

## A Futures Study on the Epistemological Assumptions of an Artificial Intelligence-Based English Language Curriculum

Osman Yılmaz Kartal <sup>1\*</sup> , Meral Yavuz Kartal <sup>2</sup> 

<sup>1</sup> Department of Education Sciences, Çanakkale Onsekiz Mart University, Çanakkale 17000, TÜRKİYE; Email: [osmanykartal@comu.edu.tr](mailto:osmanykartal@comu.edu.tr); ORCID: 0000-0003-2922-0069

<sup>2</sup> Ministry of National Education, Çanakkale Governorship - European Union and Foreign Relations Office, Çanakkale 17000, TÜRKİYE; Email: [meralyk82@gmail.com](mailto:meralyk82@gmail.com); ORCID: 0000-0003-3441-9494

\*Corresponding Author: [osmanykartal@comu.edu.tr](mailto:osmanykartal@comu.edu.tr)

**Citation:** Kartal, O. Y. and Kartal, M. Y. (2025). A Futures Study on the Epistemological Assumptions of an Artificial Intelligence-Based English Language Curriculum, *Journal of Cultural Analysis and Social Change*, 10(2), 2450-2463. <https://doi.org/10.1064753/jcasc.v10i2.1963>

**Published:** November 17, 2025

### ABSTRACT

The integration of artificial intelligence into English language curricula transcends mere technological upgrading, presenting a fundamental philosophical crossroads for the field of education. At present, the application of AI is largely confined to unstructured, individual practices, lacking a coherent pedagogical foundation or a comprehensive curricular vision. This study, designed as a futures research project, aims to interrogate how this inevitable integration ought to unfold, focusing on its philosophical underpinnings and pedagogical consequences. Employing an exploratory and qualitative scenario analysis methodology, the study develops two contrasting future scenarios: one where AI functions as an "Authority/Master" (Scenario A), and another where it acts as a "Peer" (Scenario B). The findings reveal that Scenario A constitutes a behaviorist restoration, confining learners to the lowest rungs of intellectual development and regressing the field to primitive epistemological assumptions. In stark contrast, Scenario B presents a dialogical and post-formal vision that elevates the learner to the position of a critical evaluator and active producer, fostering the collective creation of knowledge. Ultimately, the study contends that the future of the discipline hinges on the courage to position AI not as an undisputed authority, but as a dialogic partner that enriches the collective pursuit of meaning.

**Keywords:** Artificial Intelligence, Epistemological Assumptions, Futures Research, English Language Curriculum

### INTRODUCTION

As we advance into the 2020s, the field of education is undergoing a profound transformation, moving beyond its traditional paradigms to embrace contemporary and even futuristic frameworks. This evolution is propelled by two primary forces: the quest for more functional educational outcomes and the relentless advancement of technology. In the domain of language teaching, this pursuit of functionality has catalyzed the development of effective, context-sensitive English language curricula. Concurrently, technological progress has infused education with the transformative concepts of Education, Industry, and Society 4.0/5.0, fundamentally reshaping the character of learning environments. Amidst this rapid change, a central concern for educational scientists is ensuring both the "functionality" and "intelligibility" of this emerging educational character. It is within this dynamic landscape that futures-oriented educators are grappling with a foundational question: What identity will English language curricula forge in response to these profound technological and pedagogical shifts? This transformation brings forth the educational reflections of transhumanist and posthumanist discussions, where technology enhances and may even surpass human capabilities (Firdaus, 2025; Nayır, Sarı, & Bozkurt,

2024). The integration of artificial intelligence into language education not only introduces new teaching tools but also raises fundamental questions about the nature of knowledge, learner autonomy, and human values (Firdaus, 2025). Therefore, critically examining AI's role from a pedagogical perspective is essential to understanding how we can harness its potential while preserving these core human values (Nayır et al., 2024). In this context, AI-supported language teaching holds the potential to challenge traditional knowledge transmission models by placing the student at the center of their own learning process (DENG, 2025).

To fully appreciate the futures-oriented perspective of this study, it is crucial to first clarify the current state of affairs. As of 2025, generative artificial intelligence has become an integral feature of both individual and social life. However, this widespread adoption does not signify that the technology has been systematically or functionally integrated as a formal component of curricula at any level of education, including universities. Currently, the integration of AI in English language instruction is predominantly ad-hoc and individualized, without a structured pedagogical framework or a unified vision for the curriculum.

This situation is not entirely new; the history of AI in education (AIEd) traces back to the mid-twentieth century, with early developments in Intelligent Tutoring Systems and a long-standing disciplinary confluence between cognitive science, computer science, and education (Williamson & Eynon, 2020). However, the recent shift from programmable expert systems to data-driven machine learning has catalyzed the current moment, characterized by a complex convergence of academic research, the commercial edtech industry, and data-driven governance interests (Williamson & Eynon, 2020). The unstructured practices we observe today are symptomatic of a field where technological capabilities have outpaced pedagogical and philosophical consensus. Furthermore, the effectiveness of any integration is deeply influenced by educators' own views on the nature of knowledge, as teachers' epistemic beliefs about GenAI significantly shape how they plan and regulate their learning and instruction with these new tools (Sui & Chang, 2026).

Consequently, the central inquiry of this study is not *whether* AI will be integrated into language classrooms, but rather *how* this inevitable integration should be actualized—exploring the philosophical foundations upon which it must rest and the pedagogical consequences it will entail. In this evolving landscape, the role of teachers is also shifting from being mere transmitters of knowledge to facilitators who guide students' interactions with AI tools, foster critical thinking, and orchestrate the learning journey (DENG, 2025; Tafazoli, 2024). Indeed, the personalized learning paths and instant feedback provided by AI present significant opportunities to support learner autonomy (Kundu & Bej, 2025; Tahir & Tahir, 2023). However, fully realizing this potential requires both students and teachers to develop a specific set of metacognitive competencies. Levin, Marom, and Kojukhov (2025) term these competencies "Meta-AI skills," highlighting the ability to engage with AI as a cognitive partner, a process which requires a deep understanding of the interplay between human cognition and the affordances of the cognitive artifact itself (Cassinadri, 2024). Consequently, interrogating the philosophical foundations of this integration also necessitates defining these new cognitive and pedagogical skills that will be expected of the learners and teachers of the future. To consciously navigate this integration process, whether it unfolds in the near or distant future, it is critically important to analyze potential futures from our current vantage point.

One of the most significant affordances of an effective English language curriculum is the robust and collaborative intellectual climate it fosters. As artificial intelligence—a cornerstone of the Education 4.0/5.0 transformations—becomes embedded in classrooms, it is vital to anticipate the resulting shifts in this climate. A strong intellectual climate mitigates alienation, promotes educational autonomy, and facilitates the healthy evolution of the system through organic feedback mechanisms like reflection, Socratic questioning, and critical thinking. This climate is fundamentally nourished by the system's epistemological orientation. The epistemological assumptions of an educational framework are the inquiries and descriptions concerning the very nature of the knowledge that is, or will be, put into practice. It is therefore essential to examine the potential epistemological assumptions of future AI-based English language curricula through the lens of futures studies.

This study thus aims to forecast the epistemological assumptions of an AI-supported English language teaching approach designed for future educational systems. In these envisioned systems, AI is expected to assume a multitude of roles, potentially acting as an information source, a co-educator, a co-mentor, a peer, a learner, or even a knowledge creator.

