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Reframing L2 Pragmatic Competence in the Generative AI Era: A Co-Design-Oriented Critical Curriculum

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ABSTRACT

The rapid incorporation of generative artificial intelligence (GAI) into second-language (L2) education has reopened a foundational question in language pedagogy: what should count as successful communication when English is routinely used among speakers who do not share a native-speaker norm? Much L2 pragmatic instruction continues to treat pragmatics as the acquisition of socially appropriate forms modelled on idealised native-speaker practices. This conceptual review article proposes a co-design-oriented critical pragmatic curriculum that positions GAI (implemented primarily through large language models, or LLMs) not as an infallible tutor but as a contestable intercultural interlocutor. Drawing on English as a Lingua Franca (ELF), World Englishes, translanguaging, critical pragmatics, critical digital literacy, and design-based research (DBR), the paper advances a unified pedagogical architecture comprising three modules: Persona Engineering and Dialectic Diversity, Real-Time Meaning Negotiation, and Deconstructing Algorithmic Bias, each enacted through a four-stage learning episode (persona engineering → GAI interaction → critical negotiation → reflection and transfer) and organised within an iterative co-design cycle. The paper contributes a theoretically grounded model for integrating GAI with intercultural and critical language pedagogy while retaining teacher mediation, learner agency, multilingual resources, and ethical safeguards. It argues that the educational value of GAI lies less in making learners sound more native-like than in helping them become more observant, adaptive, critical, and strategically competent participants in multilingual communication.

Keywords: Critical Algorithmic Literacy; English as a Lingua Franca; Generative Artificial Intelligence; L2 Pragmatics; Translanguaging

1. INTRODUCTION

English language education has inherited a powerful but increasingly unstable assumption: that successful additional-language learning culminates in approximation to an idealised native speaker. The assumption is visible not only in descriptions of grammatical accuracy but also in pragmatic instruction, where learners are frequently introduced to preferred ways of making requests, refusing invitations, apologising, disagreeing, opening conversations, or managing interpersonal distance [21]. Such teaching can be useful when it exposes learners to socially consequential conventions. The difficulty arises when one culturally situated repertoire is transformed into a universal benchmark for communicative legitimacy. Contemporary English use is overwhelmingly characterised by mobility, multilingualism, digital mediation, and contact among speakers with different linguistic histories. English therefore operates not simply as a language possessed by a bounded native-speaking community but as a resource continually negotiated across communities and contexts [3,11,24].

The challenge is particularly acute in contexts where English is simultaneously a school subject, an institutional language, a professional resource, and a lingua franca. Learners may need to communicate with interlocutors from diverse linguistic

backgrounds without knowing which variety will dominate an interaction. In such circumstances, the relevant question is not always whether an utterance conforms to a predetermined native norm. It is whether the speaker can infer the communicative situation, recognise potential ambiguity, negotiate meaning, repair misunderstanding, manage relational consequences, and adjust language strategically. English as a Lingua Franca (ELF) research has long challenged the idea that successful international communication requires uniform adherence to inner-circle norms; World Englishes similarly foreground the legitimacy of diverse Englishes and their social histories [11,24]. Translanguaging extends the argument by treating multilingual speakers' repertoires as integrated resources rather than sealed linguistic compartments [4,5].

Generative artificial intelligence (GAI) makes this pedagogical problem more urgent. Throughout this paper, GAI refers to the broader class of generative systems capable of producing novel text, while large language models (LLMs) denote the specific statistical architectures (e.g., GPT-family models) that currently dominate educational applications. LLMs can generate dialogues, role-play interlocutors, reformulate learner contributions, explain pragmatic choices, simulate conflict, and provide immediate feedback. Reviews of recent language-education research indicate rapid growth in the use of ChatGPT and related systems, with writing, learner perceptions, feedback, and interaction among the most visible applications [3,13,16,20,28]. Experimental and review evidence also suggests that AI-supported learning can produce useful academic and affective outcomes when the technology is integrated with appropriate pedagogical mediation [6]. Yet usefulness does not imply neutrality. LLMs are statistical systems shaped by data selection, model architecture, alignment procedures, evaluation practices, user prompts, and institutional choices.

