubric Types

Analytic



Uses a single scale to assess overall performance, with paragraph-style descriptions combining all criteria into one judgment.

Holistic



Breaks down performance into specific criteria scored separately, usually presented in a grid format with levels of achievement across the top.

What is a Rubric?

A rubric is a scoring tool that lists specific criteria for an assignment and describes different levels of performance for each one.

Benefits of Rubrics

- Clarify expectations
- Guide student work
- Support fair grading
- Provide structured feedback
- Save grading time
- Encourage self-assessment

Using AI to Build Rubrics

- Generate criteria ideas
- Write level descriptions
- Adapt tone and style
- Customize for different tasks
- Edit for clarity
- Organize into a table or list

Practical Tips

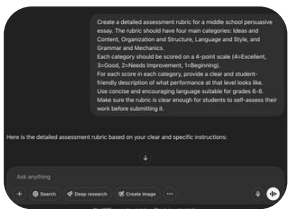
- Always review and adjust AI-generated rubrics to fit your grading criteria.
- Keep language consistent to avoid confusing students.
- Use Canva templates to quickly design worksheets or posters.
- Add icons, colors, and sections in Canva for better readability.

Sample Prompt

Create a detailed assessment rubric for a middle school persuasive essay. The rubric should have four main categories: Ideas and Content, Organization and Structure, Language and Style, and Grammar and Mechanics.
Each category should be scored on a 4-point scale (4=Excellent, 3=Good, 2=Needs Improvement, 1=Beginning).
For each score in each category, provide a clear and student-friendly description of what performance at that level looks like.
Use concise and encouraging language suitable for grades 6-8. Make sure the rubric is clear enough for students to self-assess their work before submitting it.

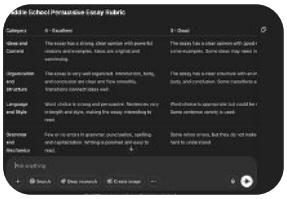
Process

1



Go to ChatGPT and write a detailed prompt.

2



Once generated, further edit & tweak the rubric.

3

Go to Canva and search for Rubrics

4

Select a template, add your text, edit it to your liking!

Top AI Tools to Design Classroom Visuals

www.educatorstechnology.com

Canva AI

Canva's Text to Image tool transforms your text prompts into unique, customizable visuals

ChatGPT

Create stunning visuals with seamless ChatGPT integration and editing tools.

Midjourney

Generate beautiful visuals and images using text or image prompts

FOTOR

Converts text or images into visuals with batch creation options.

Night Cafe

Creates stunning digital artwork from text prompts or images.

Designify

Automatically enhances and edits images for presentations, worksheets, and classroom materials.

Freepik

Offers artistic styles and custom parameters for detailed visuals.

Leonardo

Includes style referencing, prompt generation, and aesthetic control.

Deep AI

Features diverse art styles like Anime, Renaissance, and Pop Art.

BIng Image

Instantly generate images directly in Bing with descriptive prompts.

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9 AI-Powered Activities to Enhance Classroom Management

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By Med Kharbach, PhD

Create Exit Tickets

ChatGPT + Google Forms

Use ChatGPT to generate quick exit questions and collect answers easily through Google Forms.

Gamify Learning

ChatGPT + Kahoot

Build custom quizzes with ChatGPT and run them on Kahoot, Quizizz, or Quizalize.

Form Student Groups

ChatGPT + Wheel Decide

Use ChatGPT for grouping ideas and randomize them fairly with tools like Wheel Decide.

Create rules and expectations

ChatGPT + canva

Brainstorm positive rules with ChatGPT and design a colorful poster in Canva.

Set Up Daily Routines

ChatGPT + Google Dos

Map out daily routines with ChatGPT and organize them clearly in Google Docs or Trello.

Create Exit Tickets

ChatGPT + Mentimeter

Create polls and check-ins with ChatGPT and display them anonymously using Mentimeter.

Encourage Student Voice

ChatGPT + Poll Everywhere

Use ChatGPT for survey ideas and gather anonymous student input with Poll Everywhere.

Make Student Participation Fun

ChatGPT + Wheel of Names

Use ChatGPT for grouping ideas and randomize them fairly with tools like Wheel Decide.

Organize Seating Arrangements

ChatGPT + Canva

Ask ChatGPT for layout ideas and design clear seating charts in Canva.

Best Writing Assistants for Teachers

www.educatorstechnology.com

By Med Kharbach, PhD

Top Writing Platforms

Canva
A writing and design platform with Canva Write and Canva Docs, perfect for visually rich ebooks but less suited for long books

Google Docs
A cloud-based writing tool with seamless collaboration, &AI-powered features

Scrivener
Designed for complex writing projects, offering powerful organization, section management, templates, and distraction-free writing.

Ulysses
A minimalist writing app with distraction-free mode, advanced organization, seamless syncing, and AI-powered grammar checking.

Pages
A visually rich word processor with elegant templates, great for professional-looking documents and creative projects.

Word
A reliable and versatile tool for long-form writing, ideal for academic and professional projects. Great for structuring, formatting, and editing.

Notion
A multi-functional tool combining note-taking, document creation, project management, and AI-powered writing assistance.

AI Writing & Editing Assistants

Grammarly
AI-powered writing assistant that corrects grammar, spelling, and style for polished, error-free writing.

Hemingway Editor
Highlights complex sentences and passive voice to improve clarity and readability.

Quillbot
AI-based paraphrasing tool that rewrites text while maintaining original meaning.

WordTune
Enhances sentence structure and tone with AI-powered rewriting suggestions.

AI Chatbots
ChatGPT, Claude, Gemini, etc.. Assist with idea generation, content drafting, and rewriting.

Outwrite
AI-driven writing tool that improves grammar, clarity, and conciseness.

AI Design & Illustration Tools

Canva
A user-friendly design tool with templates for book covers, illustrations, and marketing materials.

Adobe Express
A simplified version of Adobe's design tools, offering easy-to-use templates for book graphics.

Midjourney
AI-driven design tool for generating detailed, high-quality book artwork.

Leonardo AI
AI-driven design tool for generating detailed, high-quality book artwork.

Fotor
An easy-to-use online photo editor with AI tools for creating book covers and graphics

Tools for Creating Engaging Educational Videos

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Tips for Creating Engaging Instructional Videos

Know Your Learning Goals

Align videos with curriculum objectives.

Keep It Interactive

Pose questions or include quick checks for understanding.

Break Down Complex Topics

Use clear, step-by-step explanations.

Personalize the Tone

Use a warm, encouraging voice.

Add Visual Examples

Use charts, diagrams, and real-world examples.

Include Real-World Context

Connect concepts to students' lives.

Scripting

Use these AI chatbots to help draft scripts for your instructional videos

ChatGPT
Generate detailed lesson scripts and explanations.

Claude
Craft engaging and context-aware video scripts.

Gemini
Integrate multimodal prompts for interactive script ideas.

Copilot
Quickly draft and refine instructional outlines.

Perplexity AI
Get concise summaries and key points for clear, effective scripts.

Text to Video

Turn your written content into engaging videos with these AI tools

Sora
Transform text into professional-looking video presentations.

FlexClip
Create dynamic videos with text-to-video features.

Vidnoz AI
Convert scripts into AI-generated videos quickly.

VEED
Generate videos from text with powerful customization options.

Pictory AI
Generate videos from text with automated scene selection.

Screen Recorders

Capture your screen and voice to create polished instructional videos

Loom
Record and share videos instantly with interactive features.

Screencastify
Simple screen recording with built-in editing tools.

Camtasia
Professional screen recording with advanced editing.

Snagit
Capture screen content with powerful annotation options.

ScreenPal
Quick, easy screen recording with sharing options.

Video Editors

Polish and enhance your instructional videos with these powerful editors.

Descript
Edit videos by editing the text transcript.

CapCut
Fast, intuitive video editing with effects and templates.

Canva
Easy-to-use editor with templates and animation tools.

Kapwing
Collaborative video editing with real-time feedback.

Invideo
Advanced editing with auto-subtitles and effects.

Camtasia
Professional editing with powerful screen recording integration.

Video Transcription

Convert your video content into text for enhanced accessibility.

Fireflies
Automated transcripts with AI-powered search.

Otter AI
Real-time transcription with collaborative editing.

Notta AI
Fast transcription with multiple export options

Rev AI
High-accuracy transcription with human review.

Fathom AI
Meeting transcripts with smart highlights and summaries.

tl;dv
Transcribe, share, and search meeting videos effortlessly.

AI Voiceover Generators

Use these AI tools to add human-like voiceovers to your instructional videos

ElevenLabs
Realistic voices in over supports 30 languages, voice cloning

Speechify
instant text-to-speech with AI summaries

NaturalReader
90+ languages, voice cloning, & seamless browser integration

Genny
Customizable voices, 100+ languages, and export in multiple formats

Speech Central
Voice customization, PDF support, and Apple Watch integration.

Murf AI
Over 200 voices, emotional tone control, and voice cloning options.

Teaching with Avatars
AI Tools & Tips


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www.educatorstechnology.com

Key Benefits

(Fink, Robinson, & Ertl, 2024)

Differentiate Instantly

Avatars adjust content to each student's level, no extra prep needed.

Make It Real

Use avatars for role-plays and real-world scenarios that connect learning to life.

Engage Through Immersion

Bring lessons into virtual spaces that grab attention and hold it.

Provide On-the-Spot Help

Let avatars give feedback, hints, or guidance while you focus on instruction.

Promote Independence

Avatars prompt goal-setting, reflection, and self-monitoring.

Spark Interest

With voices and personalities, avatars make even dry topics more engaging.

AI Tools

Synthesia

HeyGen

Canva

VEED

Fotor

Adobe Express

Do's and Don'ts

- Keep avatars age-appropriate and culturally respectful
- Use avatars to complement, not replace, real teaching presence
- Let students create their own avatars for identity expression
- Provide guidance on tone, language, and content in avatar-based work
- Test tools in advance to check accessibility and ease of use
- Monitor interactions to ensure avatars support, not distract from, learning

Classroom Applications

- Digital storytelling and character diaries
- Language practice and speaking activities
- Historical reenactments and simulations
- Flipped classroom intros and explainer videos
- Social-emotional learning reflections

Challenges

1. Privacy concerns and data usage in AI tools
2. Making sure avatars are not reinforcing stereotypes
3. Risk of over-reliance or distraction
4. Tech accessibility for all students
5. Maintaining teacher oversight, especially with younger learners

Reference:

Fink, M. C., Robinson, S. A., & Ertl, B. (2024). AI-based avatars are changing the way we learn and teach: Benefits and challenges. Frontiers in Education, 9, 1416307.

Learning Game Makers for Teachers

Prepared by Med Kharbach, PhD
www.educatortechnology.com

Kahoot

Create fun, fast-paced quiz games with images, videos, and timers. Perfect for live classroom competitions.

Gimkit

Create quiz games where students earn virtual money to buy upgrades and power-ups, adding strategy to learning.

Scratch

Create your own interactive stories, games, and animations with simple drag-and-drop blocks.

Factile

Lets you build your own Jeopardy-style games for classroom use. It supports buzzers, score tracking, and even team play

Blooket

Students answer questions to progress through various game modes like Tower Defense or Gold Quest.

Wordwall

Create interactive games like matching, sorting, anagrams, and quizzes. You can also print activities for offline use.

Flippity

Transforms Google Sheets into games and activities like flashcards, random name pickers, matching games, and quiz shows.

