

# Harnessing Generative AI for Educator Professional Development

October 2025

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**WINONA STATE UNIVERSITY**  
COLLEGE OF EDUCATION  
*Leadership Education Department*

# Teacher Motivations & Perceptions Survey for one of our master's students



CREATE THE FUTURE

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# A Little Context About Me

- Loras College
- University of Iowa
- Northern Ill. University
- Loyola University of Chicago

- Secondary history teacher
- Technology administrator
- Building principal
- PK-12 superintendent
- 20 years as adjunct professor
- 8 years full time faculty
- 5 years as dept chair
- 5 years program director



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***The key is to let AI handle the heavy lifting so you can spend more time leading people, not just managing tasks.***

**Dr. Janel Morris**

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# Session Description

Generative artificial intelligence (AI) is revolutionizing various fields, from data analysis to creative writing. In education, it presents a unique opportunity to transform instructional practices. This presentation explores how educators can leverage AI tools to enhance their professional development both individually and institutionally. It delves into practical strategies for integrating AI into professional growth, offering a fresh perspective on traditional and innovative training methods. Attendees will learn about the benefits and challenges of using AI in professional development, including ethical considerations. By the end of the session, educators and administrators will be equipped with actionable insights to implement AI-powered tools effectively, ensuring these innovations contribute positively to this new AI rich educational ecosystem.

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# Learning Objectives

- After participating in this session, attendees will be able to select and analyze the potential of AI tools to personalize professional development
- After participating in this session, attendees will be able to utilize generative AI tools to manage common professional development tasks
- After participating in this session, attendees will be able to develop actionable strategies for integrating AI into professional development plans

**AI IS HERE  
TO STAY**

**THE GENIE IS  
NOT GOING  
BACK INTO THE  
BOTTLE**



# Tiers of Artificial Intelligence

## Gemini

- Tier 1: Reactive Machines
- Tier 2: Limited Memory
- Tier 3: Theory of Mind
- Tier 4: Self-Awareness
- Tier 5: Artificial General Intelligence (AGI)



# How 213 K-12 Educators Use AI

Developing Course Materials	Creating Assessment Materials	Providing Feedback to Students	Facilitating Online Discussions	Supporting Student Research Projects	Enhancing Accessibility for Students
77	68	21	12	23	44

# Simple Professional Development Tasks

- Create or update your professional biography
- Improve instructional materials and strategies
- Update your CV, develop a specific resume
- Draft letters, etc.

Ethan Mollick states in *Co-Intelligence* that AI will be better at reference letters than we can be

# Professional Biography

## Short Bio from Easy-Peasy.ai.

Dr. Steve Baule is an accomplished educational leader with over 15 years of experience as a superintendent. He has a diverse background, having served as a high school principal and gained valuable insights as a classroom teacher and library media specialist. Dr. Baule holds doctoral degrees in both educational leadership and instructional technology, which underscore his commitment to advancing education through innovative practices.

An esteemed author, he has contributed over 100 articles on topics ranging from educational technology and leadership to the history of emerging technologies. Currently, he serves as a professor of educational leadership at Winona State University, where he continues to inspire and prepare the next generation of educational leaders.



# ChatGPT's Portrait of me

Prompt to ChatGPT:

Can you paint a picture of me based upon the interactions we have had?



# Reference Letters, etc.

- Be careful with generating high value reference letters, etc.
- A superintendent recently stated he does a leadership thought for the day, each day, tied to his shirt by AI.
- Parent letters, X (formerly known as Twitter) and LinkedIn posts
- Grant proposals



# Taking Minutes or Notes (no longer)



**NEW**

Meeting summary with AI Companion now supports additional languages in pre-view. [Learn More](#)

## Meeting summary for Graduate Council (10/24/2024)

### Quick recap

The meeting covered various aspects of course management and curriculum development, including discussions on 500-level courses, graduate assistant positions, and course revisions. The team approved several course changes, including moving some 500-level courses to the 600-level and combining existing courses into new offerings. Additionally, the group explored the use of AI for generating meeting summaries and addressed the need for more graduate program applications.

