

English for the AI Era: A Document Analysis of English Language Syllabi for Non-English Major Students in Indonesian Higher Education

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Abstract

English language courses for non-English major students have long been caught between institutional expectation and practical reality. Designed to develop communicative competence relevant to professional fields, such courses routinely deliver something far more modest: a semester of grammar review and reading exercises that students could have encountered at secondary school. That gap is not new. What has sharpened it is the accelerating presence of AI tools in academic and workplace settings. This article examines four English language syllabi from Indonesian higher education institutions, drawn from pharmacy, business administration, mathematics and natural sciences, and computer engineering. Using document analysis as the primary method, grounded in need analysis theory, the study asks whether current syllabi reflect the communicative demands of workplaces where AI now mediates how English is produced, evaluated, and used. Three gaps recur across all four documents: an overreliance on general grammar and reading instruction disconnected from disciplinary communication needs; the complete absence of AI tools from stated learning methods; and no mention of AI literacy among the learning outcomes. These are not incidental omissions. They point to embedded assumptions about what these courses are for, and resolving them will require more than inserting a reading passage about ChatGPT.

Keywords: need analysis; syllabus analysis; ESP; AI literacy; Indonesian higher education

Introduction

There is a version of the English course for non-English major students that does what it is supposed to do. It is built around the communicative demands of specific fields, aligned with what graduates will actually need to do with language after they leave university. That version has been described extensively in the ESP literature. Whether it exists in Indonesian classrooms is a different question.

What tends to exist instead is a course delivered in the first or second semester, covering grammar, vocabulary, and reading comprehension in forms that bear a closer resemblance to secondary school revision than to preparation for professional communication.

Students sit through it on their way to becoming pharmacists, engineers, or accountants. The English skills they will need for those careers, reading technical documentation, writing professional correspondence, working with AI-generated text, rarely appear in the syllabus.

The mismatch between institutional purpose and actual content has been documented for decades. What makes it worth examining now is that the professional contexts these courses are meant to serve have shifted in ways that earlier critiques could not have anticipated. AI writing and translation tools are now embedded in ordinary working life across virtually every sector that uses English. Graduates entering professional environments today will routinely

encounter AI-generated documents, be expected to work with such tools to draft and revise text, and need some practical capacity to judge when the output is fit for purpose. Few Indonesian English courses are preparing students for any of this.

At its core, need analysis rests on a straightforward claim: language courses serve learners better when built around what learners actually need to do with language, not around what is available in a textbook or familiar to the instructor. Hutchinson and Waters (1987) gave this claim its most influential elaboration, drawing a foundational distinction between target needs, what learners must be able to do in their future professional or academic situations, and learning needs, what they require in order to get there.

Within target needs, the framework identifies three sub-categories: necessities, the non-negotiable demands of the target situation; lacks, the distance between current and required competence; and wants, what learners themselves believe they need. Keeping these separate prevents need analysis from collapsing into a list of student preferences, and keeps attention on the relationship between present capacity and future demand. Dudley-Evans and St. John (1998) extended the framework through situational analysis, arguing that designers must attend not just to the tasks learners will perform but to the conventions, power relations, and genre expectations surrounding those tasks. A pharmacy graduate and a computer engineering graduate enter very different discourse communities; treating their English requirements as identical produces courses that serve neither well.

Basturkmen (2010) makes a point that has gained urgency in recent years: professional communicative needs are not stable, and a course calibrated to its learners' target contexts at one moment can fall out of alignment within a single curriculum cycle if those contexts change faster than the institution's review process. That is precisely the condition in which AI has placed English language provision. Poedjiastutie and Oliver (2017) found the dynamic already playing out in Indonesian higher education, where institutional assumptions about what students needed diverged considerably from what

students themselves reported. Desnaranti and Putra (2023) found a comparable pattern in Business English instruction, where course content did not track students' actual communicative priorities.

Among the findings that ESP research has reproduced most consistently, the relationship between content specificity and course effectiveness stands out. Hyland (2002) made the case against the drift toward general academic literacy instruction with particular force, arguing that courses which retreat from disciplinary specificity surrender precisely what makes ESP worth the effort in the first place. His argument applies at least as forcefully to non-English major students in Indonesian undergraduate programs, where the professional communication cultures students are entering vary enormously across fields.

