

AI-Driven Productivity in Education: Teachers' Perspectives on the Use of ChatGPT and Gamma for Instructional Support

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ABSTRACT

This study explored college professors' perspectives on the use of AI-driven tools, particularly ChatGPT and Gamma, for instructional support and productivity in higher education. Using Interpretative Phenomenological Analysis, the study examined the lived experiences of 10 purposively selected professors from public and private higher education institutions who had at least one year of teaching experience and active use of AI tools for lesson planning, content creation, or student engagement. Data were gathered through in-depth semi-structured interviews and were analyzed thematically. Findings revealed that ChatGPT and Gamma enhanced instructional productivity by supporting faster lesson preparation, content customization, organized lesson outlines, presentation development, generation of supplementary materials, differentiated activities, formative

assessment design, and student engagement. Teachers valued the autonomy to revise AI-generated outputs and align them with learning objectives, but they also expressed concerns regarding technical limitations, accuracy of information, lack of contextual understanding, ethical risks, possible plagiarism, learner overreliance, and the need for training. Trust in AI outputs was conditional: teachers appreciated clarity, curriculum alignment, and usefulness for scaffolding learning activities, yet they generally verified AI-generated content before classroom use. The study concludes that AI tools can strengthen instructional productivity when used as support systems guided by human judgment, ethical safeguards, and institutional training. The findings imply the need for AI literacy programs, clear usage policies, technical support, and continuous content validation to promote responsible AI integration in education.

Keywords: *AI tools, ChatGPT, Gamma, instructional support, instructional productivity, teacher perspectives*

INTRODUCTION

Artificial intelligence has increasingly influenced educational practice by expanding how teachers generate, organize, communicate, and present instructional content. In higher education, where teachers balance lesson preparation, content delivery, student engagement, assessment design, and administrative responsibilities, AI-driven tools are viewed as possible support systems for improving instructional productivity. The growth of AI applications has encouraged institutions and educators to examine how these tools can be used responsibly to improve teaching without weakening professional judgment, critical thinking, and authenticity.

Among the AI tools currently used by educators, ChatGPT and Gamma are prominent because they address complementary instructional needs. ChatGPT supports text generation, idea development, lesson explanation, quiz construction, and content refinement, while Gamma supports the creation of visually organized presentation materials from prompts or uploaded content. Used together, these tools may help teachers move from planning and content drafting to presentation design more efficiently. However, the usefulness of these

technologies depends not only on technical features but also on teachers' actual experiences, trust, concerns, and adaptation strategies.

Existing studies have examined educators' perceptions of ChatGPT, the use of AI in writing instruction, AI-related ethical concerns, and the instructional potential of Gamma-based tools. Nevertheless, there remains limited attention to the combined use of ChatGPT and Gamma as instructional productivity tools from the perspective of in-service college professors. This gap is important because teachers' daily integration of AI tools involves practical decisions about content accuracy, classroom relevance, workload reduction, student engagement, and ethical boundaries.

This study therefore explored teachers' perspectives on the use of ChatGPT and Gamma for instructional support. Specifically, it examined how teachers perceived their control over AI-supported planning and productivity, the benefits they experienced, the challenges they encountered, and the extent of their trust in AI-generated content and pedagogical value. The study contributes insights for responsible AI integration in higher education by grounding its findings in the lived experiences of professors who actively use AI tools in instructional practice.

Literature Review

AI Tools and Instructional Productivity

Artificial intelligence tools continue to reshape how educators prepare lessons and communicate knowledge. ChatGPT is a generative AI chatbot that uses natural language processing to produce human-like text for varied tasks, including explanations, scripts, lesson ideas, and assessment prompts (TechTarget, 2024). In instructional settings, such capabilities can reduce the time teachers spend drafting content while providing initial materials that can be edited and contextualized according to learning objectives.

Gamma represents another type of AI-driven instructional tool because it focuses on presentation and document development. It can transform prompts or existing content into visually organized presentations and documents through a card-based design that supports clearer communication and collaboration (Growth Tribe, 2024). For teachers, this function is relevant because instructional productivity involves not only preparing content but also organizing it into engaging, usable, and visually coherent learning materials.

The combined use of ChatGPT and Gamma creates a workflow in which teachers can generate or refine textual content using ChatGPT and then convert that content into structured presentation materials through Gamma. This dual-tool use reflects a broader productivity shift in education, where AI supports content generation, organization, differentiation, and communication. However, the educational value of these tools still depends on teacher review, contextualization, and ethical use.

