Artificial Intelligence (AI) and School Homework

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ABSTRACT: This work analyzes how the emergence of Generative Artificial Intelligence (GAI) is transforming traditional school assignments. Through an exploratory approach and a critical perspective from teaching practice, it examines various GAI-based tools and their ability to automate, solve, or enrich activities such as quizzes, summaries, or math exercises. The study highlights opportunities to foster creativity, critical thinking, and personalized learning, while also warning of risks such as lack of understanding, unethical academic use, and superficial learning processes. It calls for a rethinking of the purpose of school assignments and the teacher's role in a context where the challenge is no longer accessing information, but knowing how to use and transform it meaningfully.

KEYWORDS: Artificial Intelligence, Critical Thinking, Plagiarism, School Practices, Educational Assignments.

I. INTRODUCTION

For decades, homework has been one of the main tools through which teachers reinforce content, promote autonomous practice, and assess students' level of understanding. Activities such as answering questionnaires, creating concept maps, writing summaries, or solving math problems are part of the usual classroom repertoire. These tasks, regardless of their format, have a clear objective: to consolidate learning.

However, the contemporary educational landscape is undergoing a profound transformation: the emergence and widespread adoption of Generative Artificial Intelligence (GAI) tools. These technologies—capable of generating texts, solving exercises, designing presentations, or suggesting creative solutions—have begun to alter traditional teaching and learning dynamics outside the classroom, particularly in relation to students' autonomous work. In this context, several questions arise: How many GAI tools do we know that can be used to complete assignments? Is it better to ignore them or to study them in order to understand their true scope within the educational setting?

This paper aims to reflect on the challenges and opportunities involved in their use. It examines both the potential benefits and the ethical consequences of applying such tools without pedagogical guidance. Furthermore, it seeks to generate ideas on how to meaningfully integrate these tools into an educational system that often remains unaware of their existence. Teachers must explore how to effectively incorporate GAI into their pedagogical practices, leveraging its capabilities to foster creativity, critical thinking, and problem-solving (Cruz, García, Martínez, Ruiz, Ruiz, & Sánchez, 2024). Rather than seeing AI as a threat, it is proposed as an opportunity to rethink school assignments—their purpose, design, and pedagogical value. What kinds of assignments still make sense in the age of AI? How can we avoid empty automation in the learning process? What role should the teacher play in this new reality?

The development of intelligent technologies is profoundly impacting society (Oxford's, W., 2018). We are facing a significant and far-reaching change. We now have access to a wide range of generative AI tools with the potential to transform the way people learn—and, consequently, the way we teach. These tools are capable of automatically generating content tailored to individual needs, urging educators to adapt their teaching methods accordingly.

II. The Silent Emergence of Artificial Intelligence in Everyday Life

The presence of Generative Artificial Intelligence (GAI) in everyday life did not occur abruptly, but rather passively and imperceptibly. While the educational system continued to operate under the same teaching and assessment methods, AI quietly made its way into the devices, platforms, and applications used daily by students, teachers, and families. Without manuals, warnings, or pedagogical guidance, its use quickly spread among young people—especially through social networks, search engines, and digital spaces where knowledge flows freely, without school-based validation.

For many students, the first contact with these tools did not happen in the classroom, but in their own environments: YouTube, TikTok, Discord, Reddit, or simply through curiosity while exploring apps like ChatGPT, Perplexity, Quillbot, or Grammarly. The logic behind interacting with these tools lacks an explicit pedagogical intention: they are engaged with like any other digital resource—users present a need and expect an immediate solution. These tools are tested, challenged, compared, and adapted to meet the personal or academic goals of the user.

This learning is self-driven and functional, characteristic of the digital environment in which students grow up—a world without diplomas, grades, or hierarchies of knowledge. There is only the desire to solve what is needed, meet requirements, and navigate multiple realities to obtain an answer. In this context, knowledge ceases to be an end in itself and becomes a means to an immediate goal: completing homework, submitting an assignment, or answering a quiz—even if the content is not truly understood or internalized.