Several Indonesian studies document what the absence of specificity produces in practice. Dardjito et al. (2023) found a persistent and significant gap between the general reading skills that English courses develop in non-English major students and the disciplinary reading their fields actually require. Pranoto and Suprayogi (2020) conducted a need analysis for ESP in physical education programs and found that what students urgently needed bore little resemblance to what the course taught. Solihah et al. (2023) traced the same misalignment across a broader range of programs, noting that it was recognised by both students and instructors but rarely addressed at the curriculum level. Taken together, these studies suggest that the problem examined here extends well beyond the four institutions in this sample.

AI tools have not made English less important. They have changed what being competent in English professionally now involves, and most existing language courses have not caught up with that change.

When a student uses an AI tool to draft a professional email or translate a technical document, the relevant competence is no longer simply the ability to produce correct English from scratch. Knowing when the AI output is wrong, in register, precision, or disciplinary fit, and being able to revise it toward something genuinely communicatively effective, is the skill that matters. Desnaranti et al. (2022) found that non-

English major students were already independently using digital tools to support their English before AI became as powerful and accessible as it now is, a pattern that anticipated the far more consequential practices that followed.

Crompton and Burke (2023) reviewed the evidence on AI use in higher education and found that students across disciplines are using these tools regularly, most without any institutional guidance on how to do so effectively or responsibly. Baskara and Mukarto (2023) made the case for Indonesian higher education specifically: the relevant question is not whether students will use AI but whether their courses will equip them to use it well. Their analysis identifies several competencies warranting explicit instructional attention, among them writing effective prompts in English, critically evaluating AI-generated text, and recognising the register and precision errors that AI tools characteristically produce.

The constituent dimensions of AI literacy have been mapped with increasing precision. Laupichler et al. (2022) identified core competencies across higher and adult education contexts: understanding how AI systems function, engaging with them critically and responsibly, and evaluating the quality of their outputs. Chiu et al. (2024) developed a comprehensive framework and argued that these capacities belong inside subject-specific instruction rather than discrete digital literacy modules. Kasneci et al. (2023) suggest treating AI as a new kind of interlocutor whose outputs warrant the same critical scrutiny as any other text. Ngo and Hastie (2025) tested that proposition directly, embedding an AI literacy module in an English for Academic Purposes course; students who received the instruction showed measurable gains in critical evaluation and productive AI use. Lodge et al. (2023) found that most institutional responses to generative AI have prioritised detection and restriction over pedagogical redesign. Syllabi that make no mention of AI are the curriculum-level expression of exactly that orientation.

The lag between what syllabi contain and what learners need is partly a product of how syllabi are made. Written at a particular moment, approved through institutional processes

designed for caution rather than speed, and used without formal revision for several years, they are structurally ill-suited to contexts that change quickly. Graves (2000) argues that every syllabus encodes a theory of language, learning, and educational purpose, whether or not that theory is made explicit. A syllabus organised around grammar instruction and general reading comprehension embeds the assumption that formal accuracy is the primary thing students need, and that their future professional contexts are generic enough to be served by the same course content regardless of field. Both assumptions were contestable before AI; they are difficult to defend now. Damayanti et al. (2024) found that even programs that began with careful need analysis drifted from that alignment as professional contexts continued to shift while the syllabi remained in place.

This study examines four English language syllabi from Indonesian higher education institutions, each from a different discipline: pharmacy, business administration, mathematics and natural sciences, and computer engineering. These documents are read not as proxies for teaching quality but as institutional records, formal statements of what each institution has committed to teaching. Earlier work at the same institutional level identified persistent gaps between what students report needing professionally and what courses provide (Desnaranti & Putra, 2023), and between students' formal English training and the real demands of professional writing (Desnaranti & Putra, 2024). The question here is whether those gaps are legible in the syllabi themselves.

Two questions organise the analysis: what do these four syllabi contain in terms of outcomes, content, and methods, and how does that content hold up against the communicative demands of AI-shaped professional environments? The study draws on the need analysis frameworks of Hutchinson and Waters (1987) and Dudley-Evans and St. John (1998), supplemented by recent scholarship on AI literacy in language education.

Method

Document analysis is the primary method used in this study. The approach treats texts as data, examining not only what documents assert explicitly but what their organisational choices,

content selections, and silences reveal about the institutions that produced them (Bowen, 2009). It is well suited to questions about what formal institutional commitments contain and where gaps exist between those commitments and the contexts they are designed to serve.

