

TASK-BASED TEACHING IN THE ERA OF ARTIFICIAL INTELLIGENCE: CHALLENGES, AFFORDANCES AND PEDAGOGICAL IMPLICATIONS

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Abstract

The use of artificial intelligence (AI) in the field of education has changed the way teachers teach and students learn. Despite the convenience it offers, AI provide us with opportunities as well as new challenges in education. This conceptual paper discusses how AI can support Task-Based Teaching (TBT), a teaching approach that encourages students to learn by completing meaningful and real-world tasks. The paper is a review of studies on AI and TBT that have been done worldwide. The article proposes that AI should be used to strengthen, not replace, the main principles of TBT. AI can support learning by providing personalized feedback, learning assistance, and access to useful learning resources. However, it also brings about concerns such as plagiarism, overdependence on AI, digital inequality, ethical issues, and teacher readiness. Therefore, teachers should continue to play the main role in guiding learning, while AI serves as a learning assistant. Successful integration of AI into TBT requires responsible use, digital literacy, and thoughtful teaching practices.

Keywords: AI, Task-Based Teaching, Task-Based Learning, Digital Pedagogy, 21st Century Skills

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INTRODUCTION

Artificial Intelligence (AI) has developed very fast over the last few years (Russell & Norvig, 2021; UNESCO, 2023). It has been integrated part of everyday life. Today, people use AI to search for information, write emails, translate languages, create images, solve problems, and complete many other daily activities. This rapid development has also influenced education (UNESCO, 2023; Holmes et al., 2022). AI tools such as ChatGPT, Perplexity, Gemini, and Microsoft Copilot are now widely available. These AI tools can be accessed by both teachers and students in only a few seconds. As a result, the way teachers teach and the way students learn are changing (Holmes et al., 2022; UNESCO, 2023). AI is no longer a technology that may be used in the future. Instead, it has become part of many educational activities around the world.

As a matter of fact, the growing use of AI has created both opportunities and challenges for education. Researchers have argued that AI has influenced many aspects of teaching and learning, including lesson planning, instructional delivery, assessment, feedback, student support, and school management (Luckin et al., 2016; Zawacki-Richter et al., 2019; Holmes et al., 2022; UNESCO, 2023). AI can create learning materials, answer students' questions, give fast feedback, summarize information, and even recommend learning activities that fit students' needs (Holmes et al., 2022). Because of these capabilities many schools and universities to integrate AI into their teaching activities (UNESCO, 2023). As AI continues to improve, educators should change their teaching practice so that it will go smoothly with AI requirement as it develops faster.

Many researchers have proposed useful contributions of AI to the field of education. For example, Holmes et al. (2022) explained that AI can support personalized learning by adapting learning materials to students' different abilities and learning speeds. In other words, from AI students get the instruction or explanations which are suitable with their needs or favorite learning strategies (Holmes et al., 2022; UNESCO, 2023). In addition, AI can also give fast response or feedback so that the students can find out where they make mistakes more quickly than they can in traditional classroom (Luckin et al., 2016; Holmes et al., 2022). Also, AI reduces teachers' workload in which it can help them do routine tasks such as preparing lesson plans, generating quizzes, marking simple assignments, and organizing learning resources (Holmes et al., 2022; Zawacki-Richter et al., 2019). All of these condition provide teacher with time to interact with their student more than that in classroom without AI.

Another recognition on potential of AI ability to improve educational access and learning quality comes from UNESCO (2023) saying that AI can potentially to improve educational access and learning quality. These potential can be seen in AI-powered translation tools, speech recognition, and text simplification which proves useful for students with different language backgrounds or learning needs participate more effectively in classroom activities . Furthermore, AI enables students to learn autonomously outside the classroom by providing explanations, examples, and learning materials whenever they need them (Luckin et al., 2016; UNESCO, 2023). These qualities of AI prove that AI can facilitate learning activities to be more flexible, accessible, and learner-centered (UNESCO, 2023; Holmes et al., 2022).