### Epistemological Theories

This study's analytical framework is grounded in a synthesis of established epistemological theories that provide a lens for examining the nature of knowledge and knowing. The following frameworks are central to our analysis:

The epistemological framework synthesized by Becker, Niehaves & Klose (2005) and Becker & Niehaves (2007) delineates several key dimensions. The first, Object of Cognition, addresses the ontological question of "what is" and "how it is," positioning the inquiry on a spectrum between ontological realism and ontological relativism. Ontological realism posits that reality exists independently of human cognition, whereas ontological

relativism argues that reality is inseparable from human consciousness and that its nature is diversified through interaction with it.

The second dimension, the Relationship between cognition and object of cognition, explores the connection between knowing and reality. This dimension is assessed along a continuum from epistemological realism to constructivism. Epistemological realism pursues an objective reality, upholding a culture of knowledge that is immutable and rigid. In contrast, constructivism asserts that knowledge is actively constructed by the subject, thereby embracing a culture of knowledge that acknowledges subjectivity. This perspective gives rise to various forms of constructivism, each with distinct epistemological nuances.

The third dimension, What is true cognition (concept of truth), investigates how humans can attain true knowledge, focusing on the extent to which truth is accessible and how its validity can be verified. This assessment considers several theories of truth. The Correspondence theory of truth holds that ideas are true if they align with facts in the real world. The Consensus theory of truth accepts ideas as true if they are agreed upon by a group. Finally, the Semantic theory of truth suggests that the truth of an idea varies depending on the object and the metalanguage used to describe it.

A fourth dimension asks, What is the origin of cognition/knowledge? This inquiry contrasts empiricism, which grounds knowledge in a posteriori (empirical) experience, with rationalism, which posits that the intellect is a source of a priori knowledge attainable without observation. Kantianism offers a synthesis, proposing that knowledge originates from the interplay of both empirical and rational faculties.

The fifth dimension, By what means can cognition be achieved?, is a methodological inquiry into the valid means of acquiring knowledge, typically assessed through the logical processes of induction, deduction, or a combination of both in the hypothetico-deductive method.

To this framework, we incorporate the epistemological inquiry of Paavola & Hakkarainen (2005): How is truth gained? How does learning occur? This dimension introduces three metaphors for learning. Learning can be understood as a process of Knowledge Acquisition, which is inherently monological. It can also be viewed as Participation, a dialogical process involving functional, reciprocal interaction. Finally, learning can be conceptualized as Knowledge Creation, which is a trialogical process. In a monological model, the teacher is the authority. In a dialogical model, the teacher is a guide who participates in the learning process with the student. The trialogical model adds a third element—an "object"—to the teacher-student interaction. This object can be either a tool that facilitates the inclusion of external human subjects (e.g., integrating social media discussions or virtual guest experts into a lesson) or an active subject itself, such as an artificial intelligence participating with its own conscious identity.

Further informing our analysis are several developmental models of epistemology:

Perry's (1970) theory of intellectual development outlines a progression through four stages: Dualism, where knowledge is perceived in terms of absolute right and wrong, with authority as the sole arbiter of truth; Multiplicity, where individuals acknowledge uncertainty when authority does not provide a clear answer and begin to formulate their own opinions, though still in search of the "right" one; Relativism, which accepts that knowledge is not absolute and can vary across different authorities and learners; and Commitment in Relativism, which recognizes that knowledge is contextual and truths are probabilistic, varying with time, person, and place.

Belenky et al.'s (1986) *Women's Ways of Knowing* describes a trajectory that begins with Silence, a state where the learner is passive and described as "voice-less and mind-less." This is followed by Received Knowledge, where the learner begins to listen to and accept truths from external authorities without producing their own knowledge. In Subjective Knowledge, truth becomes personal, private, and intuited. In Procedural Knowledge, the learner recognizes that truth is attained not through intuition and experience alone, but through observation and reasoning. Finally, Constructed Knowledge posits that knowledge is diverse because it is constructed by different individuals; this diversity is seen as a source of richness, and the knower is understood to be an integral part of the known.

Baxter Magolda's (1992) Epistemological Reflection Model identifies four stages: Absolute Knowing, where knowledge is certain and transmitted by authority; Transitional Knowing, where knowledge is certain in some fields but uncertain in others, leading learners to develop "understanding" rather than acquire facts; Independent Knowing, where knowledge is viewed as uncertain and learners are seen as co-creators of meaning alongside instructors; and Contextual Knowing, where learners can judge the nature of knowledge in different contexts based on evidence, accepting that truths are probabilistic and contextually valid.

King and Kitchener's (1994) Reflective Judgment Model proposes three levels: Pre-Reflective Thinking, where knowledge is absolute and requires no justification; Quasi-Reflective Thinking, where knowledge is uncertain and evidence-based, acknowledging ambiguity; and Reflective Thinking, where knowledge is the outcome of a process of evaluating different solutions, evidence, and perspectives in a contextual manner.

Kuhn's (1991) theory of Argumentative Reasoning classifies epistemological stances as Absolutist (knowledge is certain and absolute), Multiplist (knowledge is subjective), and Evaluativist (knowledge claims must be compared and evaluated according to different viewpoints and their contextual values).

## METHOD

This study is methodologically anchored in the field of futures research. Defined as "the systematic exploration of the possible", the primary objective of futures research is to comprehend potential future conditions, provide early warnings against emerging challenges, and facilitate the evaluation of policies that could shape these futures. This methodology was selected for its capacity to offer a richer, more multidimensional analysis than simple trend extrapolation, which is particularly crucial when investigating a transformative subject like artificial intelligence, with its profound technological and philosophical implications.

### Research Design: Exploratory and Qualitative Scenario Analysis

Gordon (1992) distinguishes between two types of future forecasts: *exploratory* forecasts, which are concerned with "plausible futures," and *normative* forecasts, which focus on "desirable futures". This study adopts a distinctly exploratory approach, as its aim is to investigate the different trajectories that AI-based English language teaching might follow. Furthermore, given the philosophical depth of the problem and the current absence of established quantitative data on the topic, a qualitative design was employed for the analysis.

Within this qualitative and exploratory framework, the scenario model was designated as the core research method. According to Gordon, scenarios possess the power to "present the results of forecasts in a coherent and compelling way" and to "set the stage for planning by picturing a range of possible situations within which policies may have to operate". Methods that merely extrapolate from historical data are inadequate in a field shaped by new dynamics like artificial intelligence. Scenarios, therefore, provide an ideal tool for constructing holistic visions of possible futures.

### Development and Operational Definitions of Scenarios

A key feature of a well-constructed scenario is that it is not arbitrary but exhibits internal logical consistency. In this study, by analyzing existing pedagogical paradigms and the literature on the philosophy of technology, two contrasting scenarios were developed. These scenarios represent two "extreme" yet "plausible" futures for the role of AI in English language teaching. They serve as an analytical framework for examining the transformations between the epistemological assumptions of potential futures.

The operational definitions of the two scenarios used in this study are as follows:

**Scenario A (*What if AI Becomes the Authority/Master?*):** In this curriculum, artificial intelligence is regarded as a "master," functioning as the absolute authority on language grammar and usage. Teachers and students accept the information and feedback provided by the AI as unconditionally correct. This scenario represents a future where knowledge is sourced from a single, absolute authority.