Educaplay

Design multimedia learning activities like quizzes, crosswords, word searches, and interactive maps. Works well with most LMS platforms.

Quizizz

Create self-paced quizzes with memes, timers, and feedback. Works great for homework or in-class competitions.

Classtools.net

Offers game templates like Fakebook (character profiles), timeline creators, and countdown timers.

Baamzoozle

Make customizable team games and classroom quizzes in minutes. Ideal for in-person or remote play.

JeopardyLabs

Design custom Jeopardy-style quiz games quickly. You can share via link and edit collaboratively.

Quizalize

Create games with live leaderboards and team play. Tracks student performance in real-time and provides personalized follow-up activities

Quizlet

Turn study sets into interactive games like Quizlet Live, encouraging teamwork and collaborative learning.

Top Quiz Tools for Teachers

Video Quiz Tools

- Edpuzzle
- FlexClip
- PlayPosit
- Canva
- Educaplay
- Pictory

Gamified Quiz Tools

- Kahoot
- Jeopardylabs
- Blooket
- Quizizz
- Gimket
- Quizalize

AI Quiz Generators

- Diffit
- AI Chatbots
- MagicSchool
- Quizbot
- Twee
- Curipod

Form-Based Quiz Tools

- Google Forms
- Jotform
- FlexiQuiz
- Microsoft Teams
- Typeform
- SurveyMonkey

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

AI Tools & Chatbots

Age Limits & Data Policies

AI Tool	Age Requirement	User Data & AI Training
AI Chatbots		
ChatGPT	18 - 13 with parent/legal guardian's permission	Yes – unless you opt-out
Gemini	13	Yes, but users have control over their data
Claude	18	No, unless explicit permission is given
Copilot	18 Or younger with parent/legal guardian's permission	No, User inputs have commercial data protection.
Perplexity AI	18 - 13 with parent/legal guardian's permission	Yes, unless you opt-out
Poe	13	No, unless you opt-in
Other AI Tools		
Midjourney	13	No, inputs and outputs are not used to train the models.
GrammarlyGO	13 in the USA with parent/guardian's consent. 16 outside the USA.	Yes, user inputs and outputs may be used to train models.
Scholarcy	13	No, User inputs and outputs are not used to train the models.
Wordtune	18 - 13 with parent/legal guardian's permission	Yes, User inputs and outputs may be used to train models.

AI Classroom Policy

Teachers Guide

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

What Is an AI Classroom Policy?

An AI classroom policy is a foundational document that guides how AI practices and tools are used in your classroom across the school year. It is a flexible, evolving agreement that sets expectations, safeguards learning, and promotes ethical use of AI by both students and teachers.

Why Is It Important?

Teachers must prepare students to engage with AI systems critically and responsibly, recognizing both the opportunities and risks they present. (UNESCO, 2023)

A clear classroom AI policy:

- Fosters accountability and shared responsibility
- Builds trust and transparency
- Develops digital literacy and critical thinking
- Promotes equity and responsible innovation

Tips for Creating Your AI Policy

1. Collaborate: Involve students in the process
2. Make it student-centered: Prioritize their learning experience
3. Stay flexible: Allow room for adjustments as tools and needs evolve
4. Be transparent: Discuss expectations and boundaries openly
5. Review regularly: Reflect on how it's working throughout the year

Components of an AI Classroom Policy

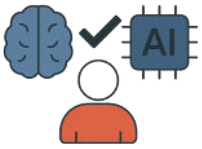
Academic Integrity

- Clarify acceptable vs. unacceptable AI use
- Require students to label or cite AI-assisted work
- Focus on process-based and authentic assessment

Data Privacy

- Don't input personal student data into public AI tools
- Use only district-approved, secure platforms
- Inform families about how AI tools handle student data

Ethical Use & AI Literacy

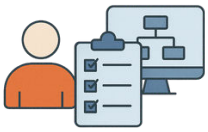


- Teach critical evaluation of AI-generated content
- Model transparency in your own AI use
- Include ethical discussions: bias, misinformation, limitations

Equity & Inclusion

- Ensure fair access to tools and support
- Use AI to enhance accessibility and differentiation
- Track usage to avoid unintentional exclusions

Pedagogical Alignment



- Align AI tools with curriculum goals
- Use AI to enhance creativity, personalization, metacognition
- Keep the teacher's role central—AI is a support, not a substitute

Key Questions to Ask

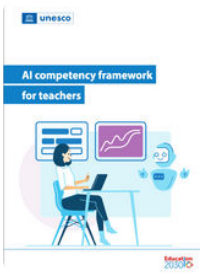
- What AI tools will we allow in this class—and for what purposes?
- How will we define and detect AI misuse?
- How do we handle student data and privacy?
- What skills do students need to engage with AI responsibly?
- What should students disclose when using AI tools in assignments?

Useful AI Tools

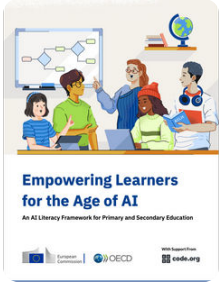
- Writing support and idea generation
  - Claude
  - ChatGPT
  - Gemini
- Visual design and templates
  - Canva
  - Adobe Experss
- Presentation creation tools
  - Slides AI
  - Google Forms
  - SlidesGo
  - Gamma

Further Reading

AI and education: A competency framework for teachers, UNESCO



Empowering Learners for the Age of AI, OECD & Code.org



References

- UNESCO. (2023). AI and education: A competency framework for teachers. United Nations Educational, Scientific and Cultural Organization.
- Shah, P. (2023). AI & the future of education: Teaching in the age of artificial intelligence. Hybrid Learning Press.

Using AI Through the SAMR Lens

Practical Ways to Rethink Learning Tasks

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

www.educatorstechnology.com

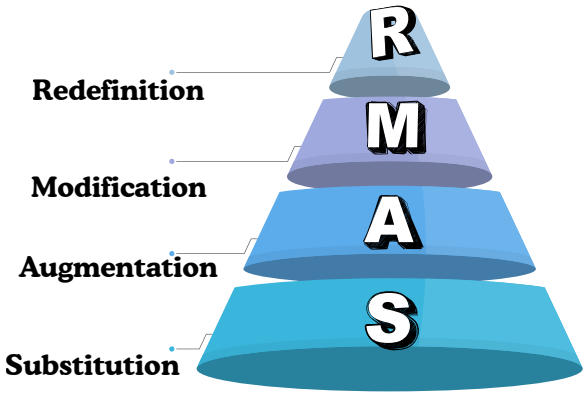
What is the SAMR Model?

The SAMR model is a framework developed by Ruben Puentedura that helps educators evaluate how technology is integrated into learning, moving from basic substitution to transformative learning experiences. It includes four levels: Substitution, Augmentation, Modification, and Redefinition.

SAMR + AI

AI can support each SAMR level, but the goal is intentional integration, use it not just to digitize tasks, but to extend thinking, creativity, and collaboration.

The SAMR Pyramid



Enhancement | **Transformation**

S A M R

Technology supports traditional learning tasks

Technology enables new learning designs and outcomes

S	A	M	R
Tech replaces traditional tools with no change in function	Tech still substitutes, but with functional improvements	Tech allows for significant task redesign	Tech enables entirely new tasks previously inconceivable
Example	Example	Example	Example
Students dictate their essay into ChatGPT using voice input, simply replacing handwriting or typing without changing the task itself.	Students use ChatGPT, Grammarly, or Quillbot to improve grammar, clarity, & tone in their writing.	Students co-write stories with ChatGPT, revise using feedback, and publish interactive versions online.	Students create a custom GPT in ChatGPT to guide them through math problems and clarify concepts as they learn.

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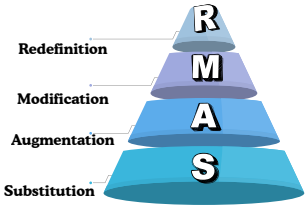
Rethinking Learning Tasks with ChatGPT and the SAMR Model



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		Definition	ChatGPT Examples
Enhancement	S	Tech replaces traditional tools with no change in function	Students dictate their essay into ChatGPT using voice input, simply replacing handwriting or typing without changing the task itself.
Enhancement	A	Tech substitutes with functional improvement	Students ask ChatGPT for grammar, spelling, and clarity suggestions on their written drafts.
Transformation	M	Tech allows for significant task redesign	Students engage in real-time writing collaboration with ChatGPT, revising based on dynamic prompts.
Transformation	R	Tech enables entirely new tasks previously inconceivable	Students build a custom GPT that helps them explore a topic deeply by guiding them through inquiry steps.

Using AI with Bloom's Revised Taxonomy

Prepared by Med Kharbach, PhD
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Practical ways AI supports every stage of learning

Level	Key Verbs	How AI Can Help	AI Tools
Create	Design, generate, plan, produce, construct, develop	• Design an assessment that measures student understanding in a new way • Develop a unit plan connecting multiple subjects around one theme • Construct a rubric for evaluating student projects	ChatGPT, Claude, Canva AI, Gemini, Poe, Gamma
Evaluate	Judge, critique, assess, defend, justify, appraise	• Have AI provide criteria and frameworks for students to judge the quality of sources or arguments. • Use AI to help students assess the strengths and weaknesses of different approaches or strategies • Have AI model peer review processes by critiquing sample student work	ChatGPT, Claude, Scite AI, Gemini, Consensus, Eduaide
Analyze	Differentiate, organize, attribute, compare, contrast, deconstruct	• Have AI compare and contrast different historical perspectives on the same event • Ask AI to differentiate between various learning styles represented in student responses • Ask AI to organize student assessment data by learning standards and identify patterns	ChatGPT, Claude, Elicit, Perplexity, Scholarcy, Gemini
Apply	Use, implement, demonstrate, solve, execute, perform	• Use AI to generate practice problems that implement specific mathematical concepts • Have AI demonstrate step-by-step solutions to science experiments or math procedures • Use AI to implement grammar rules by generating correct and incorrect sentence examples	ChatGPT, Claude, MagicSchool, Gemini, Photomath, Gamma
Understand	Summarize, explain, interpret, classify, compare, exemplify, paraphrase	• Have AI summarize complex readings or research articles in student-friendly language • Ask AI to explain difficult concepts using analogies or metaphors students can relate to • Use AI to exemplify abstract concepts with concrete, relatable examples	ChatGPT, NotebookLM, Gemini, Brisk Teaching, Otter AI, Elicit
Remember	Recall, list, define, identify, recognize, repeat	• Have AI generate flashcards for key vocabulary terms, dates, or formulas • Use AI to define technical terms or academic vocabulary in simple language • Have AI quiz students on factual recall with multiple choice or fill-in-the-blank questions	QuizGPT, Quizlet, Study Mode, Kahoot, Quizizz, Khanmigo

AI for Teachers

Tools, Extensions, & Resources

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Prompting Tips

- Use clear, natural language → Write like you're talking to a colleague.
- Be specific and give context → Add grade level, subject, or topic details.
- Keep it short but detailed enough → Don't overload, but don't leave AI guessing.
- Iterate and refine responses → Treat it like a back-and-forth chat – adjust until it works.
- Tell AI exactly what you want → Start with a verb: Summarize, Create, Draft, List, Explain.
- Ask for output in a specific format → Bullet points, table, paragraph, checklist, or script.
- Use your own files → Mention or attach lesson plans, student work, or your notes for more personalized help.
- Don't settle for the first draft → Ask: "Make it more friendly." "Make it shorter." "Add an example."