However, despite these advantages, the increasing use of AI has also brought about many concerns. One of the most feared dangers is overdependence on AI in which students will be overly dependent on AI to do their assignment (Holmes et al., 2022; UNESCO, 2023). Some students will go straight to AI for solutions or answer to their problem rather than do it themselves. Such practices will negatively influence the development of their thinking ability, creativity, problem-solving skills, and independent learning habits (Holmes et al., 2022; Kasneci et al., 2023). Several scholars have warned that excessive dependence on AI may weaken higher-order thinking skills because students rely on technology instead of constructing their own understanding (Holmes et al., 2022; UNESCO, 2023).

Another concern is the issue of academic integrity. In just a second AI can write essays, reports, programming codes, and other academic work (UNESCO, 2023; Kasneci et al., 2023). Used responsibly and critically these AI capabilities can support learning activities. However, if used inappropriately this capabilities will end up in plagiarism, academic dishonesty, and misuse of AI-generated content (UNESCO, 2023; Kasneci et al., 2023). Teachers often find it difficult to determine whether students genuinely understand the work they submit or whether it was mostly produced by AI (Kasneci et al., 2023). Moreover, AI systems sometimes generate inaccurate or misleading information, commonly referred to as "hallucinations" (UNESCO, 2023). If students accept AI-generated information without checking its accuracy, misconceptions and incorrect knowledge may easily spread (UNESCO, 2023; Kasneci et al., 2023). Therefore, many scholars argue that AI literacy, ethical awareness, and critical evaluation skills are becoming essential competencies for both teachers and students (UNESCO, 2023).

The massive development of AI has driven educators to reconsider the goals of education (OECD, 2021). Since AI can give us facts, explanations, summaries, and even complete written assignments in a matter of second, it is imperative that educators reduce substantially the focus of teaching on memorizing information (Holmes et al., 2022). Instead, they should help students

develop skills that AI cannot easily replace. The jobs that AI cannot do include critical thinking, creativity, collaboration, communication, ethical reasoning, problem-solving, and the ability to apply knowledge in real-life situations (OECD, 2021). This change is in line with many current educational reforms that emphasize deep learning, student-centered learning, and authentic assessment (Fullan et al., 2018). Thus, in this AI era teaching approaches that require students to be involved meaningfully in learning their learning activities are widely encouraged (UNESCO, 2023).

One teaching approach that strongly supports meaningful learning is Task-Based Teaching (TBT). TBT is based on learning philosophy of learning by doing (Dewey, 1938; Nunan, 2004). More exactly, TBT is based on the principle that language is learned most effectively when students use it to complete meaningful tasks rather than simply studying grammar rules or memorizing vocabulary (Ellis, 2003, 2009; Nunan, 2004; Willis & Willis, 2007). In TBT, students work individually or collaboratively to solve problems, exchange information, make decisions, create products, or complete projects that resemble real-life situations (Ellis, 2003; Willis & Willis, 2007). Language becomes a tool for communication instead of merely an object of study (Nunan, 2004; Ellis, 2003). As students complete authentic tasks, they naturally develop language proficiency while also improving other important skills such as teamwork, critical thinking, and communication (Ellis, 2003; Willis & Willis, 2007).

Constructivist learning theory supports strongly the principles of TBT. According to constructivist scholars, learning will take place if students actively try to understand themselves a concept through meaningful experiences rather than passively receiving information from teachers (Piaget, 1972; Vygotsky, 1978). Students' knowledge is built from interaction with tasks, collaboration with others, reflection, and problem-solving (Vygotsky, 1978; Jonassen, 1999). This opinion is consistent with TBT because students learn by doing instead of simply listening (Ellis, 2003; Nunan, 2004). In completing the task, students negotiate meaning, test ideas, solve communication problems, and reflect on their learning experiences (Ellis, 2003; Willis & Willis, 2007). As a result, learning becomes deeper, more meaningful, and more transferable to real-life situations (Bransford, Brown, & Cocking, 2000).

Analyzed more deeply, these principles of TBT seem to find encouraging opportunities in the features or capabilities that AI possess. AI has the potential to strengthen TBT by providing information, examples, language support, brainstorming ideas, feedback, and additional learning resources during task completion (Luckin et al., 2016; Holmes et al., 2022). Students who experience difficulties can ask AI for clarification, alternative explanations, vocabulary support, or suggestions while continuing to work on meaningful tasks (Kasneci et al., 2023; UNESCO, 2023). Teachers can also use AI to design authentic learning materials, create simulations, develop role-play scenarios, or prepare differentiated tasks for students with different proficiency levels (Holmes et al., 2022). Instead of replacing TBT, AI can enrich the learning process by making tasks more engaging, flexible, and responsive to students' individual needs (Luckin et al., 2016; UNESCO, 2023).