**Scenario B (*What if AI Becomes a Peer?*):** In this curriculum, artificial intelligence is viewed as just one among several subjects synthesizing knowledge. It holds the same status as the teacher and the student, and the linguistic information it constructs is considered one of many "probabilistic truths". This scenario depicts a future where knowledge is co-constructed through dialogue and negotiation among different subjects.

### The Analysis Process

At this stage of the research, a systematic and comparative conceptual analysis was employed to interpret the two exploratory scenarios. The primary instruments of this method were the construction of Table 1 (Pedagogical Features) and Table 2 (Epistemological Assumptions), which synthesize the study's findings. The creation and analysis of these tables proceeded in three key stages:

**Establishing a Baseline and Foundations for Comparison:** First, the core characteristics of the "Present" paradigms—"Traditional," "Contemporary," and "Technology-Supported" English language teaching—were defined through a synthesis of the relevant literature. This stage established an analytical baseline against which the potential future scenarios could be compared and their transformations tracked.

**Deductive Elaboration of the Scenarios:** In the second stage, a process of deductive reasoning was applied, starting from the core premise of each scenario ("AI as Authority/Master" for Scenario A; "AI as Peer" for Scenario B). The logical consequences of each scenario's central assumption on all the pedagogical dimensions in Table 1—such as pedagogical climate, roles of teacher and student, and the position of technology—were systematically determined. This process ensured that each scenario adhered to the principle of "internal self-consistency" emphasized by Gordon (1992). For instance, the premise of AI as an absolute authority necessarily

dictated that communication would be *monological*, the scientific paradigm *positivist*, and the conception of reality *ontological realism*.

**Theory-Based Epistemological Mapping:** In the most critical phase of the analysis, the epistemological identity of each scenario was mapped using the developmental models that constitute the study's theoretical framework. This was not a subjective interpretation but a rational analytical tool that involved directly matching the structural features of the scenarios with their corresponding theoretical definitions. For example, the structure of Scenario A, where knowledge is uncritically received from an authority, aligns perfectly with the descriptions of Perry's (1970) "Dualism," Belenky et al.'s (1986) "Received Knowledge," and Baxter Magolda's (1992) "Absolute Knowing". Conversely, the structure of Scenario B, where knowledge is constructed contextually and based on evidence from multiple perspectives, was matched with the highest stages of these models: "Commitment in Relativism," "Constructed Knowledge," and "Contextual Knowing".

This systematic three-stage analysis enabled a robust and traceable comparison between existing paradigms and potential futures, thereby forming the foundation for the study's forecasts.

## FINDINGS

The analysis of the two exploratory scenarios reveals a critical divergence, pointing to two fundamentally different evolutionary paths for English language teaching. This is not merely a question of methodology; the split goes to the core of the pedagogical structures and philosophical principles that shape the learning environment. To truly understand the nature of this schism, our inquiry must begin by systematically deconstructing the distinct pedagogical features of each potential future. The next section is dedicated to mapping these contrasting landscapes in order to establish a clear foundation for the analysis that follows.

### The Divergent Pedagogical Landscapes of AI-Integrated Curricula

To effectively chart the potential futures of English language teaching, we must begin by breaking down their core pedagogical features. The table that follows is designed for this purpose, offering a comparative analysis that sets the characteristics of traditional, contemporary, and technology-supported paradigms alongside the two proposed AI-based scenarios. What this examination uncovers is a fundamental split in the classroom's operational and interactional dynamics, a split that in turn provides the foundation for a deeper philosophical inquiry into the origins of these contrasting futures.

**Table 1.** Pedagogical Features of Present and Future English Language Teaching Curricula

| Context                  | PRESENT                             |                                                                     |                                                                     | FUTURE                                                               |                                                          |
|--------------------------|-------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------|
|                          | Traditional English Language Lesson | Contemporary English Language Teaching                              | Technology-Supported English Language Teaching                      | AI-Based English Language Teaching – If AI Becomes Authority/Master? | AI-Based English Language Teaching – If AI Becomes Peer? |
| Climate of Communication | Monology                            | Dialogy                                                             | Dialogy                                                             | Monology                                                             | Triology                                                 |
| Climate of Learning      | Monological                         | Dialogical                                                          | Dialogical                                                          | Monological                                                          | Triological                                              |
| Climate of Opinion       | Autocratic                          | Democratic                                                          | Democratic                                                          | Autocratic                                                           | Democratic                                               |
| Technology               | Tool + Aim                          | Tool                                                                | Tool                                                                | Tool + Aim                                                           | Subject                                                  |
| Knowledge                | Aim                                 | Tool + Aim                                                          | Tool + Aim                                                          | Aim                                                                  | Tool + Aim                                               |
| Teacher                  | Source of Knowledge, Instructor     | Guide, Reflective Learner                                           | Guide, Reflective Learner                                           | Source of Knowledge, Instructor                                      | Guide, Reflective Skeptical Learner                      |
| Student                  | Consumer                            | Consumer + Producer                                                 | Consumer + Producer                                                 | Consumer                                                             | Prosumer                                                 |
| Learning Approach        | Behaviorism                         | Cognitive Constructivism, Social Constructivism, Co-Constructivism, | Cognitive Constructivism, Social Constructivism, Co-Constructivism, | Behaviorism                                                          | Critical Constructivism                                  |

|                                  |                                                             |                                                                                                                                                         |                                                                                                                                                                                  |                                                             |                                                                                                                                                                                                                                                                    |
|----------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  |                                                             | Radical Constructivism                                                                                                                                  | Radical Constructivism                                                                                                                                                           |                                                             |                                                                                                                                                                                                                                                                    |
| Rationale                        | Inductivism                                                 | Dialectic Hypothetico-deductive +                                                                                                                       | Dialectic Hypothetico-deductive +                                                                                                                                                | Inductivism                                                 | Kantian Rationale + Dialectic + Hypothetico-deductive + PostFormal Reasoning (Complexity, Creativity, Dialogical Reasoning, Ecological Reasoning, Futures Reasoning, etc.)                                                                                         |
| Scientific Paradigm              | Positivist                                                  | Post-Positivist (Interpretivism)                                                                                                                        | Post-Positivist (Interpretivism + Critical Theory)                                                                                                                               | Positivist                                                  | Neo-Post-Positivist (Post-Structuralism)                                                                                                                                                                                                                           |
| Aims of Scientific Paradigm      | Prediction                                                  | Understanding + Emancipation                                                                                                                            | Understanding + Emancipation                                                                                                                                                     | Prediction                                                  | Deconstruction                                                                                                                                                                                                                                                     |
| Education Style                  | Formal                                                      | Formal                                                                                                                                                  | Formal                                                                                                                                                                           | Formal                                                      | Post-Formal                                                                                                                                                                                                                                                        |
| Learners' Intellectual Equipment | Traditional Literacy + Mathematical and Verbal Intelligence | Modern Literacy + Thinking Skills (Problem Solving, Creative/Innovative Thinking, Lateral Thinking, Algorithmic Thinking, etc.) + Multiple Intelligence | Modern Literacy + Thinking Skills (Problem Solving, Creative/Innovative Thinking, Lateral Thinking, Algorithmic Thinking, etc.) + Multiple Intelligence + Technological literacy | Traditional Literacy + Mathematical and Verbal Intelligence | Modern Literacy + Thinking Skills (Problem Solving, Creative/Innovative Thinking, Lateral Thinking, Algorithmic Thinking, etc.) + Multiple Intelligence + Technological literacy + Skepticism + Intuition + Probabilistic Thinking + Perceptual questioning skills |
| Quest for Reality                | Artificial Quest for Reality                                | Critical Quest for Reality                                                                                                                              | Critical Quest for Reality                                                                                                                                                       | Artificial Quest for Reality                                | Critical and Transcendent Quest for Reality                                                                                                                                                                                                                        |

As the findings in Table 1 suggest, the future of AI-based English language teaching is poised to follow one of two starkly different trajectories. The analysis makes it clear that this divergence hinges not on the technology itself, but rather on the pedagogical role and epistemological status assigned to AI. This point is powerfully illustrated by Scenario A (What if AI Becomes the Authority/Master?) and Scenario B (What if AI Becomes a Peer?), which reveal how the exact same technological tool can be used to erect two diametrically opposed pedagogical universes.