Teachers' Acceptance and Use of ChatGPT

Teacher perceptions of ChatGPT have been characterized by both optimism and caution. Ogurlu and Mossholder (2023) found that educators recognized ChatGPT's potential to reduce workload and enhance instruction, but they also raised concerns about academic dishonesty, overreliance, and reduced critical thinking. This ambivalence suggests that teachers may accept AI when it supports instruction but remain cautious when it threatens academic integrity or professional autonomy.

Roberts (2024), using Q-methodology and technology acceptance perspectives, identified varied teacher positions that ranged from enthusiastic adoption to cautious skepticism and uncertainty. These differences indicate that perceived usefulness, technical confidence, and readiness influence whether teachers integrate AI tools into classroom work. Similarly, Hang (2023) reported that EFL teachers viewed ChatGPT positively for writing instruction but emphasized the need for training and ethical awareness.

Research in higher education further emphasizes that ChatGPT's instructional value is shaped by motivation, pedagogy, and responsible use. Caratiquit and Caratiquit (2023) found that ChatGPT supported academic performance through learning motivation, while Mai, Da, and Hanh (2024) identified strengths such as adaptive support and personalized learning, alongside concerns involving reliability and ethics. Espartinez (2024)

and Cetin et al. (2024) also highlighted the need for ethical guidelines, teacher training, and content monitoring when using ChatGPT in educational contexts.

Gamma and AI-Supported Presentation Design

Gamma-based technologies have also been explored as tools for instructional innovation and presentation design. Que et al. (2024) reported that teacher training on Gamma-App in a remote Indonesian school improved teachers' understanding and implementation of the tool and helped support more interactive English instruction. This finding suggests that AI presentation tools can be particularly useful when educators receive guided training and contextualized support.

Boateng et al. (2022), using the TPACK framework, found that pre-service teachers viewed GammaTutor positively for collaborative and inquiry-based learning in science education. However, they also noted concerns about supporting struggling learners and implementing inquiry strategies effectively. These findings show that AI tools may support instruction but do not automatically resolve pedagogical challenges.

Jiang (2024) identified Gamma's strengths in automated formatting, smart design, real-time collaboration, and integration with external media, while also noting limitations such as learning curve and template diversity. Olatunde-Aiyedun (2023) likewise emphasized that Gamma training should include creative, technical, and ethical considerations. Together, these studies imply that Gamma can improve instructional communication, but meaningful classroom integration requires teacher competence and institutional guidance.

Technology Acceptance, Innovation Diffusion, and Trust in AI

This study was informed by the Technology Acceptance Model, which explains technology adoption through perceived usefulness and perceived ease of use (Davis, 1989). In the context of AI-supported instruction, teachers are more likely to use ChatGPT and Gamma when they believe these tools improve lesson planning, save time, support engagement, and are manageable within real teaching conditions. Teachers' perceptions of control and productivity therefore serve as important indicators of acceptance.

The study was also grounded in the Diffusion of Innovations Theory, which explains how new practices spread through stages of knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003). Teachers' adoption of AI tools may progress unevenly depending on access, confidence, training, peer influence, institutional expectations, and observed benefits. This framework helps explain why some educators embrace AI quickly while others remain cautious.

Trust is another essential dimension in AI adoption. Teachers may appreciate AI-generated content when it is clear, comprehensive, and aligned with curriculum standards, but they may withhold full trust when outputs appear generic, inaccurate, biased, outdated, or insufficiently contextualized. For this reason, the final pedagogical value of AI tools depends on the balance between technological assistance and human expertise.