Some relevant studies in AI found that AI can serve as a learning partner rather than merely a tool that only provide information (Luckin et al., 2016; Holmes et al., 2022). When students use AI responsibly, they can engage in reflective dialogue, receive immediate feedback, revise their work, and explore multiple perspectives before making decisions (Kasneci et al., 2023). Such interactions encourage students to improve their understanding, not just accepting ready-made answers (Kasneci et al., 2023). AI can also support collaborative learning in which it can help

student find ideas, organize information, and evaluate possible solutions (Zawacki-Richter et al., 2019; Holmes et al., 2022). In this way, AI becomes a tool that can support students cognitively while at the same time they remain actively responsible for completing the task (Luckin et al., 2016).

However, the successful integration of AI into TBT is determined largely by teachers' abilities to design learning activities (UNESCO, 2023; Holmes et al., 2022). If students are allowed to ask AI to complete every task without meaningful participation, the educational value of TBT will be greatly reduced (UNESCO, 2023; Kasneci et al., 2023). The purpose of TBT is not simply to produce correct answers but to engage students in thinking, communicating, negotiating meaning, making decisions, and solving problems (Ellis, 2003; Willis & Willis, 2007). These learning processes are essential because they develop the cognitive and social abilities that students need beyond the classroom (Ellis, 2003; Nunan, 2004). What teachers can do is, for example, designing activities that require students to express their opinion or reasoning, defend their points, compare different viewpoints, evaluate AI-generated information, reflect on their learning, and create original products based on their own understanding. AI should support these learning processes rather than.

This changing role also requires teachers to develop new professional competencies (UNESCO, 2023). Thus, teacher should change position from the ones who provide the knowledge to that who facilitate the learning (Richards & Rodgers, 2014). They also should be the learning designer, mentors, and ethical guide. They need to help students understand both the strengths and the limitations of AI. Students should learn when AI can be useful, when its information should be questioned, and how its output should be verified using reliable sources. Developing AI literacy alongside language competence is therefore becoming an important responsibility for language teachers in the twenty-first century (UNESCO, 2023; European Commission, 2022).

Although many studies have discussed AI in education and many others have examined TBT, fewer studies have explored how these two areas can complement each other (Zawacki-Richter et al., 2019; Holmes et al., 2022; Kasneci et al., 2023). Much of the existing literature focuses either on the technical capabilities of AI or on the effectiveness of TBT as a language teaching approach (Ellis, 2003; Zawacki-Richter et al., 2019). There is still a need to examine how AI can strengthen the principles of TBT while also identifying the pedagogical challenges that teachers may encounter during classroom implementation (Kasneci et al.). Understanding this relationship is important because AI will continue to influence educational practices, and teachers need practical guidance on how to integrate AI without reducing meaningful student learning.

Therefore, this article argues that TBT remains highly relevant in the era of Artificial Intelligence. Rather than making TBT obsolete, AI creates new opportunities to make task-based learning richer, more personalized, and more engaging. At the same time, AI presents important pedagogical challenges that require thoughtful classroom design, ethical awareness, and responsible use. When AI is used to support rather than replace students' thinking, TBT can continue to help learners develop language proficiency together with essential human abilities such as critical thinking, creativity, collaboration, communication, sound judgment, and responsible decision-making. These are competencies that remain valuable even as AI becomes increasingly capable. This article therefore discusses the opportunities, challenges, and pedagogical implications of integrating AI into Task-Based Teaching and argues that thoughtful integration of both can better prepare students for learning, work, and life in the AI era.