Prompting Guides

Promptingguide.ai

Comprehensive platform for learning prompt engineering, including basics, advanced techniques, and practical examples.

Learnprompting.org

Free, open-source guide with beginner to advanced modules. Emphasizes practical examples, community input, and research-backed methods.

Google Prompting Guide 101

Highlights four main elements of effective prompts: Persona, Task, Context, and Format. Provides tips for writing natural, concise, and context-rich prompts.

Anthropic Prompting Guide

Offers practical techniques from basic prompting to advanced strategies like chain-of-thought and multishot prompting.

AI Integration framework

01 Set Clear Learning Goals
- Define learning objectives.
- Identify the skills you want students to develop, like critical thinking and creativity.

02 Choose the Right AI Tools
- Select tools that align with your teaching goals.
- Prioritize tools that enhance understanding and engagement.

03 Create an AI Policy
- Set clear guidelines for ethical AI use.
- Involve students in creating this policy to build accountability.

04 Design AI-Enhanced Activities
- Integrate AI into lessons for deeper learning.
- Use AI to support tasks like brainstorming, data analysis, and personalized feedback.

05 Reflect and Refine
- Regularly assess the impact of AI on learning.
- Make ongoing adjustments based on student outcomes and feedback.

Educational AI Tools

Creating visuals
Canva, ChatGPT, Napkin AI

Formative Assessment
Quizlet, Socrative, Quizalize

Lesson Planning
Eduaide, Magic School, Diffit

Creating Presentations
Canva, SlidesAI, SlidesGo

Creating Videos
Invideo, Veed, Canva

Academic Search
Scite, Scispace, Elicit

AI Chrome Extensions for Teachers

Monica
Multitask with writing, translating, and summaries.

WebChatGPT
Add live web results to ChatGPT conversations.

Eightify
Summarize YouTube videos and extract key insights.

Text Blaze
Smart text templates with keyboard shortcuts.

Loom
Record screen and camera, share instantly with a link.

Merlin
Chat with websites, videos, and documents.

Quizizz
Generate quizzes from any webpage or document.

Brisk Teaching
Lesson plans, quizzes, feedback, and more.

Sider
ChatGPT side panel for multitasking without tab switching.

Speechify
Converts text into natural-sounding audio for hands-free learning.

Places to Find Educational AI Tools

Product Hunt
Community-driven platform for discovering new AI tools, with real user feedback and reviews.

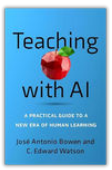
AI Tool Hunt
Simple directory with free AI tools, categorized by type like animation, academics, and art.

Toolify AI
Massive directory with 25,000+ tools, including education-focused options and GPT tools.

There is An AI Tool for That
Curated directory with trending, popular, and newly released AI tools.

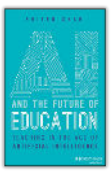
AI Books for Teachers & Educators

Brave New Words, by Salman Khan



Teaching with AI, by Watson & Bowen

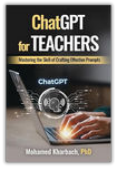
Co-Intelligence, by Ethan Mollick



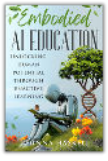
AI and The Future of Education, by Priten Shah

AI-Powered Pedagogy, By Chang Wathall

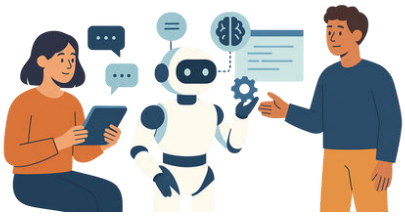
Atlas of AI, by Kate Crawford



ChatGPT for Teachers, by Med Kharbach



Embodied AI Education, by Johnna Haskell



A Practical AI Literacy Framework

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Based on the review draft of the European Commission and the Organization for Economic Cooperation and Development (OECD, 2025)

What is AI ?

"A machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments" (OECD, 2024)" (OECD, 2025, page, 6)

What is AI Literacy?

"AI literacy represents the technical knowledge, durable skills, and futureready attitudes required to thrive in a world influenced by AI. It enables learners to engage, create with, manage, and design AI, while critically evaluating its benefits, risks, and ethical implications. " (OECD , 2025, p. 6)

Why It Matters

- Young people are already using AI.
- Many struggle with misinformation and bias.
- Schools need to prepare students for an AI-shaped world.

The AI Literacy Framework , as conceptualized by OECD, is organized into four domains. Each domain represents a different way students can interact with AI. Inside each domain, there are competences, and each competence is made up of three components: knowledge, skills, and attitudes.

AI literacy Framework

Domains

Competencies

- **Knowledge**
- **Skills**
- **Attitudes**

Domains

Engaging with AI

Competencies

Using AI tools, recognizing when AI is involved, and critically evaluating outputs.

Creating with AI

Competencies

Working with AI to produce ideas, designs, or solutions. For example, writing a story with help from ChatGPT.

Managing AI

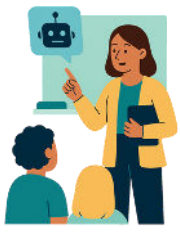
Competencies

Making decisions about how and when to use AI. This includes assigning tasks to AI or deciding when not to use it.

Designing AI

Competencies

Understanding how AI systems are built and being able to influence or shape their behavior.



Role of Teachers

Teachers are central to introducing AI literacy. They need support, training, and flexibility to integrate it across subjects.

Reference

OECD (2025). Empowering learners for the age of AI: An AI literacy framework for primary and secondary education (Review draft). OECD. Paris. https://ailiteracyframework.org

AI Literacy for Students
A Practical Guide

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Based on EDUCAUSE's AI Literacy in Teaching and Learning: A Durable Framework for Higher Education

What is AI Literacy for Students?

"Students must understand, critically evaluate, and ethically apply AI technologies in academic contexts." (Kassorla et al., 2024)

What is AI Literacy in Teaching & learning?

"AI Literacy in Teaching and Learning (ALTL) involves understanding the fundamentals of how AI works; critically evaluating the application of AI tools in teaching, scholarship, and the management of educational priorities; and maintaining vigilance in evaluating tools and techniques to protect against bias, misuse, and misapplication of these powerful models. ALTL also demands a commitment to ethical usage, ensuring that AI tools are applied transparently and responsibly, with an awareness of their societal impacts." (Kassorla et al., 2024)

Core Competencies

(Kassorla et al., 2024)

- Technical Understanding
- Evaluative Skills
- Practical Application
- Ethical Considerations




Technical Understanding

Competency	Explanation
Fundamentals of AI	Students grasp ML, NLP, and neural nets and explain them in plain language with a course example.
Application of AI Tools	Students pick the right tool, write effective prompts, and note when and how AI was used.
Hands-On Experience	Students practice on real coursework, apply AI step by step, and separate tool output from their own work.

Evaluative Skills

Competency	Explanation
Critical Evaluation of AI Tools	Students verify claims, cross-check sources, and revise or discard weak outputs.
Assessment of AI Impact	Students reflect on how AI changed their process and results, naming gains and trade-offs.
Ethical Evaluation	Students weigh privacy, security, and bias, and justify when AI use is appropriate or limited.

Practical Application

Competency	Explanation
Integration into Learning	Students fold AI into routines with time limits, checkpoints, and disclosure.
Research Enhancement	Students use AI for analysis and literature scans and keep a reproducible log of prompts and tools.
Project-Based Learning	Students tackle real problems with AI, iterate with feedback, and show a human-in-the-loop workflow.

Ethical Considerations

Competency	Explanation
Responsible Use of AI	Students protect privacy, follow policy, and uphold academic integrity in AI-assisted work.
Development of Personal AI Policies	Students draft a brief personal AI policy and attach it to major submissions.
Vigilance in AI Application	Students stay transparent about AI's role, note risks/benefits, and adjust practices as tools evolve.

Educators Technology

Source:

Kassorla, M., Georgieva, M., & Papini, A. (2024). AI literacy in teaching and learning: A durable framework for higher education. EDUCAUSE. https://www.educause.edu/content/2024/ai-literacy-in-teaching-and-learning/student-altl

12 Teacher Tips for Integrating AI in the Classroom

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Based on the U.S. Department of Education, Empowering Education Leaders: A Toolkit for Safe, Ethical, and Equitable AI Integration (2024)

1 Pace Your Integration

- Start small, try AI in one lesson or unit before using it across your teaching.
- Example: Use AI to generate a draft quiz for one class, then review and refine it before expanding to other classes.

2 Set Clear Purpose

- Link every AI activity to your learning objectives.
- Example: If your goal is to improve persuasive writing, have AI provide multiple examples for students to analyze and critique.

3 Verify All Outputs

- Cross-check AI-generated text, images, or data for accuracy and appropriateness.
- Example: If AI generates historical facts, confirm them with trusted sources before including them in lessons.

4 Model Responsible Use

- Show students how you use AI ethically: cite it, explain its role, and note limitations.
- Example: Display "Generated with AI and verified by [Your Name]" in lesson slides.

5 Co-Create Norms with Students

- Collaboratively set ground rules for AI use in class.
- Example: Students agree that AI can suggest ideas but not write full essays for them.

6 Promote Critical Thinking

- Design tasks where students must improve, fact-check, or challenge AI content.
- Example: Provide AI-generated solutions and ask students to identify flaws or suggest alternatives.

7 Protect Privacy

- Never input student names, grades, or sensitive data into AI systems.
- Example: Use fictional or anonymized data when testing AI grading tools.

8 Build AI Literacy

- Teach students how AI works, its strengths, and its limitations.
- Example: Run a mini-lesson showing how AI can produce both useful and flawed answers.

9 Support Accessibility

- Choose AI tools that offer multiple formats (text, audio, captions) and work on low-bandwidth connections.
- Example: Use AI to create transcripts for video content for students with hearing impairments.

11 Use AI to Differentiate Learning

- Adapt content for varied ability levels using AI as a starting point.
- Example: Generate simplified reading passages for struggling readers and extension questions for advanced learners.

11 Align with School Policies

- Ensure classroom AI practices match district rules and legal requirements.
- Example: If your district bans AI for grading, use it only for drafting feedback, not assigning marks.

12 Integrate Reflection Time

- After an AI activity, give students time to discuss how it helped or hindered learning.
- Example: Use exit tickets asking, "How did AI help you today?" and "What would you change?"

Educators Technology

Adapted from U.S. Department of Education, Empowering Education Leaders: A Toolkit for Safe, Ethical, and Equitable AI Integration (2024)

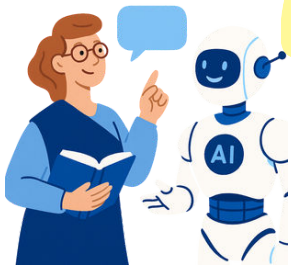
Educators Technology

8 Important Ethical Principles for Using AI in Your Classroom

Based on the European Commission's Ethical Guidelines on the Use of AI and Data in Teaching and Learning (2022).

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

1 Stay in Control



Always keep your role central. Use AI to support your teaching—not replace your judgment or interaction with students.

2 Be Fair and Inclusive

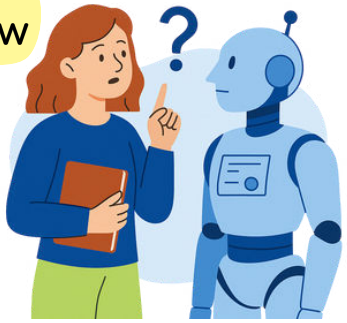
Make sure the tools you use work for all students. Watch out for bias, and ensure access for learners with different needs.