Conceptual Framework for AI-Driven Instructional Productivity

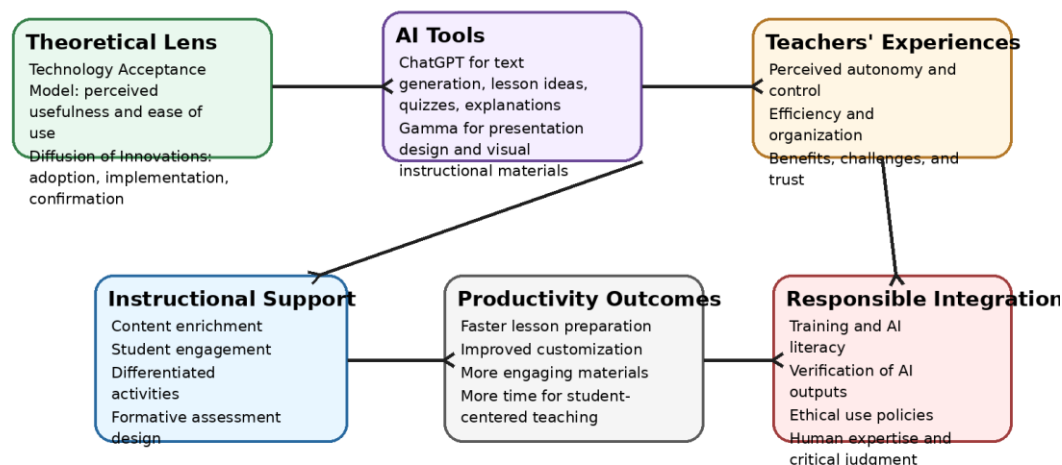


Figure 1. Conceptual framework of teachers' AI tool adoption and instructional productivity

Figure 1. Conceptual framework of teachers' use of ChatGPT and Gamma for instructional productivity.

METHODS

Research Design

The study employed Interpretative Phenomenological Analysis as its qualitative research design. This design was appropriate because the study sought to deeply explore and interpret the lived experiences of college professors who used ChatGPT and Gamma in instructional planning, content creation, and student engagement. Through this approach, the study examined not only the practical effects of AI tools on productivity but also the meanings, concerns, and attitudes teachers attached to AI-supported instruction.

Research Locale

The study was situated in public and private higher education institutions. The institutional context was appropriate because college professors in these settings commonly prepare instructional materials, develop presentations, design assessments, and engage students through varied teaching strategies. These responsibilities provided a relevant setting for examining AI-driven instructional productivity.

Participants and Sampling Technique

Purposive sampling was used to select approximately 10 college professors from both public and private higher education institutions. Participants were selected based on their ability to provide rich and relevant insights into the use of AI tools for instruction. The inclusion criteria were: full-time or part-time faculty status, at least one year of college teaching experience, active use of ChatGPT and/or Gamma for lesson planning, content creation, or student engagement, and willingness to participate in in-depth interviews.

Research Instrument

The primary research instrument was a semi-structured interview guide aligned with the study's research questions. The guide explored teachers' perceptions of control over AI outputs, perceived benefits of ChatGPT and Gamma, challenges in classroom integration, and the extent of trust in AI-generated content and pedagogical value. The semi-structured format allowed consistent coverage of major topics while permitting follow-up questions to capture deeper explanations and examples.

Data Gathering Procedure

The researchers secured the participation of eligible professors and conducted in-depth interviews. Participants were asked to describe how they used ChatGPT and Gamma, how these tools affected lesson planning and productivity, what instructional benefits they experienced, what challenges they encountered, and how they evaluated the accuracy and pedagogical value of AI-generated outputs. Responses were transcribed and coded for analysis.

Data Analysis

Interview transcripts were analyzed thematically following the principles of Interpretative Phenomenological Analysis. Significant statements were identified, coded, clustered into subthemes, and synthesized into major themes. The analysis considered both shared patterns and variations across participants' experiences. The resulting themes were organized according to the four research questions: perceived control, perceived benefits, perceived challenges, and trust in AI-generated content and pedagogical value.

Ethical Consideration

Ethical principles were observed throughout the study. Participants were informed about the purpose of the research, the voluntary nature of their participation, and their right to withdraw without penalty. To protect confidentiality, only coded responses and representative phrases were used in the results. Data were anonymized, securely stored, and made accessible only to authorized personnel.

RESULTS AND DISCUSSION

Teachers' Perceived Control in Using ChatGPT and Gamma

Teachers perceived ChatGPT and Gamma as tools that enhanced their control over instructional planning rather than replacing their professional judgment. The first major theme was perceived autonomy. Participants valued the freedom to customize AI-generated content, rephrase outputs, and align materials with their teaching style and students' needs. They also emphasized that AI outputs could be directed toward specific learning objectives, allowing teachers to guide AI responses according to curriculum requirements and classroom contexts.

The second and third themes were efficiency in planning and enhanced organization. Teachers reported that AI tools reduced lesson preparation time, provided faster access to relevant resources, and generated structured lesson outlines. These benefits enabled them to plan more quickly and organize topics in a logical sequence. However, the fourth theme, perceived overdependence risk, showed that teachers were concerned that excessive reliance on AI could weaken personal teaching style, reduce creativity, and limit critical thinking in lesson design.