RESEARCH METHOD

This article uses a critical review of the literature. It does not use empirical findings but examines how existing theories and research can explain the relationship between Artificial Intelligence and TBT. The discussion will be based on relevant studies of TBT (Ellis, 2003, 2009; Nunan, 2004; Willis & Willis, 2007; Van den Branden, 2006), together with recent scholarship and policy documents on AI in education (Luckin et al., 2016; Zawacki-Richter et al., 2019; Holmes et al., 2022; UNESCO, 2023; OECD, 2023; Miao & Cukurova, 2024).

This article does not review these sources individually. The article synthesizes their main ideas to provide a conceptual framework for integrating AI into TBT. The article focuses on the pedagogical opportunities offered by AI, the challenges that accompany its use, and the implications for teachers, schools, and teaching and educational policy.

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The discussion is presented in three parts. The first part talks about affordances offered by AI, including personalized learning, timely feedback, learning support, and more inclusive classroom practices. The second part talks about several challenges that might appear from using AI such as academic integrity, over-dependence on AI, digital inequality, teacher preparedness, and ethical considerations.

The third part presents the discussion on broader implications for teaching and educational policy. Issues mainly discussed in this part are AI literacy, development of teacher's competence, assessment, ethical governance, and equal access to digital technologies. These issue are talked about lay out the conditions needed for AI to assist meaningful learning to take place.

And the final part proposes a conceptual model doing AI-supported TBT. In this framework it is described how AI can be used to support different stages of the learning process while at the same time students are actively engaged in all the processes from inquiry, collaboration, reflection, and problem solving.

Affordances of Task-Based Teaching in the AI Era

Personalized Learning

One of the biggest advantages of Artificial Intelligence (AI) in education is its ability to support personalized learning. Every student has different abilities, interests, learning styles, and learning speeds. However, in a classroom, teachers often have limited time to provide individual support for every student. AI can help teachers address this challenge by providing learning activities that match each student's needs while still working toward the same learning objectives. For example, students who need more support can receive simpler explanations, extra examples, or additional practice, while students who learn more quickly can work on more challenging activities. This helps every student learn at a pace that is suitable for them and makes the learning process more meaningful (Holmes et al., 2022; UNESCO, 2023).

Personalized learning can also increase students' motivation and confidence. When learning materials match their ability, students are more likely to stay engaged and actively

participate in classroom activities. They are less likely to become frustrated because the tasks are not too difficult or too easy. In addition, AI can provide immediate feedback, allowing students to identify and correct their mistakes while they are learning. This helps them improve their understanding and become more independent learners (Luckin et al., 2016). However, AI should be used to support teaching rather than replace the teacher. Teachers still play an important role in guiding students, encouraging critical thinking, and creating meaningful learning experiences.

Learning Support When Students Need It

Another important benefit of Artificial Intelligence (AI) in education is that it can provide learning support whenever students need it. In a traditional classroom, teachers cannot always help every student immediately because they have many students to teach at the same time. As a result, some students may become confused, lose motivation, or stop trying to solve a problem. AI can help overcome this challenge by providing support at the moment students experience difficulties. Instead of simply giving the correct answer, AI can explain difficult concepts in simpler language, provide examples, offer hints, or ask guiding questions that encourage students to think about the problem. This helps students understand the learning process rather than just memorize the final answer (Luckin et al., 2016).

Immediate support also helps students become more confident and independent learners. When students receive quick feedback, they can identify their mistakes, correct them, and continue learning without waiting for the teacher's assistance. This keeps students engaged and reduces frustration during learning. However, AI should be used as a learning assistant, not as a replacement for students' own thinking. Teachers still play an important role in helping students reflect on their learning, discuss ideas with others, and develop critical thinking skills. Therefore, AI is most effective when it works together with teachers to support meaningful learning rather than simply providing ready-made answers (Holmes et al., 2022; UNESCO, 2023).

More Meaningful Learning Experiences

Artificial Intelligence (AI) also helps teachers create more meaningful learning experiences by making classroom activities more interesting and connected to real life. Instead of only reading textbooks or listening to lectures, students can use AI to explore real-world problems and apply what they have learned in practical situations. For example, students can have conversations with AI as if they were interviewing historical figures, analyze environmental issues using real data, prepare business or marketing plans, create presentations in different languages, or carry out virtual science experiments. These activities encourage students to apply knowledge, solve problems, and think creatively rather than simply memorize facts (UNESCO, 2023).

