

## Disclaimer

Niniejszy artykuł naukowy został przygotowany w ścisłej współpracy z modelem sztucznej inteligencji Gemini AI. Jego celem jest zademonstrowanie możliwości, jakie daje racjonalne, krytyczne wykorzystanie sztucznej inteligencji podczas pisania artykułów z zakresu nauczania języka angielskiego. Proces tworzenia polegał na wielokrotnym generowaniu i weryfikowaniu treści oraz dopracowywaniu promptów, w celu osiągnięcia jak największej precyzji metodycznej. Zgodnie z wytycznymi przedstawionymi w sekcji 6 (The "Human-in-the-Loop"), całość treści, terminologia metodyczna oraz jej merytoryczna zasadność zostały każdorazowo zweryfikowane i dostosowane przez lektora języka angielskiego (ang. *Higher Education English Lecturer*), aby zapewnić najwyższą jakość pedagogiczną i zgodność z celem nauczania.

## Beyond the Coursebook: A Pragmatic Approach to AI-Assisted Materials Design in Higher Education

### Abstract

For the university English lecturer, the search for relevant, level-appropriate materials is a perennial challenge. While Artificial Intelligence is often viewed with skepticism in academia, this article proposes a methodological framework for utilizing Google's Gemini AI not as a replacement for pedagogy, but as a sophisticated tool for differentiation. Focusing on B1/B2 learners, we explore how lecturers can "keep the human in the loop" while effectively using AI to generate bespoke EAP reading texts, rigorous comprehension tasks, and contextualized lexico-grammatical exercises.

### 1. Introduction: The Authenticity Gap

Every university lecturer knows the struggle. We want to expose our students to "authentic" language—real journal abstracts, genuine news reports, or actual case studies. Yet, for a student at the B1 or B2 level, raw authenticity often leads to cognitive overload rather than learning. Conversely, standard ELT coursebooks, while level-appropriate, rarely engage with the specific academic disciplines our students are studying.

This is where the "authenticity gap" lies, and traditionally, bridging it meant hours of rewriting texts by hand.

Enter Gemini AI. Rather than viewing it as a shortcut that undermines academic rigour, we should consider it a **scaffolding engine**. It allows us to produce materials that sit precisely in the *Zone of Proximal Development* (ZPD)—challenging enough to stimulate progress, but accessible enough to prevent frustration. This article outlines how to harness this potential without ceding pedagogical control.

### 2. Reading Texts: From "Found" to "Forged"

Finding a text that covers a specific topic (e.g., *Sustainable Urban Planning*) while adhering to B2 grammatical constraints is often a fool's errand. It is far more efficient to "forge" one.

## 2.1. Controlled Adaptation

We can use Gemini to rewrite complex source material. However, the quality of the output depends entirely on the specificity of our instructions. A generic request yields generic results. To maintain academic value, we must explicitly ask the AI to preserve **domain-specific terminology** while simplifying **syntactic density**.

Prompting Strategy:

Instead of asking for a "simple summary," try:

"Act as an EAP materials writer. Rewrite the provided academic abstract for B1+ undergraduate students. Retain key terms like 'mitigation strategies' and 'urban density,' but break down long compound-complex sentences into shorter structures. Target a length of 300 words."

## 2.2. Genre Simulation

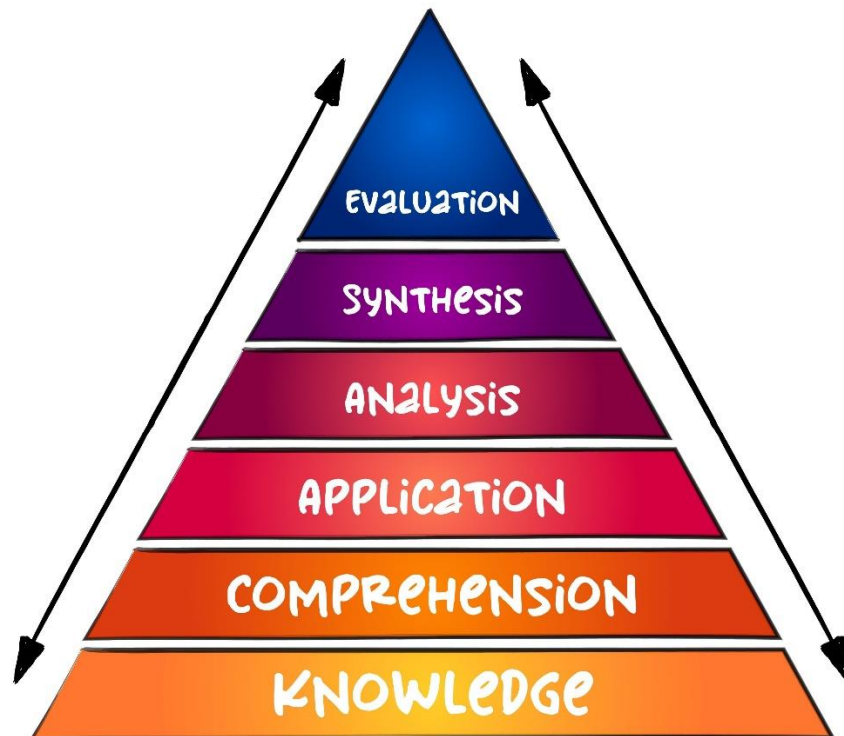
For ESP (English for Specific Purposes) modules, context is everything. Students don't just need to know English; they need to know the *genres* of their field. Gemini excels at mimicking these forms. Whether it's a patient intake form for medical students or a project brief for engineers, the AI can generate synthetic examples that highlight specific genre features (register, structure, passive voice usage) for analysis in class.