3 Respect Students as People

Students are not data points. Choose tools that protect their dignity and don't reduce them to numbers or predictions.

4 Ask Why and How

Don't use AI blindly. Know why you're using it, what it does, and how it reaches its conclusions. If you can't explain it, question it.

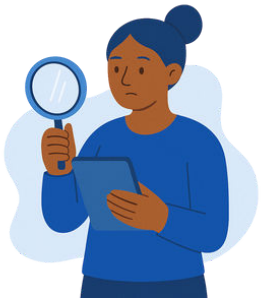


5 Protect Their Data

Handle student data with care. Know what's being collected, who has access, and how it's being stored or used.

6 Check for Safety and Accuracy

Trust, but verify. Make sure the tool is reliable and does what it claims. Be ready to step in when it doesn't.



7 Know Who's Responsible

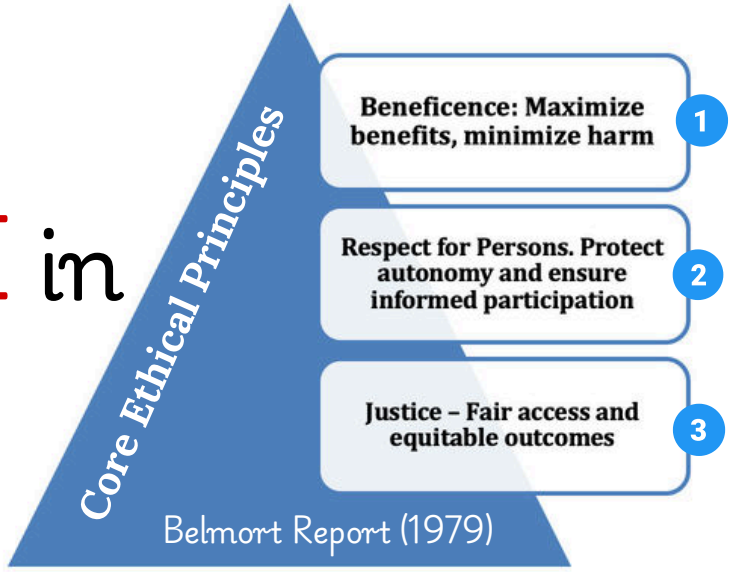
If something goes wrong, you need to know who to contact and what steps to take. Don't use systems without clear accountability.

8 Keep Reflecting

Monitor the impact. If it's not helping—or worse, causing harm—adjust or drop it. Your judgment matters most.

• SOURCE: European Commission. (2022). Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators. Publications Office of the European Union.

Core Ethical Guidelines for Teachers Using AI in the Classroom



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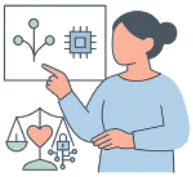
Beneficence

- Use AI to enhance student learning and engagement while actively avoiding harm, such as misinformation, biased content, or privacy violations.
- Regularly review AI-generated materials for accuracy and relevance before sharing with students.
- Apply AI in ways that reduce workload without replacing the human connection central to teaching.

Respect for Persons

- Be transparent with students about when and how AI is used in teaching and learning.
- Give students choices on whether to engage with AI tools, and explain the potential benefits and limitations.
- Avoid using AI in ways that collect unnecessary personal data or track student behavior without consent.



Justice

- Ensure AI resources are accessible to all students, regardless of background, language, or disability.
- Avoid using AI in ways that could reinforce existing inequities, such as disproportionately benefiting students with greater access to technology at home.
- Monitor AI applications for potential bias in recommendations, assessments, or feedback, and take corrective action when necessary.

Sources:

- National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. (1979). The Belmont report: Ethical principles and guidelines for the protection of human subjects of research. U.S. Department of Health, Education, and Welfare
- U.S. Department of Education. (2024). Empowering Education Leaders: A Toolkit for Safe, Ethical, and Equitable AI Integration.

AI in Language Teaching

Benefits & Limitations

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

AI and Language Teaching

AI is transforming language education by offering personalized support, instant feedback, and authentic practice opportunities. It lowers barriers like anxiety and limited access to fluent speakers, making learning more effective and engaging. At the same time, it comes with limitations such as lack of empathy, technical issues, and privacy concerns that teachers must keep in mind.

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Benefits of AI in Language Teaching

1 Reduces Anxiety

AI partners provide a low-stakes environment for practice. Learners can try, make mistakes, and improve without the fear of being judged.
For example, a student can rehearse a presentation with a chatbot until they feel ready to share it in class.

2 Realistic Practice

Chatbots and voice systems create lifelike conversations. This allows learners to experience natural dialogue in a safe, controlled setting.
For example, learners can practice ordering food at a restaurant or asking for directions before trying it in real life.

3 Fast Feedback

AI gives instant insights on grammar, vocabulary, and fluency. Quick corrections help learners adjust right away and see their progress.
For example, a learner writing an essay can get immediate feedback on sentence structure and word choice.

4 Keeps Learners Engaged

Interactive AI systems turn repetitive exercises into dynamic exchanges. This keeps motivation high and practice more enjoyable.
For example, a language app can turn a reading task into a quiz with points and rewards to sustain interest.

5 Personalized Support

AI partners provide a low-stakes environment for practice. Learners can try, make mistakes, and improve without the fear of being judged.
For example, a student can rehearse a presentation with a chatbot until they feel ready to share it in class.

VS

Limitations of AI in Language Teaching

1 Lacks Empathy

AI cannot offer genuine encouragement or emotional support. Feedback may feel flat or impersonal.
For example, a learner struggling with motivation won't get the same reassurance an understanding teacher could provide.

2 Can Feel Mechanical

Without careful design, AI conversations may sound scripted or unnatural, limiting fluency practice.
For example, a chatbot might respond with rigid phrases that don't match the learner's attempt to improvise.

3 Technical Issues

System glitches or inaccurate outputs can interrupt the flow of learning and reduce trust.
For example, an app freezing mid-session can discourage a student from continuing practice.

4 Limited Authentic Dialogue

Many AI tools still struggle to sustain rich, context-based conversations.
For example, a learner may ask a follow-up question and receive an unrelated or superficial response.

5 Privacy Concerns

Learners may worry about how their personal data is stored and used.
For example, students could hesitate to use voice features if unsure where their recordings are going.

6 Bias Risks

AI often favors dominant language varieties, overlooking accents and dialects that reflect learner identities.
For example, a student with a regional accent might receive unfairly low pronunciation scores.

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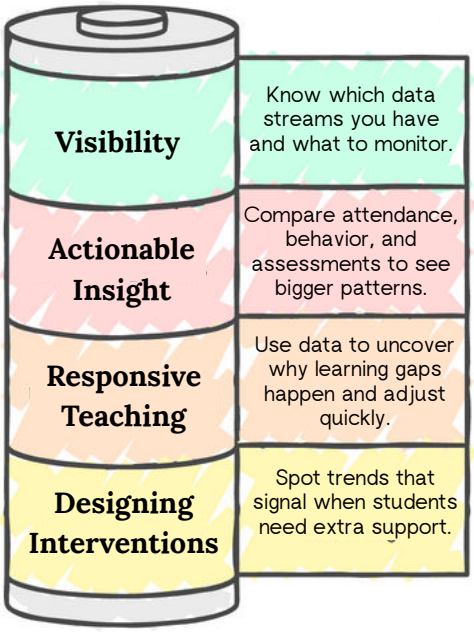
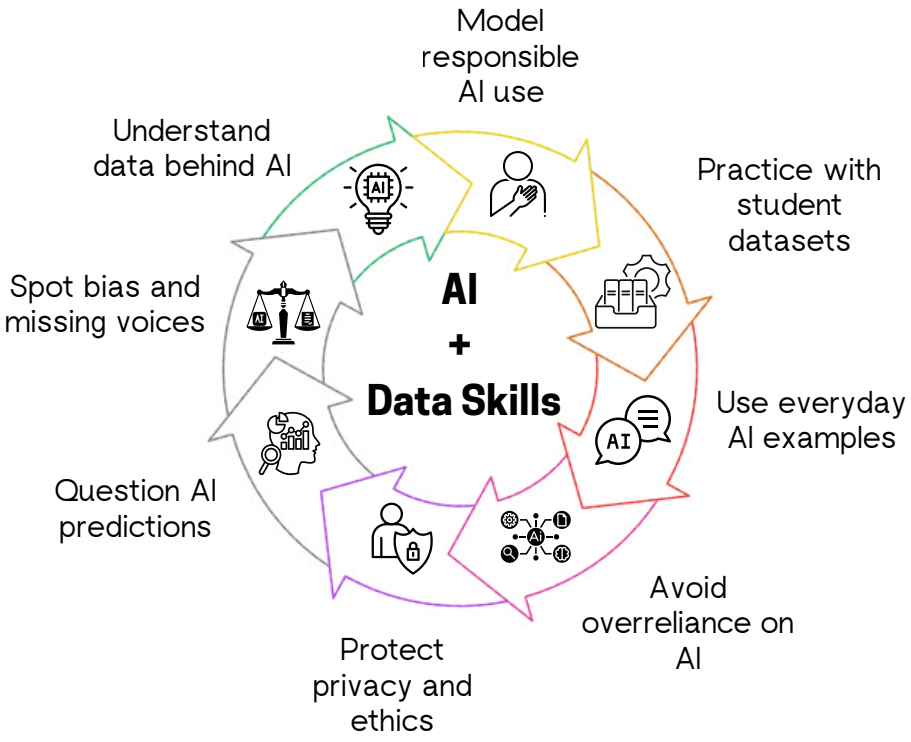
> Data literacy is the practice of examining and understanding data to draw and communicate conclusions and make decisions. Data-literate educators continually, effectively, and appropriately access, interpret, act on, and communicate multiple types of data from classroom, local, state, and other sources to improve outcomes and experiences for students.
>
> (National Center for Education Statistics, 2024, p.4)

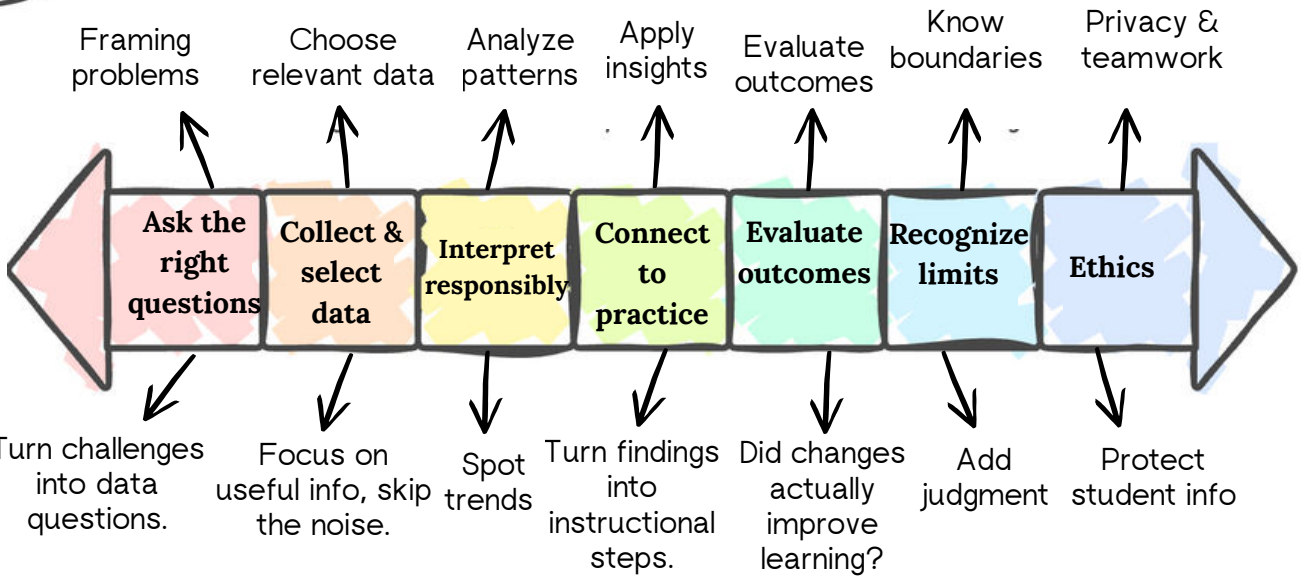
AI Literacy and Data Literacy Skills Every Teacher Needs