Such learning experiences are more engaging because students become active participants in the learning process. They are encouraged to ask questions, explore different ideas, test possible solutions, and reflect on the results of their work. This is consistent with student-centered learning, where students learn by doing meaningful tasks instead of only receiving information from the teacher (Bransford et al., 2000). AI also allows teachers to design authentic tasks that reflect situations students may face in their future studies or careers. However, teachers still need to carefully guide these activities so that students use AI to support their learning rather than depend on it completely. When used wisely, AI can make learning more relevant, enjoyable, and meaningful while helping students develop important skills for the future (Holmes et al., 2022).

Immediate Feedback

One of the greatest advantages of AI in education is its ability to provide immediate feedback. In many classrooms, teachers have limited time to check every student's work because they also need to prepare lessons, manage the classroom, and complete administrative tasks. As a result, students may have to wait several days before receiving feedback on their assignments. AI helps solve this problem by giving instant comments on students' work. It can point out mistakes, suggest improvements, and explain why an answer is incorrect. This allows students to correct their errors immediately and improve their understanding while the learning is still fresh in their minds (Holmes et al., 2022). At the same time, teachers can spend more time leading discussions, helping students solve complex problems, and developing their critical thinking instead of correcting simple mistakes. Therefore, AI feedback should be seen as a useful support tool that complements, rather than replaces, teachers' professional feedback (UNESCO, 2023).

Supporting Inclusive Learning

Artificial Intelligence (AI) can also help teachers create more inclusive classrooms where every student has the opportunity to learn successfully. Students often have different language backgrounds, learning abilities, and educational needs. Some may struggle to understand difficult texts, while others may need additional support because of language barriers or learning difficulties. AI can help by simplifying reading materials, translating texts into different languages, providing audio explanations, or presenting information through visuals. These features make learning materials easier to understand and allow more students to participate actively in classroom activities (UNESCO, 2023). In TBT, this means that students with different abilities can work together on the same meaningful task while receiving the support they need. However, AI should be used to increase students' participation, not to lower learning expectations. With proper guidance from teachers, AI can help create a more inclusive learning environment where all students feel supported, valued, and able to contribute to the learning process (UNESCO IESALC, 2023).

Challenges of Task-Based Teaching in the AI Era

Academic Integrity

One of the biggest challenges of using Artificial Intelligence (AI) in Task-Based Teaching is maintaining academic integrity. Today, students can easily ask AI to write essays, answer questions, or complete other assignments in just a few seconds. If students simply copy AI-generated answers without understanding them, they miss the opportunity to develop important skills such as critical thinking, problem-solving, and communication. In this situation, the task no longer supports learning but becomes only a way to finish the assignment (UNESCO, 2023). Therefore, teachers need to design tasks that require students to think independently and demonstrate their own understanding. For example, students can be asked to explain their ideas, discuss their work with classmates, reflect on what they have learned, or apply their knowledge to real-life situations. These activities make it more difficult to rely completely on AI and encourage students to take responsibility for their own learning. At the same time, teachers should guide students to use AI ethically as a learning support tool rather than as a substitute for their own work (Holmes et al., 2022).

Less Active Thinking

Another challenge of using Artificial Intelligence (AI) in education is that it may reduce students' willingness to think independently. AI can answer questions, explain concepts, and solve problems within seconds. Although this makes learning easier, it may also encourage some students to rely on AI instead of using their own thinking skills. In many cases, real learning happens when students struggle with a problem, test different ideas, make mistakes, and gradually find the correct solution. This process helps them develop critical thinking, problem-solving, and reasoning skills that are essential for lifelong learning (Luckin et al., 2016). If students depend too much on AI, they may become passive learners who simply accept answers without questioning or evaluating them. Therefore, teachers need to design learning tasks that require students to explain their reasoning, compare different ideas, and justify their answers. By doing so, AI becomes a tool that supports learning rather than replacing the thinking process. This helps students use AI responsibly while continuing to develop higher-order thinking skills (Holmes et al., 2022).