Their apparent fluency can conceal uneven representation of languages, cultures, and pragmatic practices. Recent scholarship provides grounds for treating GAI as a socio-linguistic agent whose outputs require interrogation. Kwak and Pardos [14], for example, identify substantial country and language disparities in LLM performance on educational taxonomies. Lee et al. [15] show that bias can enter at multiple stages of the LLM life cycle, while broader research documents persistent social and cultural biases in language models. A cultural evaluation of widely used GPT models found that model responses tended to resemble cultural values associated with English-speaking and Protestant European societies, although culturally targeted prompting could shift outputs [27]. Work specifically addressing language diversity argues that GAI can reproduce linguistic hierarchies when standard English and dominant language datasets become implicit measures of quality [1]. From a translanguaging perspective, Jeon et al. [12] further identify tensions between creativity and standardisation, inclusion and fixity, and meaning and form. These findings matter directly to L2 pragmatics because an AI-generated 'better' response may actually mean 'more aligned with a dominant norm.'

The pedagogical opportunity is therefore not to reject GAI because it is biased, nor to celebrate it as an objective conversational partner. A more productive position is to make its partiality visible and pedagogically useful. If learners can ask an LLM to simulate different interlocutors, compare alternative responses, expose hidden assumptions, and explain why an answer was reformulated, the technology becomes a site for examining pragmatics rather than merely a source of correct answers. Sim et al. [25] provide emerging empirical support for this direction by examining ChatGPT as a role-play interlocutor for L2 speech-act learning. The educational task, however, should extend beyond whether learners successfully reproduce requested forms. Learners should also be able to identify when a model's suggestion is culturally narrow, overconfident, or insensitive to context. This conceptual review article thus advances a model of GAI-mediated critical pragmatic pedagogy. The central proposition is that L2 pragmatic competence in contemporary multilingual environments should be conceptualised as adaptive, reflexive, and

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context-sensitive rather than as simple conformity to native-speaker norms. The model integrates three intellectual traditions that are often discussed separately: ELF/World Englishes and translanguaging as critiques of linguistic normativity; critical pragmatics as an orientation to meaning, identity, power, and context; and critical AI literacy as a means of interrogating algorithmic mediation. Design-based research (DBR) informs the methodological architecture through which teachers and learners may iteratively co-design, test, critique, and revise learning activities rather than receiving a fixed AI curriculum [7,17]. It is important to emphasise that the present study is a conceptual modelling exercise informed by DBR principles; it does not report a completed DBR cycle of classroom implementation, data collection, analysis, and iterative redesign.

The purpose is therefore to formulate a theoretically defensible curriculum architecture that can guide subsequent empirical implementation. Four research questions structure the framework:

a. How can ELF, World Englishes, and translanguaging principles be translated into a GAI-mediated curriculum that decentres native-speaker norms without abandoning communicative clarity?

b. How can critical pragmatic activities use GAI to develop learners' capacity to negotiate meaning across diverse interlocutors and power relations?

c. How can learners be taught to identify and challenge algorithmic linguistic and cultural bias rather than treating AI output as an authoritative norm?

d. What design principles can support ethically responsible, co-design-oriented GAI integration in L2 pragmatic education?

These questions are theoretical and design-oriented rather than claims of completed empirical effectiveness. The contribution is therefore not a new AI tutoring application but a reframing of what the technology should be used to teach. The proposed curriculum treats communicative variation as an object of inquiry, interactional breakdown as a learning resource, and AI error or bias as teachable evidence. Its principal outcomes are pragmatic adaptability and critical algorithmic literacy, supported by the enabling constructs of intercultural reflexivity and multilingual agency. Together, they provide an alternative to the simplistic equation of L2 success with sounding native.