Table 1. *Themes on Teachers' Perceived Control in Using AI Tools*

Major theme	Subthemes	Synthesis of participants' perspectives
Perceived autonomy	Customization of AI-generated content; ability to direct outputs	Teachers used AI as an adaptable draft source while retaining control over lesson style, context, and objectives.
Efficiency in planning	Reduced preparation time; faster access to resources	AI helped teachers complete lesson plans faster and locate relevant materials without extensive manual searching.
Enhanced organization	Structured lesson outlines; scheduling and task support	AI helped organize topics, map weekly lessons, and provide ready-to-use instructional frameworks.
Overdependence risk	Loss of personal teaching style; reduced critical thinking	Teachers recognized that AI should supplement rather than substitute professional judgment and creativity.

Perceived Benefits of ChatGPT and Gamma in Instruction

The first benefit identified was content enrichment. Teachers found that AI tools supplied diverse examples, analogies, explanations, and current information that helped make lessons more comprehensive and relatable. These outputs allowed teachers to present topics in different ways, supporting students with varied learning preferences. The second benefit was improved student engagement. Participants noted that AI-generated

examples, activities, and presentation materials added variety and helped create more interactive learning experiences.

The third benefit was instructional support. Teachers valued the quick generation of handouts, quizzes, worksheets, review questions, and practice tasks. AI also helped teachers design differentiated activities for learners with different ability levels. The fourth benefit was professional development. AI suggestions exposed teachers to new teaching strategies and increased their confidence in experimenting with digital tools. Thus, ChatGPT and Gamma supported not only productivity but also pedagogical innovation.

Table 2. *Perceived Benefits of Integrating ChatGPT and Gamma*

Major theme	Subthemes	Instructional implication
Content enrichment	Diverse explanations; updated information	Teachers can present concepts through varied examples and more current references.
Student engagement	Interactive experiences; personalized paths	AI supports activities that are more dynamic, differentiated, and responsive to learner needs.
Instructional support	Supplementary materials; differentiated instruction	Teachers can rapidly generate quizzes, handouts, exercises, and remedial or advanced tasks.
Professional development	Innovative strategies; confidence in technology integration	AI encourages teachers to explore new approaches and remain updated with modern teaching trends.

Challenges in Integrating AI Tools into Classroom Instruction

Despite the perceived benefits, teachers reported several challenges. Technical limitations formed the first challenge, particularly unreliable internet connectivity, platform downtime, slow loading, and system glitches. These issues affected the real-time use of ChatGPT and Gamma during instruction and sometimes forced teachers to return to traditional preparation methods. Such findings imply that technical infrastructure and school-level support are critical for effective AI adoption.

The second challenge was content accuracy. Teachers observed that AI tools sometimes generated incorrect, outdated, generic, or insufficiently contextualized information. As a result, they had to fact-check outputs and revise content before classroom use. The third challenge involved ethical and academic concerns, particularly the risk of plagiarism and overreliance among students. Teachers feared that learners might copy AI outputs or depend on AI instead of developing independent research and problem-solving skills.

The fourth challenge was teacher adaptation. Some participants found AI features confusing at first and emphasized the need for structured training and familiarization. This suggests that teachers require time, guidance, and practice before they can fully integrate AI tools into lesson planning and delivery. Without such support, the learning curve may hinder adoption despite the perceived usefulness of the tools.

Table 3. *Perceived Challenges in Using ChatGPT and Gamma*

Major theme	Specific challenge	Suggested response
Technical limitations	Unstable internet, platform glitches, downtime, and slow loading	Improve connectivity, technical support, and access to reliable AI platforms.
Content accuracy issues	Incorrect, outdated, generic, or non-localized outputs	Require teacher verification, source checking, and contextual editing before use.
Ethical and academic concerns	Possible plagiarism and learner overreliance on AI	Establish classroom guidelines on acceptable AI use, originality, and academic integrity.
Teacher adaptation	Difficulty learning AI features and need for training	Provide hands-on workshops and peer mentoring for responsible AI integration.

Teachers' Trust in AI-Generated Content and Pedagogical Value

Teachers' trust in ChatGPT and Gamma was shaped by accuracy, curriculum alignment, clarity, and pedagogical usefulness. High trust was observed when AI outputs matched curriculum standards and produced clear, comprehensive explanations. Teachers valued AI-generated materials that helped simplify difficult concepts, scaffold learning activities, and support formative assessment design.