### ***Polarization in the Pedagogical Climate and Interaction Dynamics***

The pedagogical climate, which constitutes the very spirit of the curriculum, exhibits a sharp polarization between the two scenarios. In Scenario A, the climate of communication and learning regresses to a monological structure, where knowledge is transmitted from a single authority (the AI) to the learner. This dynamic renders the climate of opinion autocratic, effectively nullifying the dialogical and democratic advancements of contemporary English language teaching. This structure is, in essence, a technologically augmented iteration of the "Traditional English Language Lesson."

In stark contrast, Scenario B elevates the pedagogical climate to a triological plane by introducing a new subject (AI) into the interaction. This tripartite network of interaction among the teacher, the student, and the AI reconstructs the learning and communication climate on a democratic foundation. This model offers an environment where knowledge is not passively received but actively negotiated and co-created among different subjects, thus holding the potential to transcend contemporary approaches.

### **The Redistribution of Roles, Statuses, and Agency**

One of the most pronounced differences between the scenarios emerges in how the roles, statuses, and agency of the core elements within the system are defined.

**The Position of Technology and Knowledge:** In Scenario A, technology (AI) becomes both a means and an end in itself—the absolute source of knowledge to be attained. Knowledge is similarly positioned as an unquestionable end. In Scenario B, however, technology transcends its role as a passive tool to achieve the status of a conscious subject participating in the learning process. Knowledge, in turn, acquires a dual function, serving as both a tool used during the learning process and an end that is collaboratively produced as a result of it.

**The Transformation of Human Subjects:** This shift in roles directly impacts the agency of both teacher and student. In Scenario A, the teacher reverts to the traditional role of "Source of Knowledge, Instructor," while the student remains a passive "Consumer." The absolute authority of the AI constrains the autonomy of both human subjects. Scenario B, conversely, radically transforms these roles. The student is transformed into an active "Prosumer"—one who both consumes and co-produces knowledge with the AI and the teacher. The teacher's role undergoes the most sophisticated transformation: beyond being a "Guide" and "Reflective Learner," they adopt the identity of a "Reflective, Skeptical Learner." This role requires the teacher to act as a meta-cognitive moderator, critically questioning even the possibilities presented by the AI.

### **The Rupture in Theoretical and Philosophical Foundations**

These differences in pedagogical practice are the result of a deeper rupture in their underlying theoretical and philosophical paradigms. The pedagogical structure of Scenario A is predicated upon the positivist scientific paradigm, with its goal of prediction, and relies on a behaviorist learning approach and inductivist logic. This amounts to a technological restoration of a 20th-century educational model.

Conversely, Scenario B is grounded in a Neo-Post-Positivist (Post-Structuralist) scientific paradigm. The objective of this paradigm extends beyond understanding and emancipation to the deconstruction of existing knowledge structures. To achieve this, it embraces more complex and dialectical approaches, such as Critical Constructivism and Post-Formal Reasoning. The evolution from a Formal to a Post-Formal educational style signifies that rule-based learning will be superseded by flexible, context-sensitive competencies such as complexity, creativity, dialogue, and ecological reasoning.

### **The Nature of the Targeted Intellectual Competency and the Quest for Reality**

Finally, the intellectual toolkit the two scenarios aim to cultivate in the individual, and their ultimate objectives, are entirely different. Scenario A equips the student with "Traditional Literacy" and directs them toward an "Artificial Quest for Reality," which is based on accepting the singular, definitive truth presented by the AI.

Scenario B, on the other hand, augments modern literacy and thinking skills with high-level competencies such as "Skepticism, Intuition, Probabilistic Thinking, and Perceptual Questioning Skills." This toolkit prepares the learner for a "Critical and Transcendent Quest for Reality," where there are no absolute truths, but rather evidence-based, contextual truths that are subject to negotiation. This represents an endeavor not merely to access information, but to achieve a consciousness that interrogates knowledge itself and the processes of its production.

In essence, Table 1 analytically demonstrates that the future of AI in education will be shaped not by technological determinism, but by profound pedagogical and philosophical choices. This shaping process becomes even more apparent when the potential futures (Scenarios A and B) are compared not only with each other but also with the evolutionary trajectory of English language teaching to date.

The "Present" columns in Table 1 summarize the journey of English language teaching from a "Traditional" structure—where the teacher was the absolute "Source of Knowledge," communication was "Monological," and the approach was grounded in "Behaviorism"—to a "Contemporary" and "Technology-Supported" paradigm where the teacher acts as a "Guide," interaction is "Dialogical," and "Constructivist" learning theories are embraced. This evolution signifies a shift from an approach centered on memorizing rules to a process aimed at fostering communicative competence and learner autonomy, with technology positioned as a "Tool" to support this democratic learning climate.

Viewed from this evolutionary context, Scenario A emerges not as a step forward for contemporary English language teaching, but as a technological restoration of the "Traditional" paradigm. By positioning AI as the "Authority/Master," this scenario reduces the communication and learning climate back to a "Monological" structure. This signifies a return to a positivist framework that the field has worked for decades to overcome—one where the student is a passive "Consumer" of unquestioned information, and the goal is to reproduce a predetermined correct answer. The objective of developing communicative and interactional skills risks being supplanted by the imperative to conform absolutely to the linguistic model presented by the AI.

In stark contrast, Scenario B represents a radical evolution that, rather than rejecting the dialogic and constructivist gains of the present, elevates them to a new level. By incorporating AI as a "Peer" and a "Subject" in the learning process, this model advances the pedagogical climate into a "Triological" dimension. This points to a process in English language teaching focused not just on the interaction between teacher and student, but on the collaborative creation of meaning and knowledge with a conscious third element—the AI. In this scenario, where the student is positioned as a "Prosumer," language learning is redefined as the ability to critically filter various probabilistic truths (e.g., different linguistic structures offered by the AI, the teacher, and peers) to select and produce the most appropriate communicative strategy. The teacher's role as a "Reflective, Skeptical Learner" is to guide the student through this complex interaction, aiming to develop them not just as language users, but as critical agents who question the nature of language and the production of knowledge. This scenario, therefore, offers a Post-Formal educational vision that pushes English language teaching beyond its current post-positivist paradigm, creating a Neo-Post-Positivist ground for "deconstruction" and a "transcendent quest for reality."

### The Epistemological Crossroads: Decoding the Philosophical Foundations

The profound pedagogical schism detailed in Table 1 is not a superficial divergence in methodology but rather a surface manifestation of a much deeper, underlying conflict in philosophical principles. To understand the roots of this polarization, it is essential to excavate the epistemological assumptions that give each paradigm its distinct character. Table 2, therefore, moves the analysis from the pedagogical to the philosophical, employing the theoretical frameworks established earlier to systematically decode the core beliefs about knowledge, truth, and knowing that define each potential future.