2. LITERATURE REVIEW

2.1 Conceptual Review Procedure

Because this article is a conceptual review rather than a systematic review or empirical study, the literature was identified through a purposeful, theory-driven search strategy. Sources were located via Scopus, Web of Science, ERIC, and Google Scholar between January 2010 and July 2026, using combinations of the following search terms: English as a lingua franca, World Englishes, translanguaging, critical pragmatics, L2 pragmatics, generative AI, large language model, ChatGPT, algorithmic bias, critical AI literacy, and design-based research. Boolean operators (AND/OR) and truncation were applied to refine results. Initial screening of titles and abstracts yielded approximately 180 candidate sources; full-text examination reduced this set according to three explicit inclusion criteria:

(i) direct relevance to the decentring of native-speaker norms or to the pedagogical use of GAI;

(ii) publication in peer-reviewed outlets or authoritative institutional guidance (e.g., UNESCO); and

(iii) capacity to inform at least one element of the proposed framework (theoretical foundations, curriculum architecture, ethical safeguards, or evaluation constructs).

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Grey literature and non-peer-reviewed blog posts were excluded except where they constituted primary technical documentation. The final corpus comprised approximately 29 core sources. The synthesis proceeded thematically: sources were grouped under the six theoretical traditions listed in Table 1, and points of convergence and tension were systematically compared to derive the curricular implications presented in subsequent sections. Discrepancies in emphasis (for example, between descriptive ELF research and critical decolonial translanguaging) were retained as productive tensions rather than resolved into a single orthodoxy. The resulting framework is therefore an analytical synthesis rather than an exhaustive inventory of all GAI-in-language-education studies.

2.2 Decentring Native-Speaker Norms: ELF, World Englishes and Translanguaging

The native-speaker model has historically offered L2 education a convenient reference point: it provides a seemingly stable target against which pronunciation, grammar, vocabulary, politeness, and pragmatic appropriateness can be assessed [22]. Yet the convenience of a benchmark can conceal its ideological effects. Native-speaker competence is not a single, homogeneous construct, and speakers within so-called native-English communities themselves differ in discourse conventions, identities, regional practices, institutional roles, and interpersonal styles [3]. More importantly, many consequential English interactions take place among multilingual speakers. ELF scholarship therefore shifts attention from imitation of a fixed model toward communicative processes through which interlocutors achieve understanding despite linguistic and cultural differences [11,24]. World Englishes complements this perspective by challenging the hierarchical division between legitimate and deficient varieties. The pluralisation of English does not mean that every form is equally appropriate in every context; rather, it means that appropriateness must be interpreted relationally. A locally meaningful expression may be highly intelligible and socially meaningful within one context yet require adaptation in another. The pedagogical implication is important: learners need repertoires and decision-making capacities, not merely a single standardised script. The curriculum proposed here therefore distinguishes between learning a conventional form and learning when, why, and for whom that form is useful.

Translanguaging deepens the critique by questioning the assumption that multilingual speakers switch between fully bounded languages in a manner analogous to changing channels. Instead, speakers draw flexibly on their linguistic and semiotic repertoires to make meaning, construct identities, and accomplish social actions [4,9,22]. Pedagogical translanguaging deliberately mobilises these repertoires to support language and content learning [5]. Recent synthesis indicates that multilingual pedagogies can support L2 achievement, although implementation depends on educational level, language skill, institutional structures, and teacher preparation. The lesson for GAI design is not that every interaction should contain multiple languages, but that the learner's full repertoire should remain pedagogically legitimate. The decolonising dimension is also significant. Rajendram [23] argues that collaborative translanguaging can help challenge the continuing linguistic effects of colonial histories in English language teaching. For GAI-mediated instruction, this raises a new question: if an AI system reformulates a locally meaningful expression into standard international English, is the change necessarily improvement? The answer depends on communicative purpose. A learner may intentionally retain a local expression to index solidarity, identity, humour, authority, or cultural knowledge. Correcting it automatically may remove precisely the pragmatic information that the learner intends to communicate.