### Next steps

- All faculty to submit graduate assistant position applications by November 1st.
- Faculty to continue working on reviewing 400/500 level courses and send information to Brian to complete the spreadsheet by November 1st.
- Nursing faculty to adjust prerequisite for CHM 539 course as noted by Amy.

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### Summary

#### Project Progress and Participant List

Diane, Mitch, Steven, Jodi Saunders, and Craig discussed the progress of a project, with Diane expressing her admiration for the Rainbow project. Steven and Mitch discussed the need for more participants for an upcoming event, with Mitch unable to see the list of participants. Jodi Saunders offered to highlight the list for Mitch. The team also discussed the need

# Developing a PD Plan

## Asked ChatGPT

Can you please draft a set of professional development goals for me as an assistant professor covering instruction, student support, research, and university service? Generate twelve draft goals, three for each enumerated area.

# Sample Generated Goals

- **Curriculum Development:** Review and update course materials to align with current industry standards and research trends. Aim to revise at least one course syllabus each semester, incorporating new research findings and technology where applicable.
- **Increase Student Engagement in AI and Technology Use:** Develop resources or workshops to help students leverage AI and digital tools responsibly in their coursework and research.

# Portion of Learning Plan for Co-Pilot

Sure! Here is a more detailed professional development plan for learning how to use co-pilot with PowerPoint in two weeks:

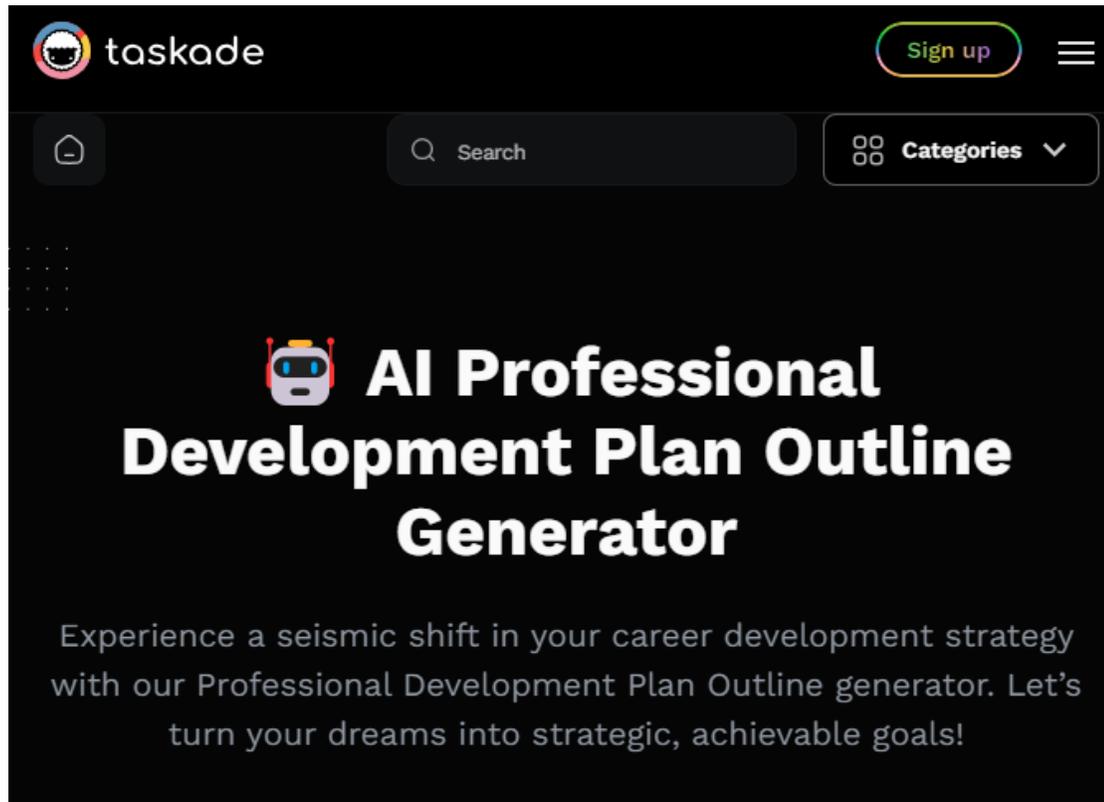
Week 1	Week 2
<p><b>Day 1-2</b> Introduction to Co-pilot and PowerPoint basics.</p> <ul style="list-style-type: none"><li>• Understand the purpose and benefits of using Co-pilot with PowerPoint.</li><li>• Familiarize yourself with the PowerPoint interface and basic functionalities.</li><li>• Set up Co-pilot and integrate it with PowerPoint.</li></ul>	<p><b>Day 8-9:</b> Advanced Co-pilot techniques in PowerPoint.</p> <ul style="list-style-type: none"><li>• Learn how to use Co-pilot for data visualization and charts.</li><li>• Explore advanced design and formatting options.</li></ul> <p>Practice creating interactive presentations with Co-pilot.</p>
<p><b>Day 3-4</b> Exploring Co-pilot features and functionalities.</p> <ul style="list-style-type: none"><li>• Learn how to use Co-pilot to create and edit slides..</li></ul>	<p><b>Day 10-11:</b> Creating a project using Co-pilot and PowerPoint.</p> <ul style="list-style-type: none"><li>• Plan and outline a comprehensive presentation project.</li></ul>