The data consist of four Rencana Pembelajaran Semester (RPS) documents collected from Indonesian higher education institutions. The RPS is the formal semester learning plan that Indonesian institutions are required to produce for every course, specifying learning outcomes, content, instructional methods, and assessment criteria. As such, it functions as the closest available institutional equivalent of an official syllabus. The four documents were selected to provide disciplinary, institutional, and geographic variation, as summarised in Table 1.

Table 1. Profile of RPS Documents Analysed

No	Institution	Department / Program	Year
1	Akademi Farmasi Santo Fransiskus Xaverius	D3 Pharmacy	2023
2	STIA Amuntai	Business Administration	2024
3	Universitas Brawijaya, Faculty of MIPA	Statistics	2023
4	Universitas Diponegoro, Faculty of Engineering	Computer Engineering	2022

All four are publicly available on their respective institutional websites and were accessed in 2025.

The analysis proceeded in three stages. Each document was first read in full to establish a working understanding of its structure and institutional context. A second, more focused reading attended systematically to four components: learning outcomes and competency statements, content and topic coverage, instructional methods and learning activities, and assessment design. These components correspond to what need analysis theory identifies as the core dimensions of course design. A comparative stage followed, in which findings

across the four documents were examined for patterns, recurring features, and consistent absences. The analytical framework draws primarily on Hutchinson and Waters (1987) and Dudley-Evans and St. John (1998), with Basturkmen (2010) on dynamic needs and recent AI literacy scholarship informing the comparative analysis. Four purposively selected documents do not support statistical generalisation. The claim is analytical: that these four documents exhibit a coherent and consistent pattern that warrants careful scrutiny.

Results and Discussion

What the Four Syllabi Contain

The four RPS documents differ in institutional context, disciplinary focus, and the elaborateness of their competency statements. What they share, across those differences, is more analytically significant than what separates them. All four treat English as a set of formal skills to be taught and assessed. Grammar and reading comprehension feature in every document; vocabulary in three; speaking in two; writing in three, with tasks varying considerably in their ambition. None contains anything that could be classified as AI-related content or competency.

Of the four, the AKFAR Santo Fransiskus Xaverius syllabus is the most field-specific. It covers pharmaceutical vocabulary, patient communication, medication explanation, and the English names of clinical tools and hospital equipment. The orientation is coherent and professionally relevant. Its limitation is that the course remains largely oral and basic in its demands, leaving the written and digital communication tasks now standard in healthcare, reading English-language drug databases, navigating AI-assisted clinical systems, corresponding with international suppliers, essentially unaddressed.

The STIA Amuntai syllabus includes some practically useful content: job vacancy advertisements and application letters are genuinely relevant to business administration students, and their presence indicates a degree of professional awareness. But the instructional methods extend no further than lecture and review, and the two reference texts, a locally produced grammar guide and a general self-

study book, suggest limited ambition beyond basic linguistic competence.

The Universitas Brawijaya MIPA syllabus is the most revealing case, and not entirely for encouraging reasons. It draws on authentic texts from real news and science sources, two of which concern artificial intelligence directly: one addresses a prominent scientist's warnings about AI risk, the other covers US government investment in AI weapons. The UB document is the only syllabus in the dataset to treat AI as a subject at all. Both texts, however, serve purely as grammar teaching vehicles: one for present perfect tense, the other for simple past. The topic appears; any engagement with its implications for students' communicative lives does not. As Dardjito et al. (2023) found, the gap between the general reading skills English courses develop and the disciplinary reading non-English majors actually need remains considerable, and using AI-themed passages for grammar exercises does nothing to close it.

The Universitas Diponegoro syllabus for Teknik Komputer is the most academically oriented of the four, organising its content around tenses, active and passive voice, complex sentences, reading scientific articles, definition, classification, comparison and contrast, cause and effect, and interpretation of data. These are skills that have genuine value for students who will read and write technical documents. The single reference text dates from 1988. Academic English competence is not without merit for engineering students, but the professional communication demands of the technology sector in 2024 extend well beyond what this content addresses.

Three Consistent Gaps

Reading across the four documents, three absences recur regardless of the differences in institutional context or disciplinary focus.