Why Data Literacy Matters for Teachers





Skills of a Data-Literate Teacher



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AI Literacy ↔ Computational Thinking

Building 21st Century Skills

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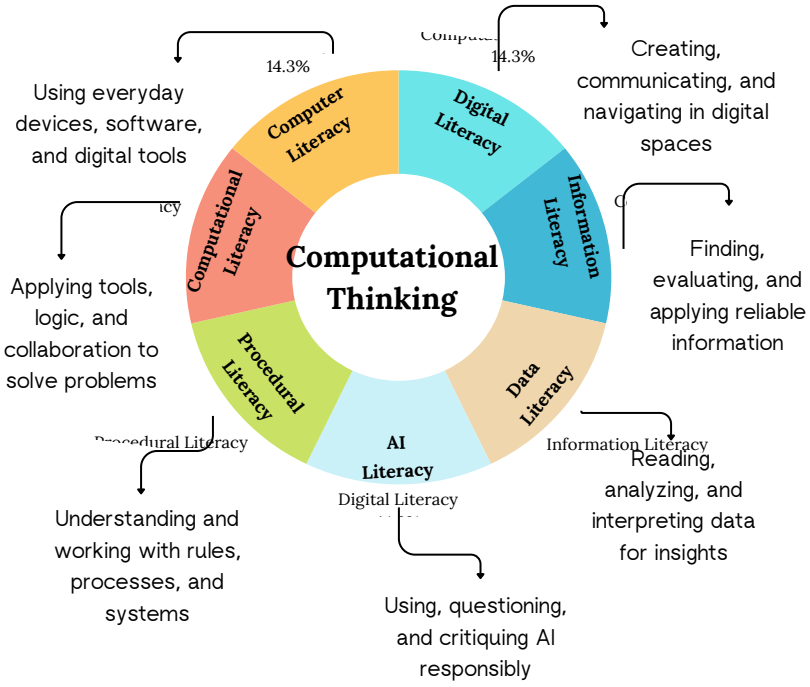

> Learning how AI works is an opportunity for learning computational thinking skills
> (TeachAI)

What Is Computational Thinking?

> "Computational thinking involve.s solving problems, designing systems, and understanding human behavior, by drawing on the concepts fundamental to computer science."
> (Wing, 2006, p. 33)

> "A way of solving problems and designing systems that draw on concepts fundamental to computer science and are applicable to various disciplines."
> (TeachAI)

Characteristics of Computational Thinking (ISTE)

Formulating Problems	Framing challenges so they can be tackled with computer-based tools and approaches.
Organizing Data	Logically structuring, sorting, and analyzing information to make it useful.
Using Abstractions	Simplifying complexity through models, patterns, or simulations.
Algorithmic Thinking	Creating step-by-step procedures that lead to workable solutions.
Evaluating Solutions	Testing and refining options to achieve the most efficient and effective result.
Generalizing	Applying successful methods to new situations and a wide variety of problems.

AI Literacy ↔ Computational Thinking

1. **Decomposition:** Breaking complex problems into smaller parts.
2. **Abstraction:** Highlighting the essential details and ignoring irrelevant ones.
3. **Algorithmic Thinking:** Designing step-by-step solutions to problems.
4. **Pattern Recognition:** Identifying trends and regularities in data.
5. **Reflection (Debugging):** Spotting and fixing errors in AI outputs.
6. **Evaluation:** Testing and refining solutions for the best result.

> One of the major benefits of learning about AI is developing computational thinking
> (TeachAI)

Sources:

- International Society for Technology in Education, & Computer Science Teachers Association. (2011). Operational definition of computational thinking for K–12 education. Supported by the National Science Foundation under Grant No. CNS-1030054. Retrieved August 23, 2025, from https://cdn.iste.org/www-root/Computational_Thinking_Operational_Definition_ISTE.pdf
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AI Literacy and Its Foundations

(Digital Promise, 2024)

Prepared by Med Kharbach, PhD
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Foundational Literacies → **Computational Thinking** → **Digital Citizneshio** → **Media Literacy** → **Digital Literacy** → AI Literacy

Computational thinking is a problem-solving approach that breaks down tasks so a computer can process them, using logic, abstraction, and step-by-step procedures.

Skills

- **Breaking** problems into smaller parts
- **Creating** algorithms and procedures
- **Recognizing** patterns in data
- **Automating** processes with rules
- **Using** abstraction to simplify complexity

Digital citizenship refers to the responsible use of technology to learn, create, and participate online while protecting privacy, rights, and relationships.

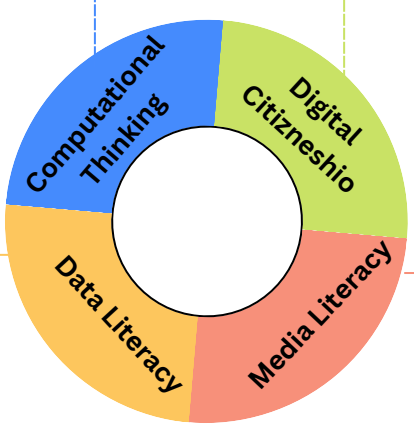
Skills

- **Practicing safe** and ethical online behavior
- **Managing** digital identity and footprint
- **Protecting** personal data and privacy
- **Balancing** media and screen time
- **Communicating** respectfully and responsibly

Data literacy is the ability to collect, analyze, interpret, and use data with critical awareness of quality, context, and limitations.

Skills

- **Collecting** accurate and relevant data
- **Organizing** and visualizing data clearly
- **Assessing** data quality and validity
- **Interpreting** patterns and trends
- **Using** data for informed decisions



Media literacy refers to the The ability to access, analyze, evaluate, and create content across media formats with awareness of influence, bias, and intent.

Skills

- **Analyzing** media messages and sources
- **Recognizing** bias and persuasive techniques
- **Creating** responsible digital content
- **Evaluating** credibility of information
- **Understanding** how algorithms shape media feeds

AI Literacy Pracitices

1	2	3	4	5	6
Algorithmic Thinking, Abstraction & Decomposition	**Data Analysis & Inference**	**Data Privacy & Security**	**Digital Communication & Expression**	**Ethics & Impact**	**Information & Mis/ Disinformation**
Example	**Example**	**Example**	**Example**	**Example**	**Example**
Writing step-by-step rules to train an AI to sort images of animals.	Checking the accuracy and patterns in a dataset used for a classroom survey.	Choosing not to share personal details when signing up for an AI writing tool.	Creating a presentation with responsibly sourced AI-generated images.	Questioning if an AI grading tool treats all student groups fairly.	Spotting a deepfake video and verifying the original source.

Source: Ruiz, P., Mills, K., Lee, K., Coenraad, M., Fusco, J., Roschelle, J., & Weisgrau, J. (2024). AI Literacy: A Framework to Understand, Evaluate, and Use Emerging Technology. Digital Promise. https://doi.org/10.51388/20.500.12265/218

12 Teacher Tips for Integrating AI in the Classroom

Prepared by Med Kharbach, PhD
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Based on the U.S. Department of Education, Empowering Education Leaders: A Toolkit for Safe, Ethical, and Equitable AI Integration (2024)

1 Pace Your Integration

- Start small, try AI in one lesson or unit before using it across your teaching.
- Example: Use AI to generate a draft quiz for one class, then review and refine it before expanding to other classes.

2 Set Clear Purpose

- Link every AI activity to your learning objectives.
- Example: If your goal is to improve persuasive writing, have AI provide multiple examples for students to analyze and critique.

3 Verify All Outputs

- Cross-check AI-generated text, images, or data for accuracy and appropriateness.
- Example: If AI generates historical facts, confirm them with trusted sources before including them in lessons.

4 Model Responsible Use

- Show students how you use AI ethically: cite it, explain its role, and note limitations.
- Example: Display "Generated with AI and verified by [Your Name]" in lesson slides.

5 Co-Create Norms with Students

- Collaboratively set ground rules for AI use in class.
- Example: Students agree that AI can suggest ideas but not write full essays for them.

6 Promote Critical Thinking

- Design tasks where students must improve, fact-check, or challenge AI content.
- Example: Provide AI-generated solutions and ask students to identify flaws or suggest alternatives.

7 Protect Privacy

- Never input student names, grades, or sensitive data into AI systems.
- Example: Use fictional or anonymized data when testing AI grading tools.

8 Build AI Literacy

- Teach students how AI works, its strengths, and its limitations.
- Example: Run a mini-lesson showing how AI can produce both useful and flawed answers.

9 Support Accessibility

- Choose AI tools that offer multiple formats (text, audio, captions) and work on low-bandwidth connections.
- Example: Use AI to create transcripts for video content for students with hearing impairments.

11 Use AI to Differentiate Learning

- Adapt content for varied ability levels using AI as a starting point.
- Example: Generate simplified reading passages for struggling readers and extension questions for advanced learners.

11 Align with School Policies

- Ensure classroom AI practices match district rules and legal requirements.
- Example: If your district bans AI for grading, use it only for drafting feedback, not assigning marks.

12 Integrate Reflection Time

- After an AI activity, give students time to discuss how it helped or hindered learning.
- Example: Use exit tickets asking, "How did AI help you today?" and "What would you change?"

Educators Technology

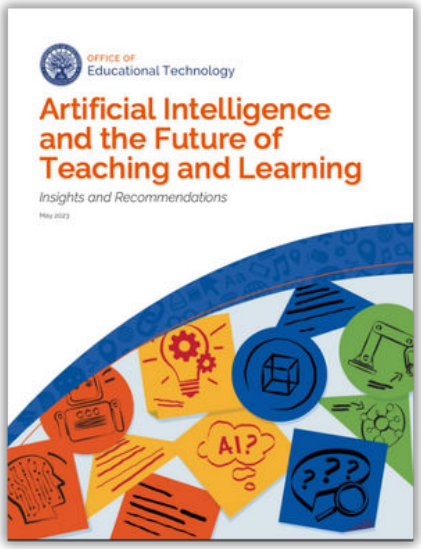
Adapted from U.S. Department of Education, Empowering Education Leaders: A Toolkit for Safe, Ethical, and Equitable AI Integration (2024)

Educators Technology

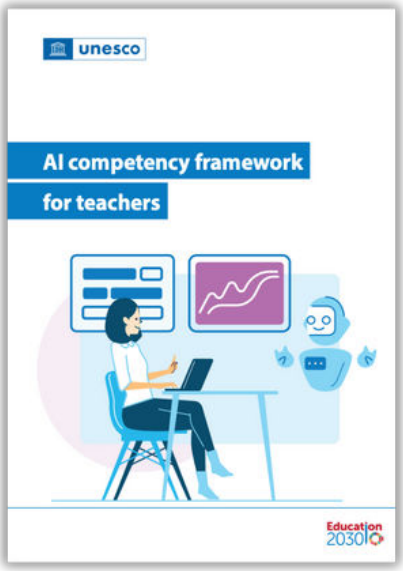
6 Free AI Guides for Teachers

Foundational guides that provide you with everything you need to teach, lead, and adapt with AI.