**Table 2.** Epistemological Assumptions of Present and Future (AI-Based) English Language Teaching Curricula

| Theorist/Framework                                        | Dimension/Concept                                      | PRESENT                             |                                                                                            |                                                                                            | FUTURE                                                               |                                                          |
|-----------------------------------------------------------|--------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------|
|                                                           |                                                        | Traditional English Language Lesson | Contemporary English Language Teaching                                                     | Technology-Supported English Language Teaching                                             | AI-Based English Language Teaching – If AI Becomes Authority/Master? | AI-Based English Language Teaching – If AI Becomes Peer? |
| (Becker, Niehaves & Klose, 2005; Becker & Niehaves, 2007) | Object of Cognition                                    | Ontological realism                 | Ontological relativism                                                                     | Ontological relativism                                                                     | Ontological realism                                                  | Ontological relativism                                   |
|                                                           | Relationship between cognition and object of cognition | Epistemological Realism             | Cognitive Constructivism, Social Constructivism, Co-Constructivism, Radical Constructivism | Cognitive Constructivism, Social Constructivism, Co-Constructivism, Radical Constructivism | Epistemological Realism                                              | Transactional Constructivism, Critical Constructivism    |
|                                                           | What is true cognition (concept of truth)              | Correspondence theory of truth      | Consensus theory of truth                                                                  | Consensus theory of truth                                                                  | Correspondence theory of truth                                       | Semantic theory of truth                                 |
|                                                           | What is the origin of cognition /knowledge?            | Empiricism                          | Empiricism + Rationalism (Kantianism)                                                      | Empiricism + Rationalism (Kantianism)                                                      | Empiricism + Rationalism                                             | Empiricism + Rationalism (Kantianism)                    |
|                                                           | By what means can cognition be achieved?               | Inductivism                         | Hypothetico-deductive                                                                      | Hypothetico-deductive                                                                      | Inductivism                                                          | Hypothetico-deductive                                    |



|                               |                                                |                                   |                                                 |                                                 |                                   |                                |
|-------------------------------|------------------------------------------------|-----------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------|--------------------------------|
| (Paavola & Hakkarainen, 2005) | How do truth be gained? How do learning occur? | Knowledge Acquisition-Monological | Participation-Dialogical                        | Participation-Dialogical                        | Knowledge Acquisition-Monological | Knowledge Creation-Triological |
| (Perry, 1970)                 | Intellectual Development                       | Dualism                           | Multiplicity + Relativism                       | Multiplicity + Relativism                       | Dualism                           | Commitment                     |
| (Belenky et al., 1986)        | Women's Way of Knowing                         | Received Knowledge                | Subjective Knowledge + Procedural Knowledge     | Subjective Knowledge + Procedural Knowledge     | Received Knowledge                | Constructed Knowledge          |
| (Baxter Magolda, 1992)        | Epistemological Reflection                     | Absolute Knowing                  | Transitional Knowing + Independent Knowing      | Transitional Knowing + Independent Knowing      | Absolute Knowing                  | Contextual Knowing             |
| (King and Kitchener, 1994)    | Reflective Judgment                            | Pre-Reflective Thinking           | Quasi-Reflective Thinking + Reflective Thinking | Quasi-Reflective Thinking + Reflective Thinking | Pre-Reflective Thinking           | Reflective Thinking            |
| (Kuhn, 1991)                  | Argumentative Reasoning                        | Absolutist                        | Multiplist                                      | Multiplist                                      | Absolutist                        | Evaluativist                   |

The findings laid out in Table 2 lend precise comparative and theoretical weight to this article's central thesis: that designing an AI-based curriculum is, at its heart, an act of making a radical epistemological choice. It is through the lens of these epistemological frameworks that we can decipher the philosophical underpinnings of the pedagogical polarization first observed in Table 1. This reveals that Scenario A and Scenario B are not simply different methodological paths; rather, they are rooted in two distinct and irreconcilable paradigms regarding the nature of reality, knowledge, truth, and the knowing subject.

### **The Foundations of the Paradigm of Being and Knowledge: Ontological and Epistemological Grounding**

The framework from Becker and Niehaves (2007), our analytical starting point, lays bare the most fundamental divergence between the two scenarios: a rupture in their understanding of being (ontology) and knowledge (epistemology).

Scenario A is founded upon Ontological Realism and Epistemological Realism. This rests on the assumption that reality is singular, objective, and independent of the human mind, and that knowledge is a correct reflection of this external reality. The concept of truth is reduced to the correspondence of a statement with this external reality. In this closed and deterministic universe, AI is positioned as the ultimate authority that has accessed this singular, objective truth. The origin of cognition is predominantly empirical data from the external world, from which certain conclusions are reached through inductivist logic. This represents a technological restoration of modernism's Cartesian and positivist ideal of knowledge, reproduced through the medium of AI.

Scenario B, conversely, abandons this solid ground entirely, building instead upon Ontological Relativism. In this paradigm, reality is pluralistic and contextual, continuously co-constructed through the interaction of knowing subjects (both human and AI). Knowledge is the product of this interactional and negotiatory process; hence, it is grounded in Critical and Transactional Constructivism. Truth is no longer a matter of correspondence with objective reality but a matter of meaning-making within a linguistic and contextual frame (Semantic theory of truth) and of probabilistic validity. Knowledge is a dynamic process involving both empirical and rational elements (Kantianism) and is perpetually questioned through hypothetico-deductive reasoning.

### **The Nature of the Act of Knowing: From Knowledge Acquisition to Knowledge Creation**

The framework of Paavola and Hakkarainen (2005) clarifies how this fundamental philosophical difference is reflected in the act of learning itself. The epistemology of Scenario A inevitably confines learning to a process of "Knowledge Acquisition - Monological." This is predicated on the metaphor of knowledge being transferred from a full vessel (the AI) to an empty one (the student).

In contrast, Scenario B redefines learning as an act of "Knowledge Creation - Triological." This model moves beyond dialogical interaction to describe a process where the teacher, the student, and the AI convene around a shared "object" (a problem, a project, a concept) to collectively construct new understanding and knowledge. This declares that the ultimate goal of learning is not to acquire existing knowledge, but to transform it and create new knowledge.

## The Intellectual Horizon of the Knower: Positioning on the Developmental Stages

The most striking finding of the table is the positioning of the two scenarios within the intellectual development models proposed by Perry, Belenky, Baxter Magolda, King & Kitchener, and Kuhn.

Scenario A, without exception, corresponds to the most elementary, dualistic, and authority-dependent stages of all these models. Perry's Dualism (knowledge consists of absolute rights and wrongs), Belenky's Received Knowledge (knowledge is silently received from external authorities), Baxter Magolda's Absolute Knowing (knowledge is certain and unchanging), King and Kitchener's Pre-Reflective Thinking (knowledge is unquestioned), and Kuhn's Absolutist stance all define the intellectual horizon to which Scenario A confines the learner. This is more than a pedagogical regression; it is an epistemological trap designed to actively inhibit the learner's intellectual development, freezing them at a cognitive starting point.