2.3 Critical Pragmatics in L2 Education

Pragmatic competence is conventionally defined as the capacity to employ and decode language appropriately within a given contextual framework. A significant body of research in second language (L2) acquisition indicates a distinct decoupling between

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grammatical proficiency and pragmatic performance. Specifically, learners who display advanced grammatical control frequently encounter difficulties when navigating the nuances of speech acts, implicatures, politeness conventions, conversational routines, and sociopragmatic interpretations [10,26]. This body of work is essential, but a critical orientation extends the question from 'What is appropriate?' to 'Who defines appropriateness, under what conditions, and with what consequences?' Critical pragmatics treats language use as inseparable from social relations. Requests, refusals, apologies, disagreements, compliments, and forms of address are not simply linguistic packages; they distribute rights, obligations, face, authority, intimacy, distance, and vulnerability. The same utterance can therefore have different pragmatic effects depending on status, institutional setting, history, medium, and perceived identity.

A curriculum focused exclusively on etiquette can unintentionally teach learners to accommodate unequal power rather than recognise it. The present framework instead asks learners to analyse pragmatic choices as situated acts. This orientation also changes the meaning of pragmatic success. Consider a learner who refuses a request in a direct form. A prescriptive model might label the response impolite and replace it with a conventionally indirect formula. A critical pragmatic model first asks what the relationship is, what the stakes are, whether directness is culturally or institutionally meaningful, whether the speaker is resisting an unreasonable demand, and what alternatives might preserve both agency and relational goals. The learner is then equipped with a repertoire of options rather than a single correct answer. GAI is particularly suitable for this work because it can generate contrasting scenarios quickly. However, it should not be allowed to settle the analysis. Learners can ask the system to provide three responses to the same situation from different positions of institutional power, then examine how lexical choices, hedging, directness, silence, address terms, and explanations change. The pedagogical objective is comparison and interpretation. The AI's answer is evidence for analysis, not the final authority.

2.4 GAI as a Non-Neutral Socio-Linguistic Agent

The phrase 'AI tutor' can obscure the sociolinguistic status of an LLM. An LLM does not possess pragmatic experience in the human sense; it generates likely continuations from patterns encoded through training and subsequent alignment. Its fluency may create an impression of intentional understanding even when the system is producing probabilistic text without access to the learner's lived social history. This distinction is especially important for pragmatic education, where meaning is dependent on relationships, embodied cues, shared histories, and consequences beyond the text itself. Bias may enter through the data used to train models, the distribution of languages and genres represented in that data, human preference judgements, safety and alignment procedures, system instructions, and the contexts in which users deploy the system [8,15]. Language-related disparities are especially relevant. Kwak and Pardos [14] found differences across countries and languages in an educational task, while Albeihi and Rice [1] argue that dominant English norms can become privileged in GAI-mediated language education. These findings suggest that linguistic inclusion cannot be inferred simply from the fact that a model can generate text in multiple languages. Cultural bias adds another layer. Tao et al. [27] report cultural-value tendencies in several widely used GPT models and show that culturally targeted prompting can change responses. This is pedagogically promising because it suggests that prompting can be used to interrogate model assumptions. It is also a warning: if cultural prompting changes outputs substantially, then a default response should not be treated as culturally universal. The model proposed here consequently makes prompt comparison a routine learning practice. At the same time, a critical account should avoid portraying LLMs as uniformly biased or unusable. Multilingual training can sometimes reduce certain forms of stereotype bias relative to comparable monolingual models

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[19]. Some systems also provide learners with access to interactional practice that would otherwise be difficult to obtain. The appropriate stance is therefore conditional: learners should be taught to test, triangulate, and contextualise AI output. Critical AI literacy is not anti-AI literacy; it is the ability to use AI without surrendering judgement to it.

2.5 Co-Design and Pedagogy

A fixed curriculum is poorly suited to a technology whose outputs, affordances, risks, and interfaces change rapidly. Co-design offers a more defensible alternative because it treats teachers and learners as contributors to pedagogical design rather than passive recipients. Design-based research involves the iterative development and evaluation of educational innovations through successive cycles of design, implementation, analysis, and refinement [7,17]. Teachers contribute contextual knowledge; learners contribute experiential knowledge; researchers contribute theoretical and methodological resources; and the resulting curriculum remains open to revision. Co-design is especially important for pragmatic education because students may notice culturally inappropriate AI behaviour that is invisible to a designer working from abstract language norms. Recent work on educational co-design shows that collaborative design can support teacher learning, decision-making, and more context-sensitive instructional ecosystems [2]. In the present model, co-design is proposed as an implementation principle rather than a completed research procedure. Teachers and students are envisaged jointly identifying communicative situations, relevant local repertoires, possible power asymmetries, privacy constraints, and acceptable uses of AI. This process itself becomes part of critical pedagogy.