However, trust was often conditional. Many teachers reported that they reviewed and verified AI outputs before using them in class. They expressed greater trust in AI for factual content, definitions, and structured explanations but lower trust for creative, opinion-based, or advanced subject-specific tasks. Low trust emerged when AI generated misleading information or shallow explanations. These findings indicate that teachers positioned themselves as gatekeepers who determine whether AI outputs are pedagogically appropriate.

Table 4. *Trust in AI-Generated Content and Pedagogical Value*

Trust level or value	Indicators	Interpretation
High trust	Curriculum alignment; clear and comprehensive explanations	Teachers trusted AI when outputs supported learning standards and simplified concepts for students.
Conditional trust	Verification required; higher trust for factual content than creative tasks	Teachers used AI cautiously and reviewed outputs before classroom implementation.
Low trust	Risk of misinformation; lack of depth in specialized topics	Teachers were hesitant when AI outputs were generic, inaccurate, or insufficiently detailed.
Pedagogical value	Scaffolding activities; formative assessment design	AI was useful for sequencing learning tasks and quickly creating quizzes or review questions.

Proposed AI Integration Support Program

Based on the findings, an AI integration support program is proposed to help teachers use ChatGPT and Gamma effectively and ethically. The program focuses on AI literacy, responsible use, technical support, content validation, and collaborative innovation. It recognizes that AI tools can improve productivity, but their educational value depends on teacher expertise, institutional policies, and sustained professional development.

Table 5. *Proposed AI Integration Support Program for Instructional Productivity*

Program area	Key activities	Expected output
AI literacy training	Workshops on prompt writing, content evaluation, source verification, and ethical use of ChatGPT and Gamma	Teachers develop competence in responsible AI-supported lesson planning and presentation design.
Institutional guidelines	Develop policies on acceptable AI use, data privacy, plagiarism prevention, and teacher review of outputs	Schools establish clear expectations for ethical and accountable AI integration.
Technical support	Improve internet access, provide platform orientation, and assign technical assistance channels	Teachers experience fewer disruptions when using AI tools for instructional preparation.
Content validation	Create peer review mechanisms for checking AI-generated lesson materials, assessments, and presentations	AI outputs become more accurate, contextualized, and pedagogically appropriate.
Faculty collaboration	Share sample prompts, AI-supported lesson templates, Gamma presentations, and best practices across departments	Teachers build a community of practice for innovative and balanced AI use.

CONCLUSION

The study concludes that college professors viewed ChatGPT and Gamma as valuable AI tools for enhancing instructional control, efficiency, organization, and productivity. Teachers appreciated the ability to customize AI-generated materials, direct outputs toward learning objectives, access resources quickly, and organize lesson plans more effectively. However, they also recognized the risk of overdependence and emphasized that AI should support, not replace, personal teaching style and professional judgment.

The findings further show that AI integration produced benefits in content enrichment, student engagement, instructional support, differentiated learning, formative assessment preparation, and teacher professional growth. At the same time, teachers encountered challenges involving unstable internet, platform glitches, inaccurate or generic AI responses, ethical concerns, plagiarism risks, student overreliance, and the need

for training. These findings indicate that productivity gains must be accompanied by safeguards and continuous teacher support.

Teachers' trust in AI-generated content was not absolute. They trusted AI outputs when these were clear, curriculum-aligned, and useful for scaffolding learning activities, but they generally verified outputs before use. The study contributes to the discussion on AI in education by showing that responsible integration depends on the balanced interaction of AI capability, teacher expertise, ethical guidelines, and institutional support.

Recommendation

Higher education institutions should provide regular AI literacy training for teachers, particularly on prompt writing, evaluating AI-generated content, verifying sources, designing AI-supported lessons, and using Gamma for effective instructional presentations. Training should also include ethical considerations, academic integrity, data privacy, and the responsible blending of AI outputs with human expertise.

Administrators should establish clear institutional policies on the use of ChatGPT, Gamma, and related AI tools. These guidelines should define acceptable use, required teacher review, protection of student data, prevention of plagiarism, and expectations for transparency when AI supports instructional material preparation.

Teachers should use AI tools as support systems rather than replacements for professional judgment. AI-generated content should be reviewed, localized, and aligned with curriculum standards before classroom use. Faculty may also form peer groups to validate AI-generated materials, share effective prompts, and develop collaborative AI-supported teaching resources.

Institutions should strengthen technical support systems by improving internet access, providing updated digital platforms, and offering assistance for teachers who are still learning AI functionalities. Future researchers may expand the study by including larger and more diverse teacher samples, different academic levels, direct classroom observations, student outcomes, and comparative studies across institutions or countries.

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