Scenario B, on the other hand, promises an intellectual journey that targets the highest, most contextual, relative, and critical stages of these models. Perry's Commitment in Relativism (developing a personal stance based on evidence while accepting knowledge is contextual), Belenky's Constructed Knowledge (knowledge is part of the knower and enriched by diverse perspectives), Baxter Magolda's Contextual Knowing (knowledge is evaluated with evidence according to its context), King and Kitchener's Reflective Thinking (knowledge is the product of continuous inquiry and evaluation), and Kuhn's Evaluativist stance all describe the intellectual character Scenario B aims to cultivate. This is an epistemological empowerment program that fosters not just knowledge, but wisdom and critical thought.

In conclusion, Table 2 reveals with stark clarity that the debate over AI's integration into education is not a technical choice of tools, but a profound philosophical and ethical decision that will determine the intellectual character of future generations and the very nature of the act of "knowing."

The depth of this philosophical decision becomes even clearer when the epistemological assumptions of these scenarios are compared with the historical epistemological evolution of English language teaching itself. The "Present" columns of Table 2 reveal the field's journey from a rigid epistemological foundation toward a more flexible and sophisticated one. The practice of the "Traditional English Language Lesson" was built on Ontological and Epistemological Realism, where knowledge was objective, immutable, and to be received without question from an authority (the teacher). In this period, the learner was positioned at Perry's stage of Dualism, where right and wrong were sharply delineated and information was passively accepted as Received Knowledge. However, the "Contemporary" and "Technology-Supported" paradigms have evolved toward an understanding that knowledge is co-constructed through social interaction (Social Constructivism) and can vary according to different perspectives (Ontological Relativism). This evolution has moved the English language learner into the stages of Multiplicity and Relativism, encouraging them to evaluate linguistic correctness not just by rules but also by communicative consensus (Consensus theory of truth).

Viewed against this evolutionary progress, Scenario A represents not an epistemological step forward for English language teaching, but, on the contrary, a technological regression to its most primitive epistemological assumptions. By establishing AI as the absolute authority, this scenario pulls the field back to the ground of Ontological Realism and reduces the criterion for truth to a one-to-one correspondence with the data presented by the AI. This confines the learner to the lowest rungs of development, such as Belenky's Received Knowledge and Baxter Magolda's Absolute Knowing, transforming the adventure of exploring the complex and contextual nature of language into the task of memorizing the singular, absolute truth offered by an artificial mind. This is an epistemological retreat that fundamentally undermines contemporary language teaching objectives like communicative competence and critical thinking.

Scenario B, on the other hand, takes the relative and constructivist ground achieved by contemporary English language teaching as its starting point and propels it radically forward. The inclusion of AI as a "peer" transforms learning into an act of Knowledge Creation and the process into a Trialogical one, compelling the learner to ascend to the highest rungs of the epistemological development ladder. In this scenario, the English language student is forced to evaluate linguistic data and evidence from various subjects (teacher, AI, other students) within a specific context to form their own reasoned position—a task corresponding to Perry's Commitment in Relativism and Baxter Magolda's Contextual Knowing. As the understanding of truth is grounded in a semantic and contextual frame (Semantic theory of truth), the learner becomes not just a language user, but an Evaluativist who weighs the value and validity of different linguistic choices. This holds the potential to transform the ultimate objective of English language teaching from merely teaching the language to an "intellectual empowerment program" that teaches, through language, the nature of knowledge, its production, and its interrogation.

## DISCUSSION

The findings of this study make it analytically clear that integrating artificial intelligence into English language curricula is far more than a technological update; it is a radical philosophical crossroads that will determine the very soul of education and the intellectual character of future generations. The dilemma at hand is not a simple choice between two pedagogical scenarios but an unavoidable decision between two irreconcilable paradigms regarding the nature of knowledge, reality, and the knowing subject. Ultimately, this choice will be shaped less by the technology itself and more by the ontological status and epistemological role we assign to it. For this reason, before asking which scenario is "better," the discussion must first delve into the deep structural and human dynamics that both give rise to these scenarios and make them socially desirable.

On the surface, Scenario A—the model where AI acts as an absolute "Authority/Master"—presents an almost irresistible sense of comfort, particularly for individuals navigating the pressures of contemporary society. This model's primary allure is the promise of certainty and predictability in a world marked by growing ambiguity and complexity. The entire structure is rooted in Ontological and Epistemological Realism, working from the premise that knowledge itself is an external, objective, and unquestionable reality. By positioning AI as the ultimate arbiter of this singular and absolute truth, it lifts the burden of "knowing the right answer" from students and teachers alike. What this amounts to is a form of cognitive outsourcing: a choice that trades the arduous and risky journey of thinking for the safe and efficient highway of ready-made answers.

Such a model fits seamlessly into the reward mechanisms of our current educational systems. After all, standardized tests, curricula built on rote learning, and evaluation systems that prize a single correct answer have already laid the pedagogical groundwork for Scenario A. From this perspective, embracing AI as a "master" is no revolutionary leap; instead, it represents the ultimate refinement of the existing positivist and behaviorist paradigm, simply taken to its technological extreme. Within this closed system, the individual is reduced to a passive recipient of knowledge—a 'Consumer of Received Knowledge'—and their intellectual development becomes arrested at its most elementary stages. This setup is more than a pedagogical regression; it is a trap that keeps the individual in a state of intellectual tutelage, discouraging the very courage to think for oneself. It's easy to see the appeal of such technological paternalism for societies aiming to manage chaos and maximize efficiency, but this comfort comes at a steep price: the sacrifice of critical thought, creativity, and ultimately, human autonomy. This dynamic echoes the "parasitic" relationship described within the "symbi(AI)tic understandings" framework from Creely and Janssen (2025), where technology weakens human intellectual development by feeding on and fostering dependence on it. It exemplifies what Waks (2025) calls a "contradictory design" that defeats its own purpose: a tool meant to enhance human effort ultimately threatens to make valuable human skills obsolete. In this light, positioning AI as an absolute authority is not just a pedagogical regression; as Firdaus (2025) warns, it also courts the risk of ethical erosion by corroding academic integrity and stunting critical skill development.

Fundamentally, this scenario exacerbates what Bouchard (2024) describes as the "separation between knowledge and knower." By outsourcing the difficult intellectual labor of composition and argumentation to a non-reflexive, probabilistic system, the learner is deprived of the opportunity to develop their academic voice and engage in the transformative process of making knowledge their own. This aligns with Cassinadri's (2024) characterization of AI being used as a "substitutive cognitive artifact," where the goal is to offload cognitive work rather than to augment the learner's own capacities. Such a relationship undermines the development of epistemic virtues and ultimately positions the learner as a passive consumer of pre-packaged information, a reality that serves the interests of a neoliberal educational model focused on efficiency over intellectual and ethical development (Bouchard, 2024).