Table 1. Theoretical foundations and their curricular implications

Tradition	Central concern	Implication for GAI-mediated pragmatics
ELF	Communication among diverse English users; intelligibility and negotiation	Prioritise adaptability, repair and negotiated meaning over imitation of a single native norm.
World Englishes	Plurality and legitimacy of English varieties	Expose learners to multiple Englishes and distinguish difference from communicative failure.
Translanguaging	Flexible use of multilingual repertoires	Permit strategic multilingual resources and examine how AI privileges or suppresses them.
Critical pragmatics	Context, identity, power and social consequences	Interrogate who defines appropriateness and how pragmatic choices distribute agency.
Critical AI literacy	Algorithmic mediation, bias and epistemic authority	Treat AI output as analysable evidence rather than unquestionable linguistic truth.
Design-based research	Iterative, context-sensitive educational innovation	Co-design, test, critique and revise curriculum with teachers and learners.

3. METHODS

3.1 Research Orientation

This paper adopts a design-based research-informed conceptual modelling orientation rather than presenting empirical findings that have not been collected. DBR is appropriate because the proposed curriculum is both an educational intervention and a theoretical conjecture about how GAI, pragmatics, multilingualism, and critical pedagogy can interact. The model can subsequently be operationalised in classrooms, evaluated through mixed methods, and revised in iterative cycles. This distinction is important for scholarly integrity: the framework specifies constructs, mechanisms, activities, and evaluation criteria but does not claim that the proposed outcomes have already been demonstrated. The conceptual unit is the GAI-mediated pragmatic episode: a learner encounters a communicative problem, constructs or selects an AI persona, interacts with the system, identifies uncertainty or conflict, compares alternative interpretations, and revises a response. The episode is embedded in a social scenario

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rather than a decontextualised sentence. Examples include refusing a supervisor's request, disagreeing with a senior colleague, responding to an indirect complaint, negotiating a group task, apologising after an intercultural misunderstanding, or asking for clarification when an interlocutor's meaning is ambiguous.

3.2 Master Framework: Relating Modules, Learning Episodes, and the Co-Design Cycle

To ensure terminological clarity, the paper distinguishes three nested levels of organisation. At the highest level, an iterative co-design cycle (diagnose → co-design → prompt → interact → critique → revise → transfer) provides the overarching process through which teachers and learners jointly develop, test, and refine activities. Nested within each cycle are three curriculum modules:

i. Persona Engineering and Dialectic Diversity;

ii. Real-Time Meaning Negotiation; and

iii. Deconstructing Algorithmic Bias.

Each module is enacted through a four-stage learning episode that constitutes the micro-level pedagogical sequence:

i. Persona Engineering,

ii. GAI Interaction,

iii. Critical Negotiation, and

iv. Reflection and Transfer.

Figure 1 presents this master architecture and indicates the key questions that guide each stage of the learning episode.