# Plan for Learning Co-Pilot in PowerPoint

## 7-Day PD Plan: Learning to Use Copilot in PowerPoint

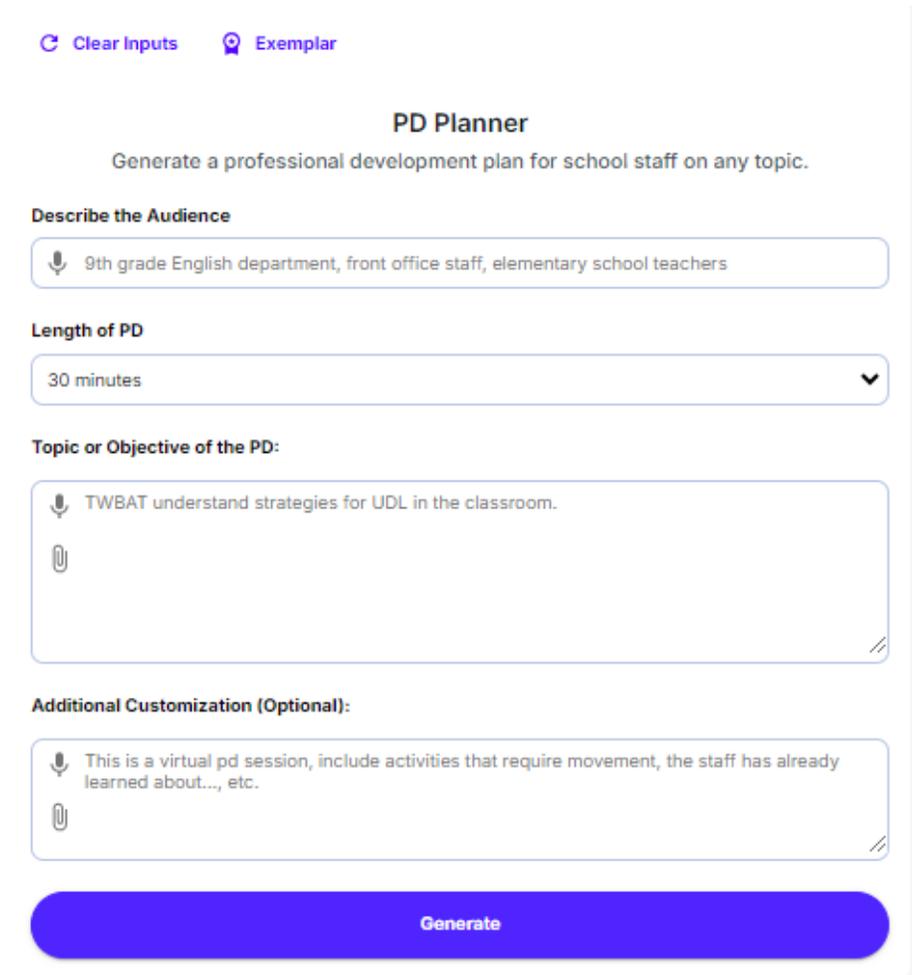
- ✘ **Day 1: Intro to Copilot** Understand what Copilot is and locate features.
- ✘ **Day 2: Generate Content** Practice generating slides and content using prompts.
- ✘ **Day 3: Slide Design** Use Copilot for layout, design, and visual appeal.
- ✘ **Day 4: Data Visualization** Create charts, graphs, and SmartArt visuals.
- ✘ **Day 5: Interactive Features** Add transitions, animations, and speaker notes.
- ✘ **Day 6: Collaboration** Collaborate with others and refine presentations.
- ✘ **Day 7: Presentation Challenge** Apply all skills in a 10-slide presentation.