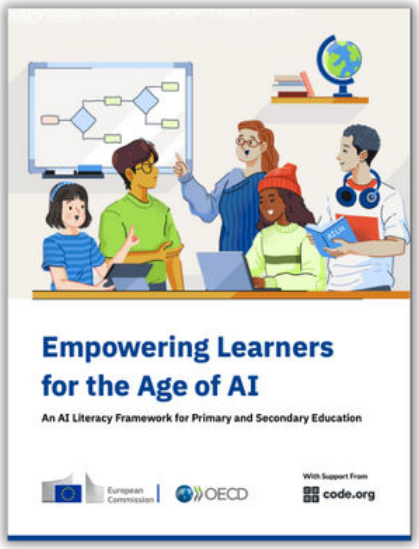
Compiled by Med Kharbach, PhD



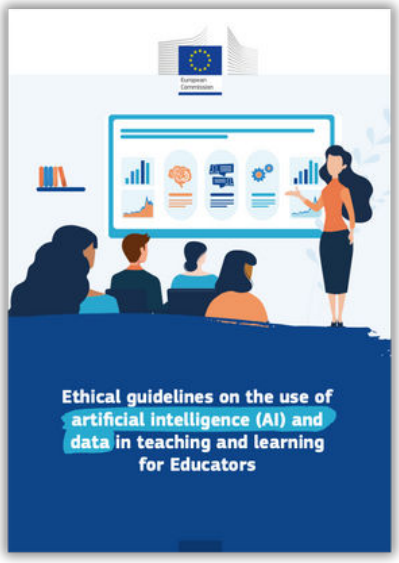
Artificial Intelligence and the Future of Teaching and Learning



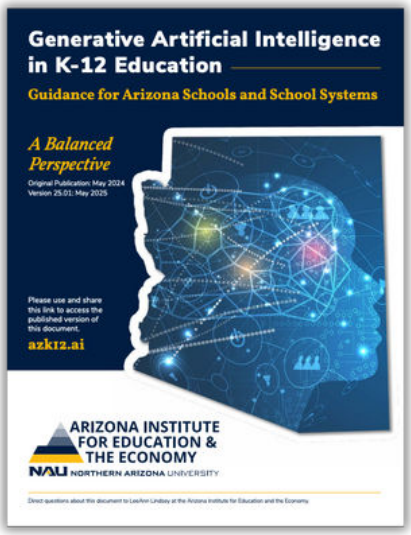
AI competency framework for teachers



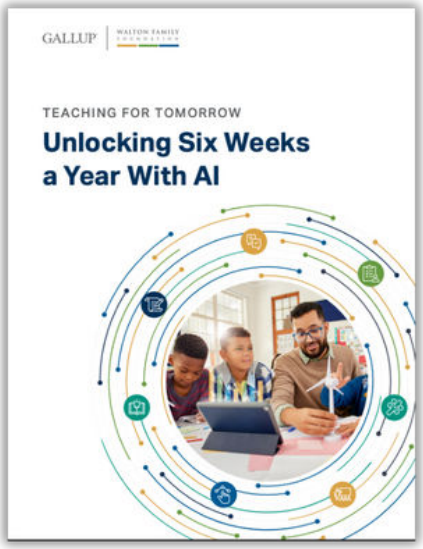
Empowering Learners for the Age of AI



Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for Educators



Generative Artificial Intelligence in K-12 Education



Unlocking Six Weeks a Year With AI

AI Resources for Teachers

Prepared by Med Kharbach, PhD
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General Resources

- **The AI Education Project:** aiEDU
- **STE:** Artificial Intelligence in Education Resource Collection
- **Learn 21:** Generative AI Annotated Bibliography and AI Video Series
- **Microsoft:** Education AI Toolkit and AI in Education Research
- **Teach AI:** AI Guidance for Schools Toolkit & Policy Resources & Future of CS Education in an Age of AI
- **European Commission:** Ethical Guidelines on the Use of Artificial Intelligence (AI) and Data in Teaching and Learning for Educators
- **US Department of Education Office of Educational Technology:** Artificial Intelligence and the Future of Teaching and Learning

Family Engagement

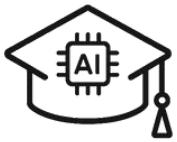
- **A Parent's Guide to AI:** Parents' Ultimate Guide to Generative AI

AI Leadership and Implementation

- **ILO Group:** Framework for Implementing Artificial Intelligence (AI) in K–12 Education
- **Teach AI:** Guidance for Schools Toolkit
- **Common Sense:** AI and Our Kids: Common Sense Considerations and Guidance for Parents, Educators, and Policymakers

Data Privacy

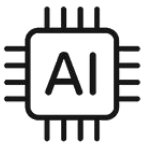
- **Future of Privacy Forum:** Student Privacy Compass, Vetting Generative AI Tools for Use in Schools, & The Spectrum of Artificial Intelligence & Youth & Education Privacy
- **Consortium for School Networking (CoSN):** Student Data Privacy Toolkit
- **Access for Learning (A4L):** Arizona Student Privacy Alliance (AZSPA)



Academic Integrity

- **Matt Miller, Ditch that Textbook:** AI in the Classroom: What's Cheating and What's OK?
- **Dr. Rahul Kumar:** The Role of Postplagiarism in Understanding AI-Generated Content
- **Perkins, Furze, Roe, & MacVaugh:** The AI Assessment Scale

AI Literacy



For Educators

- **AI4K12:** Guidelines and Grade Band Progression Charts
- **Digital Education Council:** AI Literacy Framework
- **Evergreen:** AI Competencies for K–12
- **Leo S. Lo:** The CLEAR path: A framework for enhancing information literacy through prompt engineering
- **UNESCO:** AI Competency Framework for Students

For Students

- **aiEDU:** Teach AI Classroom Curricula
- **Code.org:** AI Curricula
- **Common Sense Media:** AI Literacy Lesson for Grades 6–12
- **MIT:** Day of AI Curriculum
- **MIT:** An Ethics of Artificial Intelligence Curriculum for Middle School Students
- **Stanford Graduate School of Education:** CRAFT AI Literacy Resources

Source: https://legacy.nau.edu/wp-content/uploads/sites/222/2025/05/AZ-GenAI-Guidance-v25.0155.pdf

Prompt Like a Pro: A Teacher's Guide

The 4 Prompt Elements

Persona
Who is speaking or acting (e.g., I am a marketing manager)

Task
What you want AI to do (e.g., summarize, draft, create)

Context
Background information AI needs (e.g., reference files, goals)

Format:
Desired structure of the output (e.g., bullet points, table)

Teacher Use Cases

"Prompting is not just asking good questions , but to AI. The clearer you are, the better help you get."

- Create quiz questions from lesson notes
- Summarize student feedback from surveys
- Generate lesson plan ideas
- Turn learning goals into classroom activities

General Prompting Tips

- Use clear, natural language → Write like you're talking to a colleague.
- Be specific and give context → Add grade level, subject, or topic details.
- Keep it short but detailed enough → Don't overload, but don't leave AI guessing.
- Iterate and refine responses → Treat it like a back-and-forth chat — adjust until it works.
- Tell AI exactly what you want → Start with a verb: Summarize, Create, Draft, List, Explain.
- Ask for output in a specific format → Bullet points, table, paragraph, checklist, or script.
- Use your own files → Mention or attach lesson plans, student work, or your notes for more personalized help.
- Don't settle for the first draft → Ask: "Make it more friendly." "Make it shorter." "Add an example."

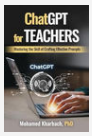
Avoide These Prompting Mistakes

- Being too vague → Bad: "Help me."
- Forgetting context → Bad: "Write a lesson."
- No clear task → Bad: "Math ideas."
- No format → Bad: "Activities."

I'm a Grade 4 teacher. Create 3 fun math review games for fractions. List them in bullet points."

Ready-to-Use Prompts for Teachers

- "I'm a grade 7 teacher. Summarize this article in simple language for students."
- "Write a kind email to parents about missing homework. Keep it short and clear."
- "I'm a grade 5 teacher. Generate 5 creative writing prompts about nature."
- "Turn this lesson outline into a 5-slide Google Slides deck. Add 1 key idea per slide."



Check out my book Prompting for Teachers for more insights and tips on how to leverage the power of prompting in your interactions with AI

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Teachers' Prompting Guide for Classroom Management

www.educatorstechnology.com

Student Behavior and Discipline

- "I am a middle school teacher preparing for the first week of school. Suggest practical strategies to help me set clear classroom expectations and routines that students will remember and follow."
- "I am teaching a lively group of 5th graders. Write a short, respectful script I can use to address disruptive behavior in the middle of a lesson without escalating the situation."
- "I am a high school teacher looking for ways to reinforce positive behavior consistently. Suggest non-tangible methods (like praise, responsibilities, recognition) that fit a teenage classroom culture."

Classroom Organization and Structure

- "I am setting up a 4th-grade classroom for the new school year. Suggest layout ideas that minimize distractions and help students stay focused during independent and group work."
- "I am an elementary school teacher looking to tighten classroom management. List 5 practical transition routines I can teach students to move quickly and efficiently between activities without losing focus."
- "I teach middle school science, and I want students to take more ownership of the classroom space. Share strategies to encourage students to help keep supplies, desks, and materials organized on a daily basis."

Instructional Strategies and Student Engagement

- "I am a high school English teacher preparing a 50-minute lesson. Help me design an engaging lesson plan that keeps students active and participating from start to finish."
- "I teach 6th grade math and sometimes lose students' attention during longer activities. Suggest quick, practical attention-getter techniques I can use when students start to drift off."
- "I am an elementary school teacher looking to strengthen my daily interactions with students. Share simple, consistent ways I can build trust and positive relationships during everyday routines like greetings, check-ins, and feedback."

SEL and Classroom Culture

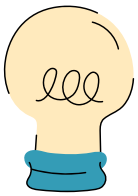
- "I teach 3rd grade and want to make morning meetings more meaningful. Suggest creative morning meeting ideas that can help build a positive and welcoming classroom atmosphere."
- "I am a middle school teacher looking for ways to support students during high-stress times, like tests or conflicts. Share strategies or mini-activities I can use to help students regulate their emotions in the moment."
- "I work with a diverse group of 5th graders. Suggest simple classroom activities that encourage kindness, peer support, and stronger friendships among students."

Communication and Collaboration

- "I am a 7th grade teacher and I need to update a parent about their child's recent progress in both academics and behavior. Draft a friendly and professional email that highlights improvements and encourages continued support at home."
- "I am setting up norms for a new high school class. Suggest ways I can involve students in creating classroom expectations collaboratively so they feel more ownership and responsibility."
- "I teach 5th grade and want to build stronger teamwork skills among my students. Share practical strategies or short activities I can use to foster collaboration and group problem-solving."

Diversity, Equity, and Inclusion

- "I am a high school social studies teacher working with a culturally diverse group of students. Suggest ways I can adapt my lessons to be more inclusive and respectful of different backgrounds and experiences."
- "I teach a multi-grade elementary class with students from various cultural and linguistic backgrounds. Share practical ideas I can use to make my classroom environment more welcoming, safe, and inclusive for every student."
- "I am a middle school teacher aiming to improve my classroom management practices. Give me examples of culturally responsive strategies that help build trust, respect, and positive behavior among students from diverse communities."