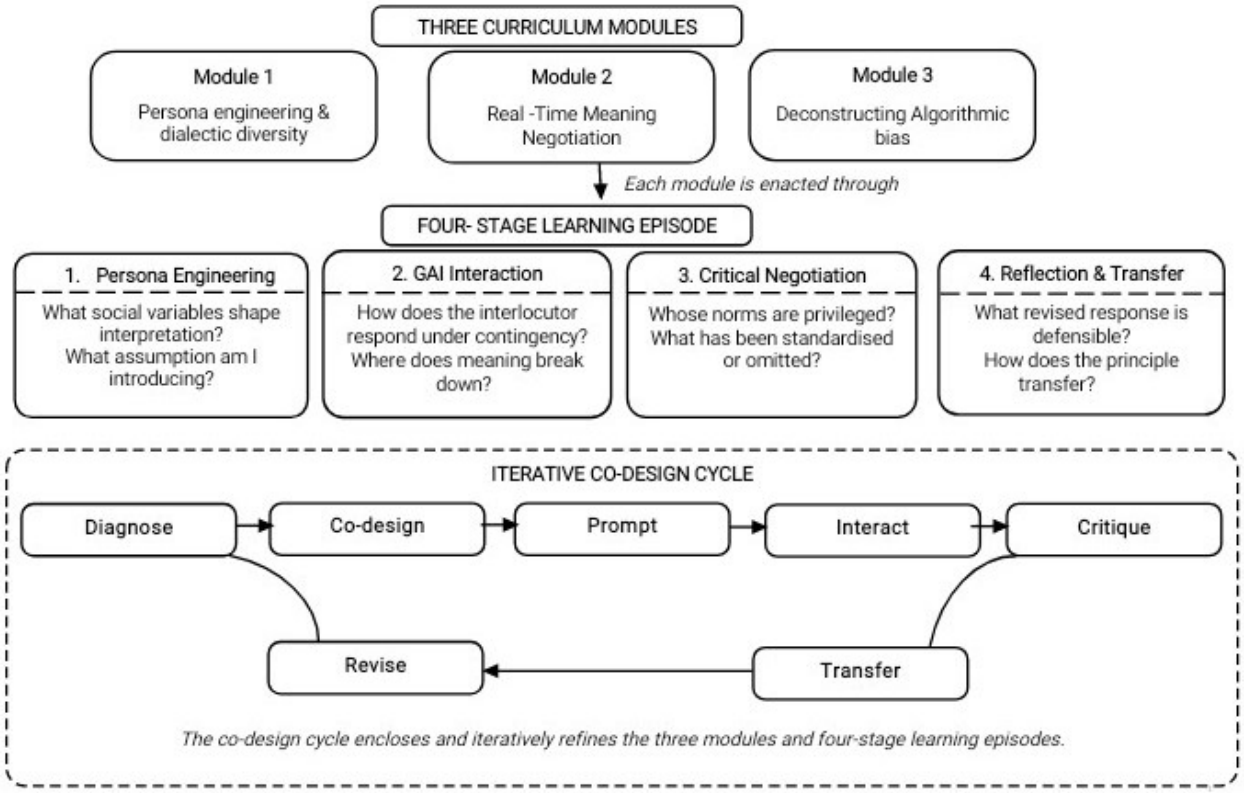


Figure 1. Master framework for GAI-mediated critical pragmatic learning

Source: Author's conceptualisation.

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Persona Engineering requires learners to specify relevant social variables: institutional role, communicative purpose, relationship to the learner, degree of familiarity, and possible pragmatic expectations while documenting assumptions and their limits. The purpose is not to stereotype communities but to make contextual assumptions explicit. GAI Interaction engages learners in a realistic task in which the system may introduce ambiguity, misunderstanding, or competing goals. Critical Negotiation asks learners to examine where the AI's response appears normatively loaded, to compare default outputs with alternative prompts, and to ask whose interests are served. Reflection and Transfer requires learners to formulate a revised response, explain pragmatic choices, and apply the principle to a new context.

3.3 Core Constructs, Enabling Capacities, and Evaluation Criteria

The proposed framework distinguishes two principal outcome constructs: pragmatic adaptability and critical algorithmic literacy from two enabling capacities that support their development: intercultural reflexivity and multilingual agency. The enabling capacities are not independent end-goals of the same status as the principal outcomes; rather, they function as mediating resources that make adaptive and critical performance possible. These constructs are deliberately anchored in established concepts within applied linguistics. Pragmatic adaptability builds directly upon the foundational notion of pragmatic competence [10,26] yet shifts the evaluative focus from approximation to native-speaker norms toward the capacity to interpret context and recalibrate language choices across interlocutors, purposes, relationships, and power conditions. In this respect it also resonates with ELF-oriented accounts of negotiation and accommodation [11,24]. Critical algorithmic literacy extends the tradition of critical digital literacy and media literacy into the specific domain of generative AI; it requires learners to interrogate how AI outputs are produced, what norms they privilege, and when outputs should be accepted, modified, or rejected. Intercultural reflexivity draws on intercultural communicative competence scholarship, while multilingual agency operationalises translanguaging theory [5,9] as a strategic resource rather than as interference.