# Professional Development Planners



The screenshot shows the Taskade website interface. At the top left is the Taskade logo. In the top right corner, there is a "Sign up" button and a hamburger menu icon. Below the logo, there is a search bar with a magnifying glass icon and a "Search" label, and a "Categories" dropdown menu with a grid icon. The main content area features a large white text overlay on a dark background. The text reads: "AI Professional Development Plan Outline Generator". Below this, there is a sub-headline: "Experience a seismic shift in your career development strategy with our Professional Development Plan Outline generator. Let's turn your dreams into strategic, achievable goals!".

<https://www.taskade.com/generate/outline/professional-development-plan-outline>



The screenshot shows the "PD Planner" form. At the top, there are two buttons: "Clear Inputs" and "Exemplar". The title "PD Planner" is centered. Below the title is the instruction: "Generate a professional development plan for school staff on any topic." The form consists of several sections:

- Describe the Audience:** A text input field containing "9th grade English department, front office staff, elementary school teachers".
- Length of PD:** A dropdown menu with "30 minutes" selected.
- Topic or Objective of the PD:** A text input field containing "TWBAT understand strategies for UDL in the classroom." Below the text is a paperclip icon for attachments.
- Additional Customization (Optional):** A text input field containing "This is a virtual pd session, include activities that require movement, the staff has already learned about..., etc." Below the text is a paperclip icon for attachments.

At the bottom of the form is a large blue button labeled "Generate".

# Instructional Coaching

AI offers a non-judgmental approach without the potential to damage interpersonal relationships. Three current tools that can be used for this type of analysis include:

- M-Powering Teachers (<https://www.mpoweringteachers.com/>)
- TeachFX (<https://teachfx.com/>)
- Amazon Rekognition (<https://aws.amazon.com/rekognition/>)

# TCEA Lesson Plan Prompt

Generate a [INSERT TOTAL LESSON TIME], [INSERT GRADE LEVEL] lesson plan as a table. The table should have columns for "Objectives," "Standards," "Pre-Assessment," "Activities," "Post-Assessment," "Accommodations," and "Time".

Here are the standards for the lesson: [COPY AND PASTE SPECIFIC STANDARDS HERE]

I would like for you to generate the objectives, pre-assessment, activities, post-assessment, and accommodations for the lesson plan which should be about [INSERT SPECIFIC LESSON TOPIC HERE].

In the standards column, include the full standards for each corresponding aspect of the lesson.

In the time column, include the amount of time that should be spent on that aspect of the lesson.

Provide a pre-assessment activity to complete at the beginning of the lesson and a post-assessment activity to complete at the end of the full lesson. (Horn, 2023).