On the other hand, Scenario B—the model where AI is integrated into the learning ecosystem as a "Peer"—offers not the promise of comfort and certainty, but a process of meaningful uncertainty and collective construction. This scenario is a pedagogical reflection of the individual's and society's quest for self-actualization and self-determined existence. Rising from the foundation of Ontological Relativism and Critical Constructivism, this model accepts that reality and knowledge possess a dynamic and contextual nature, continuously recreated through the interaction of subjects (both human and AI). The goal here is not to transmit a pre-existing truth to the student, but to "collectively" arrive at a valid and defensible understanding by negotiating different perspectives, evidence, and possibilities. This is a radical shift from a process where knowledge is passively acquired (*Knowledge Acquisition*) to a dialogical act where it is collectively created (*Knowledge Creation*). This model aligns with the philosophy described by Mollick as "co-intelligence," where AI is viewed not as a tool but as an intelligent partner (as cited in Waks, 2025). In the terminology of Creely and Janssen (2025), this represents a "mutualistic" symbi(AI)tic relationship where both parties benefit. The pedagogical roots of this approach can be found in the Trialogical Learning Approach (TLA), which is built on the pillars of individual learning, social collaboration, and the joint production of shared, concrete artifacts. In this scenario, knowledge ceases to be a

purely mental entity and becomes a tangible "object" that students, the teacher, and the AI collaboratively work upon (Paavola & Hakkarainen, 2005, 2021; Sansone, Bortolotti, & Buglass, 2016; Sansone, Cesareni, & Ligorio, 2016). This object-oriented collaboration, where learning emerges through the shared effort of advancing epistemic artifacts, represents a core tenet of the trialogical framework (Paavola & Hakkarainen, 2021).

In this model, the AI is not an oracle that provides answers but a dialogic partner that forges connections beyond the reach of the human mind, presents different possibilities, and provokes the learner to ask deeper questions. This vision reframes the epistemic agent not as a mere 'Manager' of externally provided information, but as a 'Maker' who actively constructs knowledge through effort and purposeful investigation (Cox, 2024). It resonates with Kant's doctrine of education, which sees education as the process through which human beings actualize and cultivate their rational powers, thereby 'becoming human' (Kornilaev, 2021). By positioning AI as a subject alongside the teacher and student, Scenario B opens the door to a form of education that is not exclusively a relation between human beings, challenging anthropocentrism and fostering a posthumanist perspective where technology is a partner in the cultivation of reason (Kornilaev, 2021). This approach moves beyond the pursuit of mere intelligence and instead orients education toward the development of wisdom—a nuanced understanding of ethical principles, human values, and societal contexts (Peters & Green, 2024). This has revolutionary implications for the practice of English language teaching. Language is no longer an object to be learned as a set of rules, but becomes a living, dynamic process through which different meanings and realities are constructed. The student is compelled to synthesize a linguistic structure proposed by the AI, a recommendation filtered through the teacher's experience, and their own communicative intent to select, and even create, the most contextually appropriate expression. This elevates them from being a mere user of language to an "Evaluativist" who reflects on the nature of language and weighs the value of different linguistic choices, and to a "Prosumer" who both consumes and produces knowledge. The teacher's role, in turn, is transformed into that of an orchestra conductor in this complex interaction—the "Reflective, Skeptical Learner" who provides a critical balancing element to the system.

This is undoubtedly a more arduous path. It demands an embrace of uncertainty, a willingness to question authority, and the courage to take intellectual risks. Yet, this path offers the potential to transport the learner to the highest stages of intellectual development, such as Perry's "Commitment in Relativism" and Baxter Magolda's "Contextual Knowing". This is not merely about teaching language, but an "empowerment program" that teaches wisdom, critical consciousness, and intellectual autonomy through the medium of language. Thriving in such an ecosystem demands that both students and teachers cultivate specific competencies that go beyond traditional metacognition, requiring a cognitive partnership with AI. Termed "Meta-AI skills" by Levin et al. (2025), these competencies include the ability to critically interpret AI's variable and context-sensitive outputs, question the human-AI interaction itself, and strategically utilize the technology's generative potential. This elevates the teacher's role, who is no longer just a guide but becomes a "reflective, skeptical learner" who helps students manage this complex cognitive partnership, even questioning the suggestions of the AI (Levin et al., 2025; Tafazoli, 2024). By allowing AI to handle routine tasks, teachers can then dedicate their time to more complex and creative pedagogical duties, such as fostering students' higher-order thinking skills (DENG, 2025).

In conclusion, the choice between Scenario A and Scenario B reflects a fundamental human tension between efficiency and autonomy, security and freedom, determinism and possibility. The future of English language curriculum development lies at the heart of this philosophical choice. Curriculum developers, educators, and policymakers must decide whether they will position AI as a tool to enhance the efficiency of the current educational paradigm or as a subject that transforms education itself into a more democratic, critical, and creative process. The first path risks leading us to a future that is technologically advanced but intellectually stagnant, while the second opens the door to a more complex but more promising vision of post-formal education centered on human potential and collective intelligence.

## CONCLUSION

This study has brought into sharp focus two radically different and philosophically irreconcilable futures for AI-based English language teaching curricula. The core finding is that this divergence is driven not by the technology itself, but by the pedagogical role and epistemological status we grant to artificial intelligence. Scenario A (AI as Authority/Master) and Scenario B (AI as Peer) serve as powerful illustrations of this principle, showing how a single technological tool can give rise to two diametrically opposed pedagogical universes. This contrast forces us to recognize that AI is not simply a pedagogical tool but a potential epistemological subject, and that the future of this field will be determined by how the very "authority of knowledge" is renegotiated within this new ecosystem.

The epistemological assumptions underpinning Scenario A resurrect a neo-traditionalist language teaching model that casts AI as an absolute authority on knowledge—a knowledge treated as certain, external, and beyond

question. This model fundamentally undermines the core objectives of contemporary English language teaching—namely, communicative competence, learner autonomy, and critical thinking—and threatens to plunge the field into a technological regression back to its most primitive epistemological assumptions. In essence, it is a comfortable yet confining trap, one designed to keep the learner stranded on the lowest rungs of intellectual development.

In stark contrast, the epistemology of Scenario B charts a far more functional, sustainable, and transformative course for the future of English language teaching. Here, with AI participating as a "peer," language learning is reimagined—moving beyond a simple dialogical interaction to become a trialogical act where teacher, student, and AI function as co-creators of knowledge. By embracing the constructed, contextual, and probabilistic nature of knowledge, this approach is designed to propel the learner from a passive consumer into the dual role of an active producer (prosumer) and a critical evaluator (Evaluativist). In a world where knowledge exists in a perpetual cycle of "construction-deconstruction-reconstruction," such an ecosystem provides the fertile ground needed to cultivate autonomous individuals—learners truly capable of navigating uncertainty, managing complexity, and taking full ownership of their education.

What becomes clear is that integrating artificial intelligence into English language teaching is not a mere technical exercise. It is a profound philosophical and ethical decision, one that will ultimately define the intellectual character of humanity and the very nature of "knowing." This study has shown that educators cannot afford to surrender to technological determinism; they are now called to make deliberate pedagogical and epistemological choices. The future of English language teaching, then, hinges on our courage: the courage to position AI not as an oracle of answers, but as a dialogic partner that provokes deeper questions, fosters critical skepticism, and joins in the collective pursuit of meaning. Our final aim must be to craft an educational paradigm that transcends language instruction, transforming it into a practice where language itself becomes the medium for interrogating knowledge, thereby fortifying human intelligence and autonomy.

## LIMITATIONS

For an accurate assessment of this study's findings and claims, it is critical to recognize its fundamental identity as a "futures research" project. The study presents a philosophical and theoretical framework based on two contrasting scenarios for the potential futures of AI-supported English language teaching. As such, its primary strength and purpose lie in opening up the epistemological assumptions underlying present and future curricula to critical inquiry and in deciphering the potential consequences of these assumptions.

However, this epistemological investigation, by its very nature, does not purport to offer a direct analysis of concrete teaching or learning situations, nor does it aim to provide pedagogical prescriptions. While the study focuses on "what knowledge is" and "how it is known," it is beyond its scope to address the pragmatic and application-oriented questions of "how this knowledge should be taught" or "how it is learned" in the classroom. Furthermore, for the sake of analytical transparency and clarity, the analysis was confined to two scenarios representing polar opposites. This approach inherently carries the limitation of overlooking the hybrid or alternative models that could exist on the spectrum between these two poles.