Table 2 presents working definitions, observable indicators, illustrative measurement approaches, and performance descriptors (Emerging–Developing–Proficient) that can inform future empirical operationalisation. The conceptual rubric is offered as a starting point for instrument development; it does not claim that the constructs have already been validated.

Table 2. Core constructs, enabling capacities, evaluation criteria, and performance descriptors

Construct / Capacity	Working definition	Observable indicators	Performance descriptors (Emerging → Developing → Proficient)
Pragmatic adaptability (principal outcome)	Capacity to interpret context and recalibrate language choices across interlocutors, purposes, relationships and power conditions.	Generates alternatives; explains contextual differences; repairs breakdown; adjusts directness/indirectness; recognises relational consequences.	Emerging: Produces limited alternatives with minimal justification. Developing: Generates multiple options and links some to context. Proficient: Systematically generates, compares and justifies context-sensitive alternatives, including power-aware adjustments.
Critical algorithmic literacy (principal outcome)	Capacity to interrogate how AI outputs are produced, what norms they privilege, and when outputs should be accepted, modified or rejected.	Identifies over-correction; compares prompts; detects unsupported claims; questions cultural assumptions; triangulates outputs; documents uncertainty.	Emerging: Accepts AI output with little scrutiny. Developing: Notices some bias or over-correction and begins to question. Proficient: Systematically audits outputs, compares prompts, verifies claims, and documents decisions to accept/modify/reject.

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Construct / Capacity	Working definition	Observable indicators	Performance descriptors (Emerging → Developing → Proficient)
Intercultural reflexivity (enabling capacity)	Capacity to examine one's own assumptions while interpreting another person's communicative behaviour.	Identifies stereotypes; distinguishes preference from rule; explains multiple plausible interpretations.	Emerging: Relies on single cultural script. Developing: Recognises alternative interpretations. Proficient: Explicitly examines own assumptions and articulates multiple plausible readings of the same act.
Multilingual agency (enabling capacity)	Capacity to mobilise linguistic resources strategically rather than treating non-target languages as interference.	Uses translanguaging where useful; explains language choice; evaluates AI suppression of local forms.	Emerging: Avoids or suppresses non-target resources. Developing: Occasionally deploys multilingual resources with partial rationale. Proficient: Strategically selects and justifies multilingual resources and critiques AI standardisation of local forms.

A high-performing learner would not necessarily produce the most native-like sentence. Instead, the learner would demonstrate a defensible relationship between context, intention, linguistic choice, and anticipated effect. This is consistent with the pragmatic view that appropriateness is context-sensitive and with multilingual perspectives that resist treating linguistic variation as automatic deficiency [5,10].

4. THE PROPOSED CURRICULUM ARCHITECTURE

The following sections describe the three proposed modules and associated learning activities. These descriptions constitute a curriculum architecture offered for subsequent empirical testing; they do not report findings from classroom implementation.

4.1 Module 1: Persona Engineering and Dialectic Diversity

Module 1 introduces learners to the idea that an AI persona is a pedagogical construction rather than a transparent representation of a real community. Learners begin with a communicative scenario and identify the social variables likely to shape pragmatic interpretation. They then design two or more personas with deliberately different profiles. For example, the same workplace disagreement can be modelled through an experienced professional who uses English as a lingua franca and prefers concise workplace communication, an institutional manager working within a formal hierarchical setting, and a multilingual international project coordinator. The activity is not intended to teach learners that every member of a given national, ethnic, or regional group communicates in one way. Its purpose is to make variation visible and to expose the danger of treating one model response as universal. Explicit safeguards are built into persona design: (a) nationality-as-personality prompts are prohibited; (b) learners must create multiple plausible personas for the same scenario; (c) locally validated examples are preferred over abstract national stereotypes; and (d) learners are required to justify every assumption they introduce and to discuss its limits.