Meanwhile, the educational system has yet to respond clearly to this phenomenon. Students have taught themselves how to interact with these tools, but no one has guided them on how to do so critically, ethically, or with pedagogical awareness. This gap between what is happening outside the classroom and what is expected inside it is growing—and it can no longer be ignored.

III. Between Efficiency and Superficiality: Risks of Unguided Use

The speed with which students have adopted Generative Artificial Intelligence (GAI) tools contrasts sharply with the slow pace of the educational system's adaptation to their presence. This gap has led to a practical—but not always

formative—use, where the focus is less on learning and more on completing, fulfilling, and submitting tasks. In this model, learning can become secondary, and reflection unnecessary.

The risk does not lie in the technology itself, but in its use without critical guidance. Many students have found in AI a way to meet school demands without engaging in deep cognitive processes. The problem is not that they use these tools, but that no one has taught them how, when, or why to use them from an ethical and conscious perspective. Thus, copying answers, automatically generating assignments, and repeating information without understanding its origin, validity, or structure becomes normalized.

Critical thinking—which should be at the heart of the educational process—fades when content appears ready to be submitted. The opportunity to argue, analyze, compare, and construct meaning is lost. Furthermore, the uncritical use of AI reinforces the idea that knowledge is an immediate product rather than a process that requires effort, interpretation, and responsibility.

Additionally, in an environment that rewards speed and compliance, a new form of academic superficiality emerges: tasks completed but devoid of thought. Within this logic, students can fulfill requirements without learning, pass without reflecting, and even excel without having built genuine understanding.

This scenario highlights an urgent need for the teacher's role: it is not enough to forbid the use of AI or pretend it does not exist. Spaces must be opened to discuss, question, and guide the use of these tools. Education can no longer remain disconnected from the digital environment in which students live, interact, and learn independently.

IV. From Mechanical Tool to Creative Ally: Opportunities to Rethink School Assignments

While the use of Generative Artificial Intelligence (GAI) can pose risks when not mediated by the teacher, it also opens up numerous possibilities to transform school assignments into more meaningful and authentic learning experiences. Everything depends on how these tools are integrated into the pedagogical design and what objectives are pursued with their use. It is important to keep in mind what Prendes and Castañeda (2010) mention: we do not adopt ICT simply as training for information mastery that fosters memorization. Instead, we seek a

perspective that can be used in the development of competencies, especially to enhance them.

AI is not only useful for automating answers but also for exploring new paths in knowledge construction. With its help, students can compare different versions of a text, analyze how a tool generates a solution, identify errors in a math result, or even create original products such as infographics, scripts, animations, or interactive presentations. The key is that the tool does not replace the student, but accompanies them in a process of reflection, creation, and continuous improvement.

From this perspective, teachers can leverage AI to redesign tasks that no longer focus on content reproduction but rather on its analysis, evaluation, and transformation. For example:

Instead of asking for a summary, students can be asked to compare two versions (one generated by AI and another their own) and argue which they consider clearer and why.

Instead of solving a problem, students could analyze how AI solved it and detect possible errors or assumptions.

Instead of submitting an essay, students might co-write with AI, identifying which parts were generated by the tool and which are their own.

These proposals not only strengthen critical thinking but also develop metacognitive and ethical skills: students learn to make decisions, justify choices, assume authorship, and reflect on the learning process.

Thus, AI ceases to be a threat and becomes a creative ally, provided the focus is on how it is used rather than only what result it delivers. This requires the teacher to become an active mediator who guides, proposes, and evaluates not only the final product but the path the student took to reach it.

V. The Teacher's Role in the Age of Artificial Intelligence: Between Resistance and Reinvention

The emergence of Generative Artificial Intelligence has confronted teachers with an unavoidable reality: knowledge is no longer transmitted solely from the classroom, and technological tools play an increasingly active role in learning processes. In this context, the teacher's role does not disappear, but it must transform.