Digital Inequality

Another challenge of using Artificial Intelligence (AI) in education is digital inequality. Although AI offers many learning opportunities, not all schools and students have equal access to the technology. Some schools have fast internet connections, modern computers, and easy access to AI tools, while others have limited internet access or very few digital devices. In addition, students have different levels of digital skills. Some know how to use AI effectively, but others may not have the knowledge or experience to use it for learning. These differences mean that some students can benefit much more from AI than others (UNESCO, 2023). As a result, AI may increase educational inequality instead of reducing it. To address this problem, schools and governments need to improve digital infrastructure, provide equal access to technology, and offer training for both teachers and students. Only when these conditions are met can AI become a tool that supports equal learning opportunities and benefits all students, regardless of their background or where they study (UNESCO IESALC, 2023).

Teacher Readiness

Teacher readiness is another important factor in the successful use of Artificial Intelligence (AI) in education. Many teachers are interested in using AI because it can save time and provide new ideas for teaching. However, knowing how to use an AI tool is not enough. Teachers also need to understand when AI can improve learning and when it may reduce students' opportunities to think independently. They should be able to evaluate the accuracy of AI-generated information, recognize its limitations, and decide how it can best support their learning objectives (Holmes et al., 2022). Therefore, teachers need ongoing professional development that focuses not only on technical skills but also on effective teaching strategies. Training should help teachers design meaningful learning tasks, encourage critical thinking, and guide students to use AI responsibly and ethically. UNESCO (2023) also emphasizes that teachers remain central to the learning process because they provide guidance, motivation, and human interaction that AI cannot replace. With proper preparation, teachers can use AI to enrich learning while maintaining the quality of classroom instruction.

Ethical Issues

Artificial Intelligence (AI) also raises several ethical issues that schools need to address carefully. Many AI tools collect and process users' data, which creates concerns about student privacy and data security. In addition, AI sometimes produces information that is inaccurate, biased, or based on unreliable sources. If students accept this information without checking it, they may develop misunderstandings or spread false information. There are also concerns about copyright because students may use AI-generated text or images without understanding who owns the content or how it should be used properly (UNESCO, 2023). For these reasons, schools should help students develop AI literacy, which includes knowing how AI works, understanding its strengths and limitations, and evaluating the information it provides. Students should be encouraged to verify AI-generated content by comparing it with reliable sources and to use AI in honest and responsible ways. Holmes et al. (2022) argue that developing ethical awareness is just as important as developing technical skills if AI is to support meaningful learning in education.

Implications for Teaching and Educational Policy

Rethinking Task Design

The growing use of AI means teachers need to rethink the way they design classroom activities. If AI can easily complete a task, then the task may no longer help students learn as much as it should. Instead, learning activities should encourage students to do things that require their own thinking, creativity, and interaction with other people.

For example, students can investigate problems in their local community, interview people, carry out science experiments, work together to solve real-life problems, or develop ideas for a business or social project. They can also reflect on their learning and explain how they reached their conclusions. These activities help students build skills that AI cannot replace.

The way teachers assess students also needs to change. Rather than asking students to write an essay that AI could easily produce, teachers can invite them to compare their own work with an AI-generated response. Students can then discuss the differences, decide which ideas are more convincing, and explain the reasons for their choices. Activities like these encourage students to think more carefully instead of accepting AI's answers without question.

The goal is not to remove AI from the classroom. AI is likely to become part of students' daily lives, both in education and in the workplace. What matters is helping students learn how to use it responsibly. They should know when AI can be useful, when its answers need to be checked, and where its limitations lie. When students develop these skills, AI becomes a tool that supports learning rather than a shortcut that replaces thinking (UNESCO, 2023; Holmes et al., 2022).

The Evolving Role of Teachers

Some people believe that AI will eventually replace teachers which is more likely not true. Many researchers argue that AI is to support teachers not take their place. This is because there is some teaching action that cannot be performed by technology. (Holmes et al., 2022; UNESCO, 2023).

Teaching is not merely about how teacher explain their lesson. More than that, teaching is to help students ask questions, think critically, solve problems, and learn from their experiences. Teachers also design meaningful learning activities, monitor students' progress, and encourage

them when learning becomes difficult. As AI becomes more common in education, teachers also play central role in helping students use it responsibly and ethically (UNESCO, 2023).