## 3. Comprehension: Engineering Critical Thinking

We often fall into the trap of testing memory rather than understanding. A well-designed university seminar should push students up **Bloom's Taxonomy**, yet creating high-quality inference questions is incredibly time-consuming.

# BLOOM'S TAXONOMY

THE COGNITIVE DOMAIN - KNOWLEDGE-BASED



## 3.1. Beyond "Find and Fetch"

We can task Gemini with creating a tiered questioning strategy. The initial prompt should request questions that check basic comprehension (LOTS), but the follow-up must demand Higher-Order Thinking Skills (HOTS).

- **The Strategy:** Ask the AI to generate questions that force the student to *evaluate* the strength of an argument or *infer* the author's bias.
- **The Prompt:** *"Based on this text, generate three discussion questions for a B2 seminar. Avoid questions with 'yes/no' answers. Focus on asking students to critique the author's methodology."*

## 3.2. The Distractor Problem

Any lecturer who has written a multiple-choice quiz knows that coming up with the correct answer is easy; writing three plausible but incorrect "distractors" is the hard part. This is a prime task for delegation. We can ask Gemini to generate distractors that mirror common student misconceptions, thereby increasing the **validity** of our formative assessments.

## 4. The Lexical Dimension: Teaching Chunks, Not Lists

At the B2 level, the "single word" approach becomes obsolete. Proficiency relies on **collocation**, **colligation**, and **register**. AI allows us to move away from static vocabulary lists towards data-driven learning.

### 4.1. Contextualising Vocabulary

Instead of handing out a glossary, we can use Gemini to generate **lexical sets** embedded in context.

| Target Skill              | The "Human" Rationale                                                                                          | Sample Prompt Structure                                                                                                                                 |
|---------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Collocations</b>       | Students often know the noun (e.g., <i>research</i> ) but miss the verb ( <i>conduct/undertake</i> ).          | <i>"Identify 5 key nouns in this text. For each, provide three academic verbs that commonly collocate with them, and create a matching exercise."</i>   |
| <b>Register Awareness</b> | Students struggle to distinguish between <i>get</i> and <i>obtain</i> , or <i>look at</i> and <i>examine</i> . | <i>"Create pairs of sentences showing the difference between neutral English and formal Academic English for the following synonyms: [List words]."</i> |

## 5. Grammar in Context: The Inductive Approach

Grammar lectures are rarely the highlight of a student's week. However, the **inductive approach**—where students discover rules by analyzing examples—is highly effective. The difficulty has always been finding a text that contains enough examples of a specific structure (like the *Passive Voice* or *Inversion*) without sounding unnatural.

### 5.1. Input Enhancement

We can command Gemini to write a text where a specific grammatical feature is naturally recurrent. This facilitates **noticing**.

The Scenario: You want to teach the Third Conditional to Business students.

The Prompt: "Write a short case study (200 words) about a failed marketing campaign. Include at least four examples of the Third Conditional (e.g., 'If they had researched the market...'). Keep the tone professional."

### 5.2. From Rules to Production

Rather than mechanical drills, we can generate exercises that require cognitive engagement, such as **transformation tasks** or **error correction** based on common interlanguage errors.

| Activity Type           | Pedagogical Goal                                            | Prompt Template                                                                                                                                                               |
|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Error Correction</b> | Developing proofreading skills and fossilization awareness. | <i>"Write a paragraph about [Topic] that contains 5 typical B1-level errors regarding [Grammar Point, e.g., article usage]. Provide an answer key explaining the errors."</i> |
| <b>Transformation</b>   | Syntactic flexibility.                                      | <i>"Create 5 sentence transformation tasks where students must rewrite an active sentence into the passive voice to improve academic objectivity."</i>                        |

## 6. The "Human-in-the-Loop": Methodology & Ethics

It is imperative to state that Gemini is a tool, not a teacher. It creates *content*, but we provide the *context*.

### 6.1. Verification is Mandatory

AI models are prone to "hallucinations"—they can invent facts or citations with supreme confidence. Furthermore, they can sometimes default to American norms or culturally biased viewpoints. **The lecturer must review every single output.** If we view AI as a junior research assistant, we understand that their work always requires a supervisor's sign-off.

### 6.2. Modelling Critical Digital Literacy

We should not hide our use of AI from students. On the contrary, demonstrating how we use it to generate ideas or check vocabulary models **digital literacy**. By showing students that we use AI critically—checking its output, refining its suggestions—we teach them to do the same in their future academic and professional lives.

## 7. Conclusion

Integrating Gemini AI into the university syllabus is not about cutting corners. It is about **reallocating resources**. By automating the labor-intensive process of text creation and exercise formatting, we free up mental bandwidth for what actually matters: responding to our students' ideas, guiding their critical thinking, and

providing the human empathy that no algorithm can replicate. The aim is a curriculum that is more responsive, more personalized, and ultimately, more human.