# Ethan and Lilack Mollick

- One Useful Thing
  - <https://www.oneusefulthing.org/>
- More Useful Things
  - <https://www.moreusefulthings.com/>
  - <https://www.moreusefulthings.com/prompts>

# Identify Patterns and Trends in Student Performance

A professor uses an AI-powered learning analytics dashboard (e.g., Power BI, Tableau, or an LMS with built-in analytics) to examine midterm exam results. The AI detects that 80% of students scored poorly on questions related to critical thinking in data analysis, suggesting that students may need more scaffolded instruction or additional resources on that topic.

**Improvement Strategy:** Revise the next unit to include more guided case studies and real-world problem-solving activities to reinforce these skills.

# Sentiment Analysis of Student Feedback

Using AI-driven sentiment analysis tools (such as MonkeyLearn or Qualtrics), a professor processes end-of-course evaluations. The AI finds that a recurring theme in open-ended responses is “lack of real-world applications” and “too many dense readings.”

*I have enjoyed my courses prepared by this instructor. I always learn a lot, even though there is an overwhelming amount of materials.*

**Improvement Strategy:** Redesign the curriculum to incorporate more applied learning, such as guest speakers from industry, project-based assessments, and AI-generated case studies tailored to students' career interests.

# Developing Personalized Instruction

An instructor uses an adaptive learning platform (Smart Sparrow or Edmentum) that analyzes quiz and homework data to suggest customized learning paths for each student. The analysis finds that some students struggle with foundational concepts while others excel.

**Improvement Strategy:** Integrate AI-powered adaptive quizzes, where students struggling with basic concepts receive additional review material, while advanced learners get more challenging problems and enrichment activities

# Optimize Course Design & Assessment Strategies

After an AI tool like Gradescope analyzes multiple semesters' worth of student answers to open-ended essay questions, it finds that students frequently misinterpret certain prompts or that specific rubric criteria consistently lead to grading discrepancies.

**Improvement Strategy:** The professor redesigns exam questions for clarity, rewrites rubrics for better alignment, and uses AI-generated exemplars to show students what high-quality responses look like.

# Evaluating AI Output

## Assessing AI Output

Use this to guide your analysis and evaluation of AI-generated content.

### Step One: Read Carefully

Look at the language and understand the overall layout.

### Step Two: Verify Details

Write down details to check and use research to confirm them.

### Step Three: Evaluate Style

Check if the writing style fits the needed tone, like formal or casual.

### Step Four: Compare Inputs and Outputs

Compare input and output to see if they match and how to improve.

### Step Five: Track AI Changes

Write down changes that could make the AI's output better.

### Step Six: Address Poor Results

If the result isn't good, try again, change the question, or ask more questions.

A Perplexity AI collaborative creation with Miguel Guhlin  
(@mguhlin@mastodon.education)