It is commonly agreed that AI perform all his responsibilities. Things like understanding students' emotions, recognizing when they need extra support, and making decisions based on professional experience and knowledge of their classrooms can only be done by teachers , not AI. Teachers also understand the social and cultural backgrounds of their students, which allows them to create a positive and supportive learning environment, things that AI cannot do. Human qualities such as empathy, professional judgment, and ethical decision-making remain essential parts of effective teaching (Luckin et al., 2016; Holmes et al., 2022).

For this reason, AI should be seen as a tool that supports teachers, not as the replacement for teachers. It can reduce routine work, help teachers prepare learning materials, and provide useful information about students' learning. However, teachers remain at the center of the learning process because they guide, motivate, and inspire students in ways that AI cannot (UNESCO, 2023; OECD, 2023).

Proposed AI-Supported Task-Based Teaching

Task-Based Teaching can continue to be effective in the AI era if teachers design learning carefully. Instead of replacing students' thinking, AI should be used to support learning at different stages of the task. The following model shows one possible way to organize the learning process.

Table 1. Stages in doing AI-supported TBT

STAGES	ACTIVITIES
Stage 1: Starting with a Meaningful Task	Every lesson begins with a task that has a clear purpose. Teachers should choose activities that relate to real-life situations so students can use what they have learned to solve authentic problems. When students see the connection between classroom learning and everyday life, they are usually more motivated to take part in the activity (Ellis, 2003; Van den Branden, 2006).
Stage 2: Using AI to Support Learning	Once the task has been introduced, students can use AI to look for information, explore different ideas, or ask questions when they need help. AI can suggest resources or explain difficult concepts, but it should not replace students' own thinking. The aim is to help students learn more effectively, not simply finish the task more quickly (UNESCO, 2023; Miao & Cukurova, 2024).
Stage 3: Learning Through Collaboration	After exploring ideas with AI, students work together in small groups. They discuss what they have found, compare different opinions, and decide how to solve the problem. During these discussions, they learn from one another and develop a deeper understanding of the topic. Working with classmates also helps students practice communication and teamwork, which remain important skills in the age of AI (Johnson & Johnson, 2009).

Stage 4: Reflecting on the Learning Process	Reflection gives students a chance to think about what they have learned and how they reached their conclusions. They can compare their own ideas with AI-generated responses, identify any differences, and decide which ideas are more convincing. This encourages students to question information instead of accepting every AI response as correct, helping them become more critical and responsible users of technology (UNESCO, 2023).
Stage 5: Assessing Learning	Assessment should look beyond the final answer. Teachers also need to consider how students approached the task, how they worked with others, and how they used AI during the learning process. Students' reasoning, creativity, and ability to apply their knowledge deserve as much attention as the final product (Black & Wiliam, 2009; OECD, 2023).

This model views AI as a learning partner rather than a replacement for students or teachers. AI can provide useful support throughout the learning process, but meaningful learning still depends on students' own thinking, collaboration with others, and guidance from their teachers (Holmes et al., 2022). When used appropriately, AI can encourage students to ask questions, revise their work, and explore different perspectives instead of simply accepting ready-made answers. At the same time, teachers remain responsible for designing learning experiences that ensure AI supports active engagement rather than passive dependence on technology (Holmes et al., 2022; UNESCO, 2023).

As AI becomes part of everyday education, schools need clear plans for using it well. The goal should not be to ban AI, but to help teachers and students use it in ways that improve learning while protecting academic integrity (UNESCO, 2023). Such plans should include clear guidelines on when and how AI may be used for learning activities, assignments, and assessments. A well-designed implementation strategy can help schools maximize the educational benefits of AI while minimizing potential risks and misuse (UNESCO, 2023).

One important step is to teach students how to use AI responsibly. They need to understand not only how AI works but also how to check its accuracy, recognize its limitations, and use it ethically. AI literacy is becoming an essential skill for learners in the digital age (Miao & Cukurova, 2024). Students should also learn to compare AI-generated responses with information from reliable academic sources before accepting them as accurate. Developing these habits helps learners become critical users of AI rather than passive consumers of automatically generated information (Miao & Cukurova, 2024; UNESCO, 2023).