Critical Thinking
Teachers' Guide


Prepared by Med Kharbach, PhD
www.educatorstechnology.com

What is Critical Thinking?

Ennis (2015)

"reasonable reflective thinking focused on deciding what to believe or do." (p. 32)

Dewey (1933)

"active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further conclusions to which it tends." (p. 9)

Why Critical Thinking Matters?

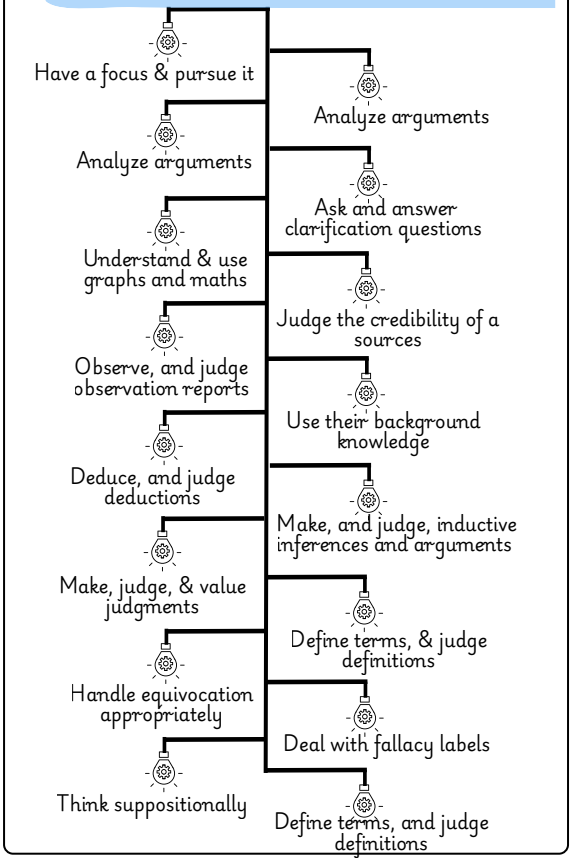
- It protects us from manipulation
- It improves decision-making
- It helps us challenge assumptions
- It makes us better citizens
- It sharpens our learning.

Ennis' Critical Thinking Framework

Ennis (2015, p. 32-33)

- Dispositions
- Skills

Critical Thinking Skills



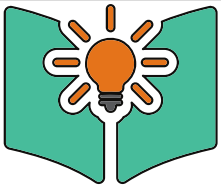
Critical Thinking Dispositions

Ennis (2015, p. 32)

- Seek and offer clear statements of the thesis or question,
- Seek and offer clear reasons,
- Try to be well informed,
- Use credible sources and observations, and usually mention them,
- Take into account the total situation,
- Keep in mind the basic concern in the context,
- Be alert for alternatives,
- Be open-minded
- Take a position and change a position when the evidence and reasons are sufficient,
- Seek as much precision as the situation requires,
- Try to "get it right" to the extent possible or feasible, and
- Employ their critical thinking abilities.

The Elements of Thought

Paul & Elder (2014)



Purpose
What are you trying to achieve with your thinking? What's the goal?

Inferences
What conclusions are you drawing? Are they reasonable?

Question
Every thought starts with a question or a problem to solve.

Point of View
From what perspective are you looking at this issue?

Information
What data or evidence are you using? Is it reliable?

Concepts
What ideas or theories are shaping your interpretation?

Assumptions
What are you taking for granted?

Implications
If your reasoning is accepted, what follows? What's at stake?

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Systems Thinking

Teachers' Guide

Prepared by Med Kharbach, PhD
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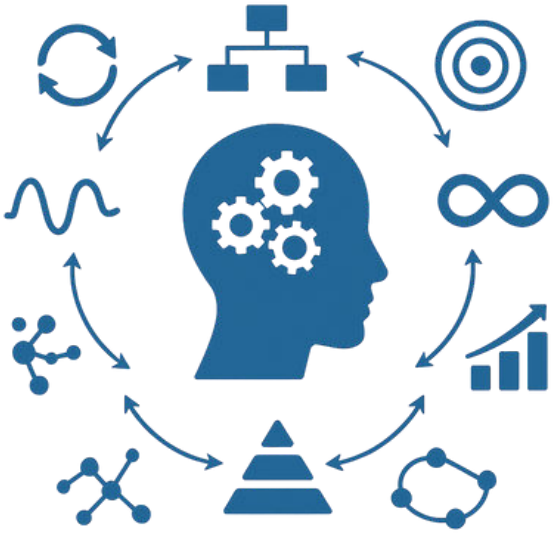

What is Systems Thinking?

Arnold & Wade (2015)

"a set of synergistic analytical skills used to improve the ability to recognize and understand systems, predict their behavior, and design their changes to achieve desired effects." (p. 675)

Why Systems Thinking is Important for Educators

Navigates complexity
Helps educators understand the interrelated elements in classrooms and curricula.

Holistic problem-solving
Encourages addressing root causes, not just symptoms, of educational challenges.

Enhances critical thinking
Develops higher-order thinking by helping students analyze interrelated factors.

Tackles complex problems
Helps educators solve complex, interconnected issues like inequality or tech integration.

Fosters collaboration
Builds adaptive learning environments through teamwork and multiple perspectives.

Applying Systems Thinking in Teaching Practice

1. **Use real-world systems**
Teach students to examine and understand real-world systems (e.g., ecosystems, social systems).

2. **Encourage interdisciplinary learning**
Tie concepts from different fields to reflect how real-world problems are interconnected.

3. **Visual mapping tools**
Use diagrams to help students visualize systems.

4. **Continuous reflection**
Regularly incorporate systems thinking questions to deepen understanding

5. **Collaborative learning**
Use group projects where students role-play system stakeholders and negotiate solutions.

Systems Thinking in the Age of AI

AI's systemic effects
AI's impact goes beyond just adding tools, it changes entire systems (e.g., education, labor markets).

Preparing students for AI
Guide students in critically assessing how AI influences various stakeholders and broader societal issues.

Broader societal implications
Use systems thinking to address the systemic nature of AI-related challenges like automation and misinformation.

Navigating AI complexity
Systems thinking helps educators understand AI's multifaceted impact and unintended consequences.

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- Arnold, R. D., & Wade, J. P. (2015). A definition of systems thinking: A systems approach. Procedia Computer Science, 44, 669-678.
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Important Tips for Designing AI-Proof Assessments

By Med kharbach, PhD www.educatorstechnology.com

1

Help students understand the risks of using AI and the value of self-expression.

- Discuss how skills like collaboration, pitching, and debate improve communication when AI is unavailable.

2

Design assessments that AI tools like ChatGPT cannot easily answer

- Ask students to write about personal experiences and connect them to the text or reflect on their learning journey.
- Require students to critique ChatGPT's default response to a question.
- Have students cite real, primary sources to support specific claims or analyze recent events.

3

Incorporate interactive, real-time assessments

- Assess students through live peer discussions and use peer assessment tools like Peerceptiv.
- Shift lectures to be take-home while requiring assignments to be completed in class.

4

Encourage iterative work and critical thinking

- Require students to produce multiple drafts, refining their work through peer or educator feedback to reinforce the learning process.

5

Assign creative outputs in challenging mediums

- Ask students to create PowerPoint presentations, visual displays, videos, or audio recordings that are harder for AI to replicate.

6

Set clear expectations about AI detection tools

- Inform students that you will use AI detectors like GPTZero to check submitted work, deterring misuse.

Source: https://gptzero.me/faq#ideas-for-ai-proof-assignments

Educators Technology

10 Free AI Literacy Resources for Teachers

OpenAI Academy

Free sessions, tutorials, and community groups to build your AI knowledge—ideal for all levels.

Claude AI Academy

Learn how to use Claude for teaching, writing, research, and productivity through hands-on tutorials.

Generative AI for Educators

Self-paced course with practical use cases, ethical strategies, and reflection prompts. Offers bu Google.

MIT RAISE

Open AI curriculum and creative tools for K-12, including App Inventor and AI Playground.

Common Sense AI Lessons

Ready-to-use mini lessons for grades 6-12 on AI ethics, bias, chatbots, and more.

CRAFT (Stanford University)

Multidisciplinary resources to help high school students explore and critique AI.

AI Pedagogy Projec

Assignments and resources focused on critical, ethical, and imaginative uses of AI in education.

Prompt Engineering Guide

Advanced prompt strategies, tutorials, and model-specific guides for LLMs like ChatGPT and Claude.

AI 101 for Teachers

Expert-led sessions, teaching guides, and resources on AI ethics, learning, and classroom use.

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Digital Literacy
Simply Explained

Prepared by Med Kharbach, PhD
www.educatorstechnology.com

Core Components of Digital Literacy

Bawden (2008) outlines four essential elements

Foundational Skills
Basic literacy and ICT know-how.

Context Knowledge
Understanding how information is created and organized, both online and offline.

Core Competencies
Searching, evaluating, combining, and creating digital content across formats.

Attitudes and Values
Independent learning and ethical digital behavior.

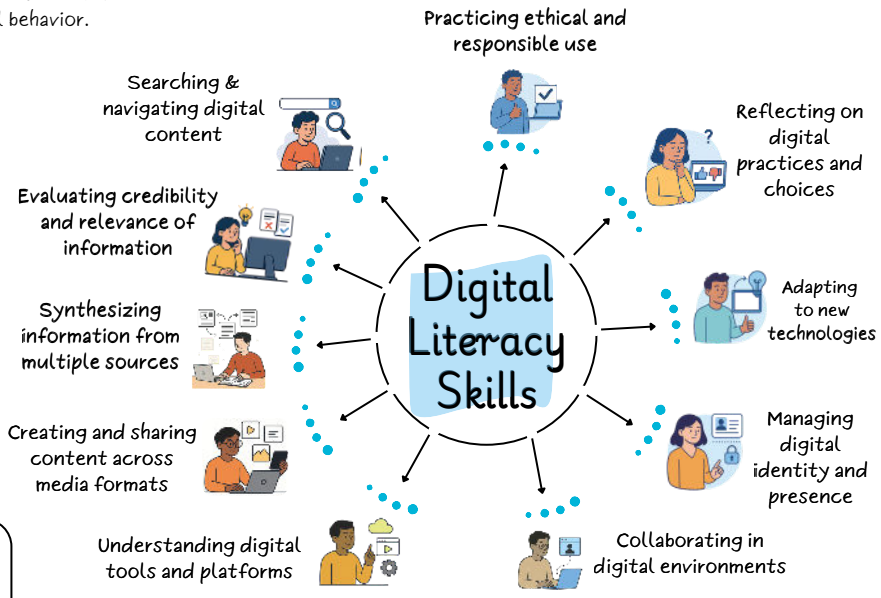
What is Digital Literacy?