## SUGGESTIONS FOR FURTHER RESEARCH

To ensure that the epistemological framework and philosophical discussion presented here can offer tangible contributions to the field, it is essential that they be substantiated by practice-oriented research. In this context, the primary recommendation for future studies is the design, implementation, and evaluation of prototype teaching curricula explicitly grounded in the epistemological assumptions of Scenario A and Scenario B. Such research would provide an invaluable opportunity to comparatively analyze the effects of different epistemological foundations on key outcomes such as learner autonomy, critical thinking, communicative competence, and intellectual development.

Specifically, the concretization of how teaching/learning situations (e.g., course materials, assessment approaches, teacher-student-AI interaction dynamics) would be constructed under each epistemological framework would move this philosophical debate beyond a theoretical exercise and into the reality of the classroom. Moreover, to overcome the limitations of the present study, new futures research should be designed to investigate hybrid models or alternative scenarios where AI assumes different roles, such as a "coach," a "tool," or a "critical friend". Such studies would allow us to develop a more nuanced and context-sensitive understanding of the integration of AI into education.

## REFERENCES

- Baxter Magolda, M. B. (1992). *Knowing and reasoning in college*. Jossey-Bass. <https://doi.org/10.1177/027046769401400431>
- Becker, J., & Niehaves, B. (2007). Epistemological perspectives on IS research: A framework for analysing and systematizing epistemological assumptions. *Information Systems Journal*, 17(2), 197–214. <https://doi.org/10.1111/j.1365-2575.2007.00234.x>
- Becker, J., Niehaves, B., & Klose, K. (2005). A framework for epistemological perspectives on simulation. *Journal of Artificial Societies and Social Simulation*, 8(4). <https://www.jasss.org/8/4/1.html>
- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's ways of knowing: The development of self, voice and mind*. Basic Books.
- Bouchard, J. ChatGPT and the separation between knowledge and knower. *Educ Inf Technol*, 30, 10091–10110 (2025). <https://doi.org/10.1007/s10639-024-13249-y>
- Cassinadri, G. (2024). ChatGPT and the technology-education tension: Applying contextual virtue epistemology to a cognitive artifact. *Philosophy & Technology*, 37(14). <https://doi.org/10.1007/s13347-024-00701-7>
- Cox, G. M. (2024). Artificial intelligence and the aims of education: Makers, managers, or inforgs? *Studies in Philosophy and Education*, 43, 15–30. <https://doi.org/10.1007/s11217-023-09907-2>
- Creely, E., & Janssen, K. (2025). Onto-epistemological understandings of generative artificial intelligence in education. *International Journal of Changes in Education*, 2(2), 55-65. <https://doi.org/10.47852/bonviewIJCE52024380>
- DENG, Y. (2025). Challenges of college English teaching in the AI era. *Sino-US English Teaching*, 22(4), 129-132. <https://doi.org/10.17265/1539-8072/2025.04.002>
- Firdaus, T. (2025). The philosophical construction of educational science in relation to posthumanism and transhumanism in artificial intelligence. *Turkish Academic Research Review*, 10(1), 70-83. <https://doi.org/10.30622/tarr.1610935>
- Gordon, T. J. (1992). The methods of futures research. *The Annals of the American Academy of Political and Social Science*, 522, 25–35. <https://doi.org/10.1177/0002716292522001003>
- King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment: Understanding and promoting intellectual growth and critical thinking in adolescents and adults*. Jossey-Bass.
- Kornilaev, L. (2021). Kant's doctrine of education and the problem of artificial intelligence. *Journal of Philosophy of Education*, 55 (6), 1072–1080. <https://doi.org/10.1111/1467-9752.12608>
- Kuhn, D. (1991). *The skills of argument*. Cambridge University Press.
- Kundu, A., & Bej, T. (2025). Empowering students' autonomy in EFL learning: AI innovations in schools of the Global South. *The Electronic Journal of Information Systems in Developing Countries*, 91 (6), e70041. <https://doi.org/10.1002/isd2.70041>
- Levin, I., Marom, M., & Kojukhov, A. (2025). Rethinking AI in education: Highlighting the metacognitive challenge. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 16(Special Issue 1), 250-263. <https://doi.org/10.70594/brain/16.S1/21>
- Nayır, F., Sari, T., & Bozkurt, A. (2024). Reimagining education: Bridging artificial intelligence, transhumanism, and critical pedagogy. *Journal of Educational Technology & Online Learning*, 7(1), 102-115. <https://doi.org/10.31681/jetol.1308022>
- Paavola, S., & Hakkarainen, K. (2005). The knowledge creation metaphor – An emergent epistemological approach to learning. *Science & Education*, 14, 535–557. <https://doi.org/10.1007/s11191-004-5157-0>
- Paavola, S., & Hakkarainen, K. (2021). Trialogical learning and object-oriented collaboration. In U. Cress, A. Wise, C. Rose, & J. Oshima (Eds.), *International handbook of computer supported collaborative learning*. Springer. <https://doi.org/10.1007/978-3-030-65291-3>
- Perry, W. G. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. Holt, Rinehart and Winston.
- Peters, M. A., & Green, B. J. (2024). Wisdom in the age of AI education. *Postdigital Science and Education*, 6, 1173–1195. <https://doi.org/10.1007/s42438-024-00460-w>
- Sansone, N., Cesareni, D., & Ligorio, M. (2016). The trialogical learning approach to innovate teaching. *Italian Journal of Educational Technology*, 24(2), 82-91. <https://doi.org/10.17471/2499-4324/892>
- Sansone, N., Bortolotti, I., & Buglass, S. (2016). The Trialogical Learning Approach in practices: Reflections from pedagogical cases. *QWERTY - Rivista Interdisciplinare di Tecnologia, Cultura e Formazione*, 11(2), 99–120. <https://irep.ntu.ac.uk/id/eprint/29572>
- Sui, C.-J., & Chang, C.-Y. (2026). Generative AI and education: Exploring the interplay between teachers' epistemic beliefs and self-regulated learning. *Educational Technology & Society*, 29(3), 34–50. [https://doi.org/10.30191/ETS.202607\\_29\(3\).RP03](https://doi.org/10.30191/ETS.202607_29(3).RP03)

- Tafazoli, D. (2024). Critical appraisal of artificial intelligence-mediated communication. In H. P. Bui, R. Kumar & N. K. Kamila (Eds.), *Innovations and applications of technology in language education* (Chapter 4). Taylor & Francis. <https://doi.org/10.1201/9781003473916-5>
- Tahir, A., & Tahir, A. (2023). AI-driven advancements in ESL learner autonomy: Investigating student attitudes towards virtual assistant usability. *Linguistic Forum*, 5(2), 50-56. <http://doi.org/10.5281/zenodo.14776953>
- Waks, L. J. (2025). Review of Co-intelligence: Living and working with AI, by E. Mollick. *Education Review*, 32. <https://doi.org/10.14507/er.v32.4257>
- Williamson, B., & Eynon, R. (2020). Historical threads, missing links, and future directions in AI in education. *Learning, Media and Technology*, 45(3), 223–235. <https://doi.org/10.1080/17439884.2020.1798995>