More than ever, the challenge is not only to teach content but to teach how to learn critically in a digital environment saturated with information and automation. In this new scenario, the teacher

ceases to be the main source of knowledge and becomes a guide, facilitator, mediator, and designer of learning experiences. Since students have not been taught that identity system standards are essential to ensure secure, interoperable, and efficient identity management across all organizations and platforms—a fundamental part of navigating the web.

Resisting or banning AI may seem like a temporary solution, but in reality, it widens the gap between what happens inside and outside the classroom. Instead of ignoring its existence, it is necessary to understand, analyze, adapt, and strategically use it. This involves rethinking what types of assignments are given, which skills are prioritized, and what is truly being assessed: memory or analytical ability? The final product or the process?

Furthermore, there is an urgent need to create teacher training spaces on the ethical, pedagogical, and creative use of these tools. Many teachers do not use them—not for lack of interest but due to lack of knowledge or fear of losing control over the educational process. Therefore, updating pedagogical strategies must be an institutional and collective priority, not an individual burden.

AI will not replace teachers, but it will demand that they take on new challenges: designing tasks that promote critical thinking, assessing beyond mere compliance, and training students capable of engaging with technology ethically and responsibly. This is undoubtedly one of the deepest transformations currently affecting educational practice.

The World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) of UNESCO describes AI as machines capable of imitating human intelligence functions, including perception, learning, reasoning, problem-solving, linguistic interaction, and creative production (COMEST, 2019). AI is recognized as a key element of the Fourth Industrial Revolution, raising the question: Is education prepared for this change? If AI is used or implemented without a solid ethical foundation, it could have negative repercussions on the teaching-learning process and on the formation of those who use it (Coll, 2004).

II. CONCLUSION

LGenerative Artificial Intelligence has entered education not as a future possibility, but as a present reality that is already transforming the ways we learn, teach, and assess. School assignments, conceived for decades as tools to

consolidate knowledge, now face a new scenario: one in which students interact daily with digital tools capable of generating answers, solving problems, and simulating learning in a matter of seconds.

This context presents an urgent dilemma for the educational world: to ignore or to integrate, to resist or to transform. The response cannot be denial or prohibition. It is necessary to recognize that AI is part of students' everyday environment and, therefore, must also become part of pedagogical practices. This requires rethinking school assignments not as mere compliance activities, but as spaces for analysis, authorship, creation, and reflection.

Far from being a threat, AI can become a pedagogical ally if it is integrated consciously, ethically, and with teacher support. To achieve this, it is essential to update educational strategies, develop teacher training processes, design meaningful tasks, and encourage a critical stance in students toward the technological tools they use.

The real challenge is not to prevent students from using AI, but to teach them how to think with it, how to question it, how to improve it, and how to use it to truly learn. Only then can we transform school assignments into experiences that are meaningful in the present and relevant for the future.

SOME OF THE ADVANGES FROM THE ABOVE RESULTS

Promotion of Critical Thinking
When used with proper pedagogical guidance, AI tools can foster students' ability to analyze, compare, and reflect, rather than simply memorize or reproduce content.

Enhanced Personalization of Learning
Generative AI allows students to receive tailored responses and resources that adapt to their individual learning needs and styles.

Support for Creativity and Innovation
AI can assist students in creating new products—such as infographics, scripts, or presentations—encouraging original thinking and design.

Opportunities for Metacognitive Development
Tasks that require students to evaluate AI-generated content help them develop skills such as self-regulation, reflection, and decision-making.

Redefinition of the Teacher's Role
Rather than replacing educators, AI challenges them to become designers of learning experiences, guiding students in the ethical and meaningful use of technology.

Bridging the Gap Between the Classroom and the Digital World
Integrating AI into education helps align formal learning with the tools and environments students already engage with outside the classroom.

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