Paul Gilster (1997) defines digital literacy as:

"The ability to understand information and-more important-to evaluate and integrate information in multiple formats that the computer can deliver. Being able to evaluate and interpret information is critical [...] you can't understand information you find on the Internet without evaluating its sources and placing it in context" (in Pool, 1997, p. 6)

What Digital Literacy is Not

- It's not just knowing how to use devices
- It's not limited to typing or basic software skills
- It's not a checklist of technical tasks
- It's not the same for every subject or student
- It's not separate from critical thinking and ethics
- It's not something mastered once and for all

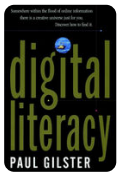


Digital Literacy & AI

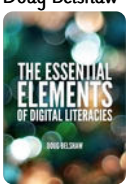
- Understand how AI tools gather, sort, and generate information
- Encourage responsible data sharing and privacy awareness
- Teach students to question and verify AI-generated content
- Use AI as a support for thinking, not a replacement for it
- Promote ethical use of AI in learning and communication
- Build habits of reflection when working with AI tools

Key Readings

Digital Literacy, Paul Gilster



The Essential Elements of Digital Literacies, Doug Belshaw



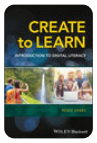
Digital Literacies, Lankshear & Knobel

Digital literacy Unpacked, Reedy & Parker,

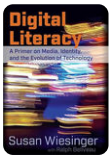
New Literacies, Lankshear & Knobel

Digital Literacies for Learning, Alan & Dan

Create to Learn, Hobbs Renee



Digital Literacy Susan Wiesinger



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10 Digital Skills That Still Matter Even With AI

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Digital Literacy Skills

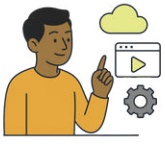
1. Searching & navigating digital content

2. Evaluating credibility and relevance of information

3. Synthesizing information from multiple sources

4. Creating and sharing content across media formats

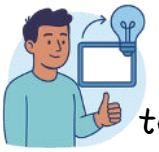
5. Understanding digital tools and platforms



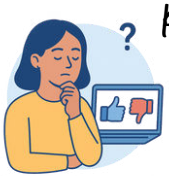
6. Collaborating in digital environments

7. Managing digital identity and online presence

8. Adapting to new technologies



9. Reflecting on digital practices and choices



10. Practicing ethical and responsible use of technology

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Important Digital Literacy Skills for Teachers and Students

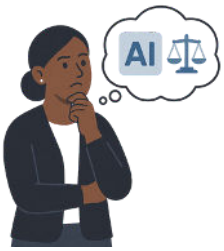
Ease of Use

- Is it intuitive for both teachers and students?
- Can users start quickly without extensive training?
- Are support resources available and easy to access?
- Does it integrate well with your existing tools?

Educational Value

- Does it align with your goals and curriculum?
- Does it deepen student understanding & engagement?
- Is the content relevant and meaningful?
- Can it be applied across multiple subjects?

Ethical Standards



- Does it help reduce bias and promote fairness?
- Is it transparent in how it works and generates content?
- Are there safeguards for accountability?
- Does it support equity and inclusion?

Effectiveness

- Does it deliver on its promises?
- Is it accurate, relevant, and reliable?
- Can you see measurable student improvement or engagement?
- Does it require frequent updates or tweaks?

Cost-Effectiveness

- Is it competitively priced?
- Does the value justify the cost?
- Are there hidden costs or ongoing fees?
- Can it replace or enhance current tools economically?

Data Privacy & Accessibility

- What data is collected, and how is it used?
- Is it compliant with privacy laws like FERPA or GDPR?
- Is it accessible and adaptable for all learners, including those with disabilities?

What Is Digital Citizenship?

Teachers Guide

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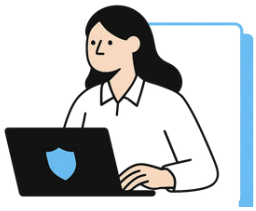


What is Digital Citizenship?

"The norms of appropriate, responsible behavior with regard to technology use."

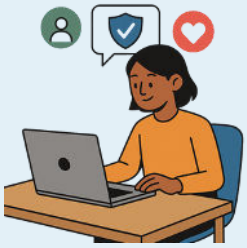
Ribble & Bailey (2007, p. 10)

"“The ability to participate in society online." (Mossberger et al., 2008, p. 1)

Digital citizenship means using technology in ways that are responsible, ethical, and informed. It includes understanding digital rights and responsibilities, protecting privacy, communicating respectfully, thinking critically about online content, and making positive contributions to digital communities.

Digital Citizens

"Those who use the Internet regularly and effectively—that is, on a daily basis" (Mossberger et al., 2008, p. 1)



Why Digital Citizenship Matters?

- Encourages safe, responsible, and ethical tech use
- Builds critical digital literacy and evaluation skills
- Prepares students for academic and professional success
- Protects privacy, well-being, and online safety
- Promotes equity through access and inclusion
- Fosters respectful global digital engagement
- Moves beyond rules to meaningful tech education
- Shapes habits for lifelong digital participation

Elements of Digital Citizenship

Digital Access
Equitable participation in the digital world

Digital Communication
Respectful and effective electronic communication

Digital Etiquette
Appropriate online behavior and interaction

Digital Rights
Freedoms and expectations in digital environments

Digital Security
safeguarding personal information & systems

Digital Commerce
Buying and selling goods online responsibly

Digital Literacy
Competence in using and understanding digital tools

Digital Law
Legal responsibilities related to technology use

Digital Health & Wellness
Physical and psychological well-being in tech use

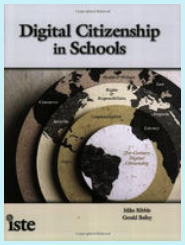
Steps to Create a Digital Citizenship Program

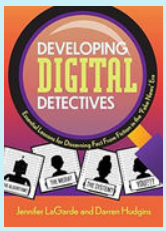
1. Conduct audit
2. Analyze results
3. Discuss key issues
4. Set priorities
5. Design & implement

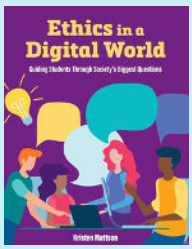
Digital Citizenship Online Resources

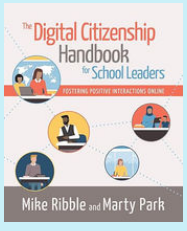
- Be Internet Awesome
- Common Sense Media
- Edutopia
- PBS Learning media

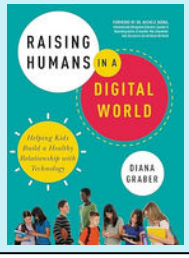
Key Readings

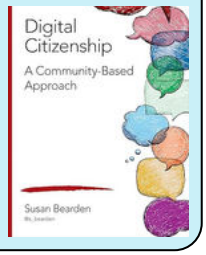












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Media Literacy
Simply Explained

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Definition

Media Education

"The process of teaching and learning about media" (Buckingham, 2007, p. 163)

Media literacy

"The ability to access, understand, analyze, evaluate, and create media in a variety of forms." (De Abreu, 2019)

CriticalMedia literacy

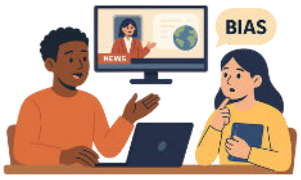
"Providing individuals access to understanding how the print and non-print texts that are part of everyday life help to construct their knowledge of the world and the various social, economic, and political position they occupy within it" (Alvermann, Moon, and Hagood, 1999, pp. 1-2)

Media

According to Potter (2004), media are technologies used to deliver messages to large audiences. They include all forms of mass communication, from print to digital platforms.

Media Literacy Skills
(Potter,2004)

1. **Analysis**
   Breaking down a message into meaningful elements.
2. **Evaluation**
   Judging the value of an element based on standards.
3. **Grouping**
   Organizing information by recognizing patterns and categories.
4. **Induction**
   Drawing general conclusions from specific examples.
5. **Deduction**
   Applying general principles to specific situations.
6. **Synthesis**
   Combining elements from different messages into a new structure.
7. **Absraction**
   Creating clear, concise summaries that capture the essence of messages.



Why Media Literacy Matters

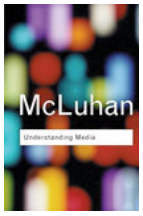
- Helps individuals recognize bias, manipulation, and misinformation
- Encourages critical thinking about media content and sources
- Empowers people to make informed choices as consumers and citizens
- Fosters awareness of media influence on beliefs, behavior, and culture
- Promotes active rather than passive engagement with media
- Supports democratic participation and civic responsibility
- Equips students with essential skills for the digital age

Strategies to Teach Media Literacy

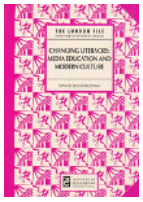
- Use real-world media examples for critical analysis
- Encourage students to question authorship, purpose, and audience
- Teach how to identify bias, framing, and missing perspectives
- Compare how different media outlets cover the same story
- Incorporate media creation projects (videos, podcasts, blogs)
- Discuss advertising techniques and persuasive language
- Teach students to fact-check and verify sources
- Create classroom discussions around current media trends and issues

Key Readings

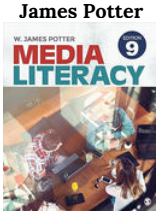
Understanding Media, Marshall McLuhan



Changing Literacies, David Buckingham



Media Literacy, James Potter



Literacy in the New Media Age, Gunther Kress

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11 Lessons I Learned After 15 Years in EdTech

www.educatorstechnology.com

1

Young Teachers Jump In Faster

Newer teachers tend to embrace new technologies easily, often experimenting without fear.

2

Mobile Tech Still Underused

Despite its potential, smartphones and tablets are still rarely used seriously in classrooms.

3

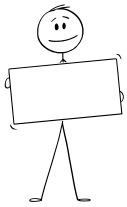
PD for Technology Is Still Weak

Most teachers are left to navigate technology integration without proper training or support.

4

Outdated School Infrastructure

Many schools operate with outdated devices and weak networks that block meaningful innovation.



5

Theory-Practice Gap in Teacher Training

There is still a real gap between what teacher education programs teach and real-world classroom needs.

6

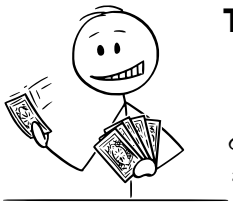
Tech Use Without Pedagogical Grounding

Technology often gets used for the sake of it, without linking it to strong teaching frameworks.

7

Stuck at Lower SAMR Levels

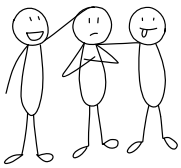
A lot of tech integration stays stuck at substitution, without truly transforming learning experiences.



8

Digital Divide Is Still There (Now AI Too)

Students from less privileged backgrounds continue to have limited access to digital and AI tools.

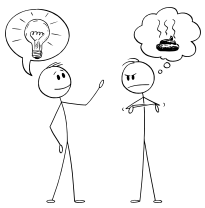


9

Students Are Tech Miles Ahead

Students learn and adapt to new technologies much faster than many teachers can keep up with.

10



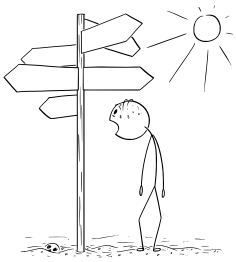
Fear and Doubt Slow Tech Adoption

New technologies often trigger fear, doubt, and hesitation among teachers, slowing down adoption.

11

Ecological Cost of Tech Overlooked

The environmental impact of digital technology and AI rarely enters conversations about EdTech.

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About the author

Med Kharbach, PhD, is the editor of www.educatorstechnology.com. A seasoned educator with over 15 years of classroom experience, Med earned his doctorate in Educational Studies from Mount Saint Vincent University in Halifax, Canada. His scholarly work includes numerous publications in prestigious peer-reviewed journals, alongside co-authoring several impactful book chapters. Currently, Med's research is passionately focused on exploring the integration and implications of AI in education. Med is currently working on a book on the use of AI in academic research.

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