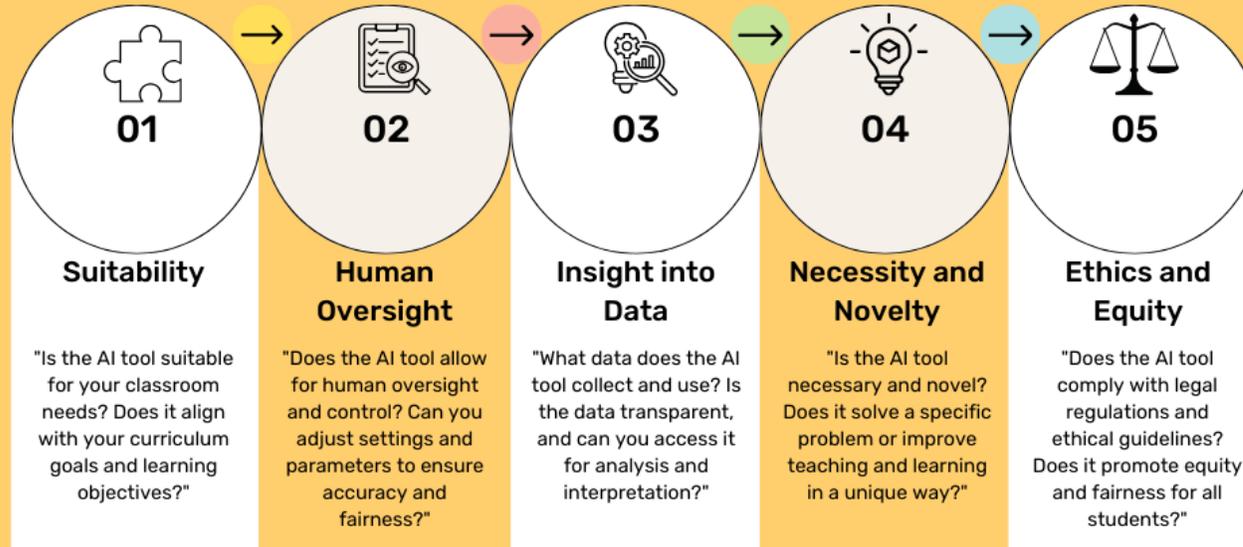


# Evaluating AI Tools



## SHINE: Evaluating AI Tools for the Classroom

5 Quick Steps



**Problem:** Grading and feedback can be a challenge for K-12 educators. Can AI help? Let's apply SHINE to a grading tool AI and ask: Is it suitable? Does it allow human oversight? What data does it collect? Is it necessary and novel? Is it ethical and equitable?



- Aligns with curriculum goals and learning objectives?
- Compatible with existing educational platforms?



- Can you adjust settings to ensure accuracy and fairness?
- Provides transparent and explainable options?



- What data is collected and used? Is there an exit strategy?
- Is data transparent and accessible for analysis?



- Solves a specific problem or improves teaching and learning?
- More efficient and effective than traditional methods?



- Complies with legal regulations and ethical guidelines?
- Promotes equity and fairness for all students?

# Professional Reflections

- Content: Evaluating What is Taught
- Process: Evaluating How Teaching is Delivered
- Premise: Evaluating the Underlying Assumptions of Teaching
  
- Reflection on Rational Processes (Mezirow's Cognitive Model)
  - critical reflection
  - discourse
  - disorienting dilemmas
  - action



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<https://www.techlearning.com/news/10-ways-educators-can-use-ai-to-streamline-daily-life>

# Summary Tools

- Streamline literature reviews
  - Highlight key points in new literature
- AI Summarizer <https://www.summarizer.org/> (\$6.99/month)
  - Editpad <https://www.editpad.org/tool/text-summarizer> (Free)
  - Paraphraser <https://www.paraphraser.io/text-summarizer> (\$23/month +)
  - Scite <https://scite.ai/> (\$20/month)
  - Semrush <https://www.semrush.com/goodcontent/summary-generator/> (Free)
  - Writesonic <https://writesonic.com/text-summarizer> (\$16/month)

# AI Life Tasks (w/Megan Simonson)

1. Create Smart Grocery Lists
2. Plan Weekly Meals in Seconds
3. Plan Workout Schedule
4. Summarize Long Emails or Articles
5. Auto-Draft Thank You Notes or Messages
6. Schedule Social Media Posts or Reminders
7. Organize Travel Plans
8. Create a Study Plan for Your Own Coursework
9. Draft and Revise Household To-Do Lists
10. Plan Family Activities or Game Nights
11. Reflect and Journal with AI