Teachers also need ongoing support. Learning how to operate AI tools is only the beginning. Professional development should help teachers design meaningful classroom activities, evaluate AI-generated content, and decide when AI can genuinely improve learning. The teacher's professional judgment remains essential because effective teaching depends on much more than technology (OECD, 2023; Holmes et al., 2022). Training programs should also provide opportunities for teachers to share successful classroom practices and discuss challenges related to AI integration. Continuous professional learning enables teachers to adapt their instructional strategies as AI technologies continue to evolve (OECD, 2023; Miao & Cukurova, 2024).

Assessment practices also need to evolve. If students can easily use AI to produce information, schools should place greater value on skills such as critical thinking, creativity, collaboration, and problem solving. These abilities are much more difficult for AI to replace and are increasingly important for students' future lives and careers (OECD, 2023). Teachers may also incorporate authentic assessments such as presentations, projects, portfolios, and classroom discussions that require students to demonstrate their own understanding. These forms of assessment provide stronger evidence of genuine learning than tasks that can easily be completed by AI alone (OECD, 2023; Black & Wiliam, 2009).

Schools should also develop clear policies on the ethical use of AI. These policies need to address issues such as privacy, copyright, academic honesty, and responsible use of data. At the same time, they should encourage teachers and students to explore AI in creative and productive ways rather than discourage its use completely (UNESCO, 2023). Clear policies also help establish consistent expectations for all members of the school community regarding acceptable AI use. By promoting transparency and accountability, schools can foster a culture in which AI is used responsibly to support learning rather than undermine it (UNESCO, 2023).

Finally, equal access to technology cannot be ignored. Students will benefit from AI only if they have reliable internet connections, suitable digital devices, and opportunities to develop digital skills. Without these conditions, AI could increase educational inequalities instead of reducing them (UNESCO, 2023). Governments and educational institutions therefore need to invest in digital infrastructure and provide adequate technological resources for all learners. Ensuring equitable access allows students from different backgrounds to benefit equally from AI-supported learning opportunities (UNESCO, 2023).

If schools, governments, and teachers work together, AI can become a valuable tool for improving education. Technology may continue to change, but the main purpose of education remains the same: helping students think independently, solve meaningful problems, work with others, and continue learning throughout their lives. AI should therefore be viewed as a tool that enhances, rather than replaces, meaningful teaching and learning. By maintaining a balance between technological innovation and sound educational principles, schools can prepare students to succeed in an increasingly AI-driven world (OECD, 2023; UNESCO, 2023).

CONCLUSION AND RECOMMENDATIONS

Artificial intelligence is reshaping education, but it does not reduce the value of Task-Based Teaching. In many ways, it makes this approach even more relevant. While AI can generate information, answer questions, and assist with learning tasks, education is about much more than producing correct answers. Students also need to learn how to think independently, make ethical decisions, work with others, and solve problems in unfamiliar situations. These remain fundamentally human capabilities (UNESCO, 2023; OECD, 2023).

Task-Based Teaching offers opportunities for students to develop these abilities because learning is built around meaningful tasks rather than the memorization of facts. As students investigate real-world problems, discuss ideas with their classmates, and reflect on their learning, they build knowledge together and learn how to apply it in authentic contexts (Ellis, 2003; Van den Branden, 2006). AI can enrich this process by helping students explore information, generate

alternative perspectives, or receive timely feedback. Even so, it should support, not replace, their own reasoning and decision-making (Holmes et al., 2022).

For this reason, integrating AI into Task-Based Teaching requires thoughtful implementation. Schools need to consider issues such as academic honesty, equitable access to digital technology, teacher preparedness, and the responsible use of AI. These challenges cannot be solved by technology alone. They require informed policies, effective leadership, and teachers who understand both the opportunities and the limitations of AI (Miao & Cukurova, 2024).

The future of education is therefore unlikely to be shaped by teachers or AI working independently. Greater benefits will come from a partnership in which each contributes its strengths. AI can make learning more efficient and provide personalized support, while teachers contribute what technology cannot: professional judgment, empathy, encouragement, and the ability to inspire meaningful learning. By bringing these strengths together, Task-Based Teaching can help prepare students not only to succeed in an AI-driven world but also to participate in it responsibly, ethically, and with confidence.

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