The first concerns content relevance. All four syllabi lean more heavily on general English instruction than on content calibrated to what students in each discipline will actually need to communicate professionally. Pranoto and Suprayogi (2020) and Solihah et al. (2023) found similar patterns across other Indonesian programs. What distinguishes the present study is that none of the four syllabi addresses AI-mediated communication at all, a lacuna that becomes increasingly hard to justify as AI tools

become standard features of professional English use. Hutchinson and Waters (1987) would classify this capacity as an emerging necessity of the target situation, yet none of the documents acknowledges it.

The second gap is methodological. Not one of the four syllabi lists AI tools among its stated instructional methods, which remain limited to *ceramah*, *diskusi kelompok*, *tanya jawab*, and similar conventional approaches. Crompton and Burke (2023) found that students are already using AI tools on their own initiative, regularly and across disciplines. Desnaranti et al. (2022) found that non-English major students were turning to digital tools independently before AI became as capable as it now is. The practice has moved ahead of the institution. Lodge et al. (2023) found that most institutional responses to AI have focused on restriction rather than integration. These four syllabi do not quite reach restriction; they simply proceed as though the tools do not exist.

The third gap is the complete absence of AI literacy as a learning outcome. Across all four documents, no competency statement addresses evaluating AI-generated text, producing effective English prompts, or handling AI-assisted communication tasks in professional contexts. Laupichler et al. (2022) mapped the core dimensions of AI literacy in educational settings; Chiu et al. (2024) argued these dimensions need to be integrated into subject-specific instruction rather than isolated in digital literacy modules; Baskara and Mukarto (2023) made the case specifically for Indonesian higher education. None of it has reached the level of formal curriculum commitment in the institutions under study.

What the Gaps Reveal

These three gaps are not incidental. They point to a shared set of assumptions embedded across all four documents. Graves (2000) argues that every syllabus encodes a theory of language, learning, and educational purpose, whether or not that theory is ever made explicit. Reading the four documents with that in mind, the shared theory is fairly legible: English is a formal skill set that can be taught without close reference to specific professional contexts; the environments students will work in are sufficiently stable and generic to be served by the same content from one

year to the next; and what students do with technology outside the classroom is not the course's concern.

Basturkmen (2010) identifies the most common failure in ESP design as treating the target context as fixed when it is in fact changing. Damayanti et al. (2024) found that even programs that began from careful need analysis drifted from alignment as professional contexts evolved and syllabi did not. AI has accelerated that drift considerably. A UNDIP engineering student who completes this course can organise ideas using classification and contrast but has never been asked to critically evaluate an AI-generated technical specification or draft a prompt in English for a programming task. An AKFAR pharmacy student knows medication vocabulary in English but has had no exposure to the AI-assisted clinical tools now entering pharmaceutical practice. Kasneci et al. (2023) frame the operative question plainly: not whether students will use AI, but whether they will be equipped to use it well. Ngo and Hastie (2025) demonstrated that the integration of AI literacy into an EAP course is both achievable and effective. The syllabi examined here have not yet attempted it.

Conclusions

Four syllabi, four disciplines, four institutions, and the same three gaps across all of them. Content does not reflect what students will need professionally. AI tools are absent from the methods. AI literacy appears nowhere as a learning outcome. The consistency is the central finding. These are institutions of different types, sizes, and disciplinary orientations, arriving independently at the same blind spot. That convergence points to something structural rather than incidental: a set of shared assumptions about what an English course for non-English major students is supposed to accomplish, one that keeps the focus on generic linguistic competence and leaves no room for the AI-shaped communicative realities graduates are entering.

The argument here is not that every English course must become a course about AI. Different disciplines generate different specific needs, and responsible course design begins with understanding those differences rather than

imposing a single response. What the argument does insist on is that need analysis taken seriously in 2025 cannot produce syllabi that look like these four documents. The professional contexts these courses are meant to serve have shifted. The syllabi have not followed. Future research might expand the sample considerably, complement document analysis with interviews with syllabus designers to understand the reasoning and constraints shaping current choices, or examine institutions that have already begun integrating AI literacy into English language programs, building on what Ngo and Hastie (2025) and others have demonstrated. The more pressing question is whether Indonesian higher education is prepared to close the distance between its formal curriculum commitments and the professional futures its graduates are actually heading into.

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