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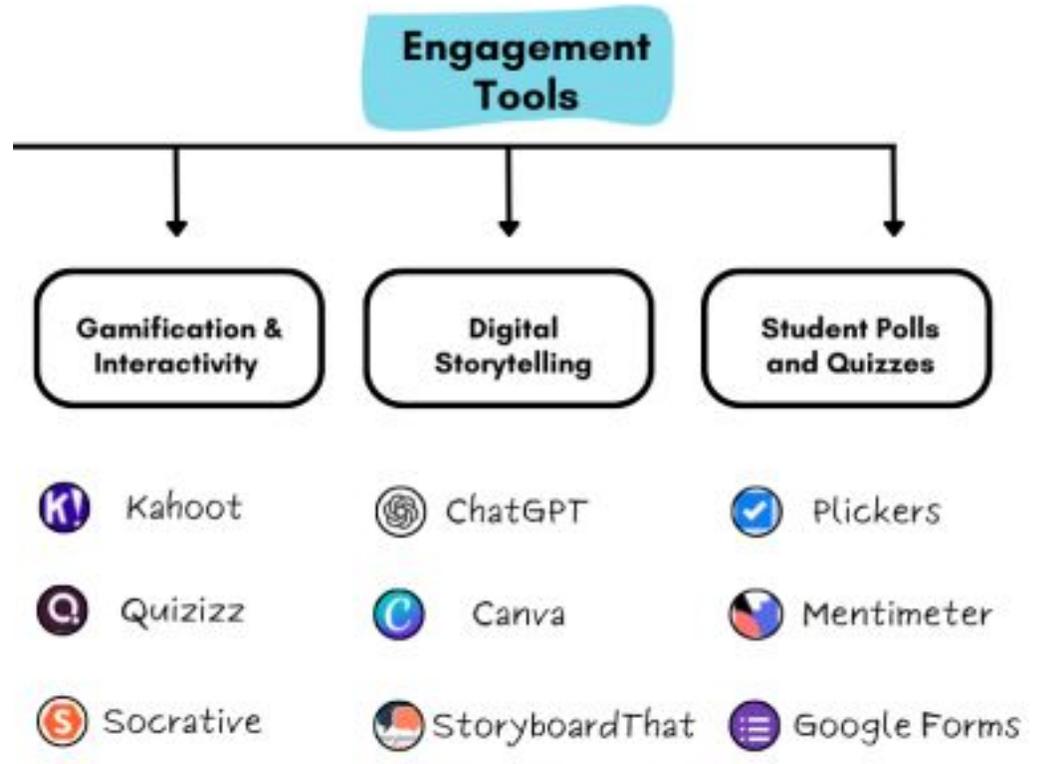
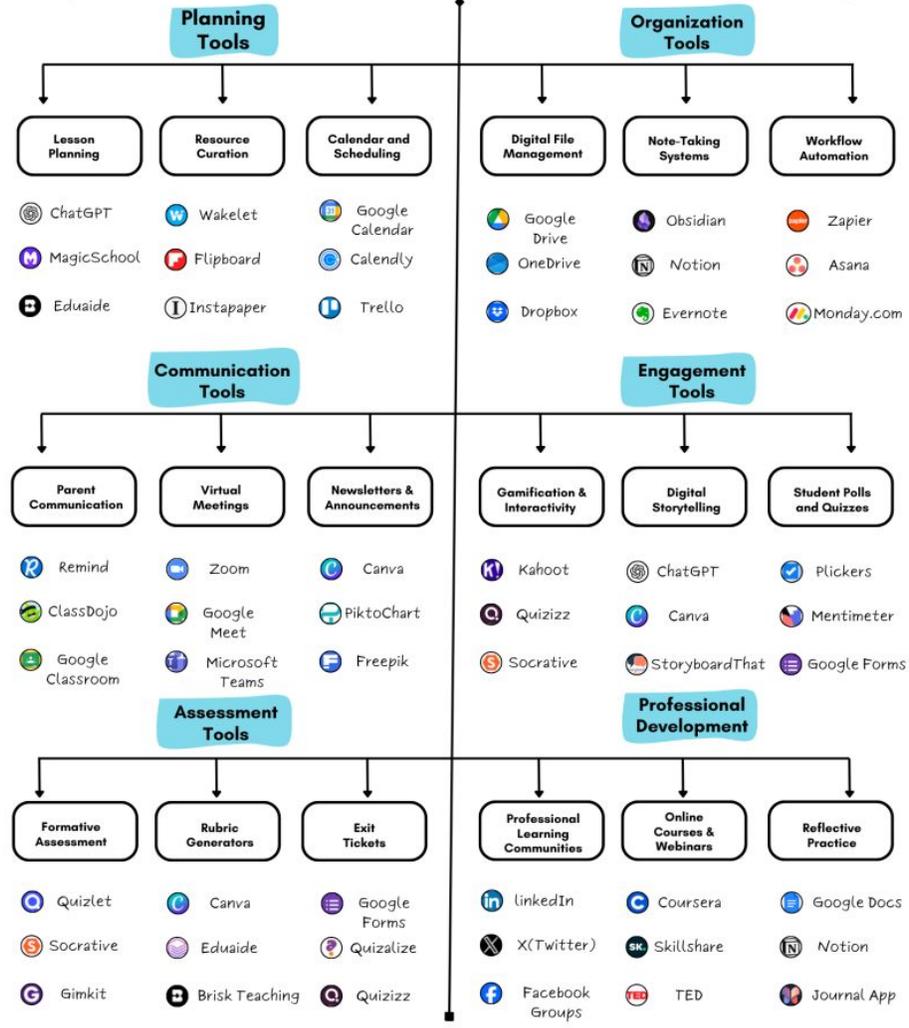
<https://www.techlearning.com/news/10-ways-educators-can-use-ai-to-streamline-daily-life>

# Keeping up to Date

- Curate personalized updates and summaries of the latest research and trends across various disciplines, helping educators stay current with developments in multiple fields.
- A tool for Professional Learning Communities (PLCs)
- Managing logistics, providing tailored support, and ensuring deeper learning and collaboration among educators.
- The age of agents will be helpful for these tasks



# TOP Productivity Tools for Teachers



[https://www.linkedin.com/posts/mkharbach\\_here-are-some-of-the-productivity-tools-i-activity-7357955248923049984-dbDr/?rcm=ACoAAABBnNcBLz4rk9OfWurN9Yny2gVewKRBxDM](https://www.linkedin.com/posts/mkharbach_here-are-some-of-the-productivity-tools-i-activity-7357955248923049984-dbDr/?rcm=ACoAAABBnNcBLz4rk9OfWurN9Yny2gVewKRBxDM)



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# Implementation Concerns

- Data privacy and security
- Accessibility and equity
- Accuracy and potential generative bias
- Resistance to implementation
- Faculty disorientation
- Technology support and training
- The need for human agency



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# Retaining Human Agency

- AI provides valuable insights and automates certain aspects of professional development
- AI cannot replace the human connections central to effective teaching
- AI should be used to assist in human decision-making, ensuring educational decisions are data-informed but not data-driven.



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# Tools Mentioned

- EasyPeasy (<https://easy-peasy.ai/>)
- ChaptGPT (<https://chatgpt.com/>)
- M-Powering Teachers (<https://www.mpoweringteachers.com/>)
- TeachFX (<https://teachfx.com/>)
- Amazon Rekognition (<https://aws.amazon.com/rekognition/>)
- TCEA Lesson Plan blog (<https://blog.tcea.org/prompts-for-lesson-planning-with-chatgpt/>)
- MonkeyLearn (<https://help.monkeylearn.com/>)
- SmartSparrow (<https://www.smartsparrow.com/>)
- Edmentum (<https://www.edmentum.com/>)
- Gradescope (<https://www.gradescope.com/>)



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# Most Common AI GPTs

- ChatGPT
- DeepSeek (Chinese tool)
- Google Gemini
- Perplexity
- Claude
- Microsoft CoPilot
- Grok (Xtool)
- Poe
- Meta AI
- Mistral (Le Chat)



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<https://www.techlearning.com/news/the-10-most-popular-ai-chatbots>

# AI Tool Listings

- [AIToolsReport](#) (AI tool search)
- [40 AI tools for the classroom - Ditch That Textbook](#)
- [Classroom Tools That Use AI | Common Sense Education](#)
- [AI Tools for Teachers \(schoolai.com\)](#)
- [19 Best AI Tools for Students in 2024 \(Mostly FREE\) - Kripesh Adwani](#)
- [Future Tools - Find The Exact AI Tool For Your Needs](#)
- [There's An AI For That - Discover The Newest And Best AI Tools \(theresanaiforthat.com\)](#)



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