Students next prompt the system to produce alternative responses to the same communicative problem. They classify the differences using pragmatic categories such as directness, mitigation, modality, hedging, address forms, turn-taking, apology, disagreement, and explicitness. They then ask the system to explain the reasons for its choices. Crucially, students do not automatically accept the explanations. They compare them with course readings, teacher knowledge, peer interpretation, and locally grounded examples. The AI thus becomes an object of triangulation. A further activity is 'norm switching'. Learners instruct the system first to produce a standardised international-English version, then a locally situated version, then a deliberately multilingual version. They identify which dimensions changed and which remained stable. The teacher then asks: Which differences concern intelligibility? Which concern identity? Which concern politeness? Which concern institutional power? Which changes are unnecessary? This moves the lesson away from binary correct/incorrect judgements.

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4.2 Module 2: Real-Time Meaning Negotiation

Module 2 shifts from generated examples to live interaction. The AI is instructed to behave as an interlocutor whose interpretation is not always predictable. Learners complete tasks involving requests, refusals, disagreement, clarification, negotiation, and repair. The system may deliberately misunderstand a phrase, interpret an utterance too literally, or respond from a different pragmatic orientation. The learner must then clarify or reformulate without assuming that the first interpretation is necessarily wrong. The teacher's role is to foreground negotiation strategies. Learners practise asking for clarification, checking interpretation, paraphrasing, acknowledging uncertainty, offering alternatives, and repairing unintended offence. Such strategies are central to communication in multilingual settings because the goal of interaction is not perfect prediction of the interlocutor's norms but successful coordination when prediction fails. This principle aligns with ELF scholarship's emphasis on negotiation and with contemporary pragmatic pedagogy that treats contextual interpretation as central to communicative competence. Power is explicitly incorporated. Learners repeat a scenario in which their role changes from subordinate to supervisor, student to lecturer, customer to service provider, or junior colleague to team leader. They analyse how the same linguistic form can have different pragmatic force under different power conditions. This makes visible a limitation of formulaic politeness teaching: a highly indirect form may be appropriate in one hierarchical context and unnecessarily deferential in another. Pragmatic adaptability includes the ability to preserve agency while remaining strategically sensitive to relational consequences.

4.3 Module 3: Deconstructing Algorithmic Bias

Module 3 makes the AI itself the object of analysis. Learners collect several outputs generated from identical or slightly modified prompts. They identify patterns of over-correction, standardisation, cultural generalisation, unexplained certainty, or differential treatment of varieties. They then conduct a 'bias audit' in which each claim is classified as linguistic evidence, cultural assumption, model preference, or unsupported assertion. One particularly useful activity is the 'why was my English corrected?' exercise. Learners submit a locally meaningful expression and ask the model to improve it. They record what changes. The class then distinguishes errors that genuinely impede comprehension from features that are merely non-standard relative to a prestige variety. The teacher asks learners to restore any pragmatically meaningful feature that the AI removed. This exercise turns AI over-correction into an opportunity for critical language awareness. A second activity compares prompts that foreground different cultural and linguistic contexts. If the response changes, learners investigate whether the change reflects legitimate contextual adaptation or stereotypical cultural packaging. This distinction is crucial. Cultural prompting should not become a mechanism for producing simplistic national characterisations. Learners should be taught to use cautious descriptors such as 'one possible interactional style in this setting' rather than 'people from X always speak this way.' A third activity focuses on hallucination and false authority. Learners ask the system to provide a source for a pragmatic claim and verify the claim independently. Where the system produces an invented or unverifiable citation, the learner documents the failure. Miao and Holmes [18] stress human-centred validation, data protection, equity, and meaningful pedagogical use of GAI. In the proposed curriculum, verification is therefore not an optional technical skill; it is part of language competence in an AI-mediated communicative environment.

4.4 Co-Design-Oriented Learning Cycle

The three modules are organised through an iterative cycle proposed as a future implementation process: diagnose → co-design → prompt → interact → critique → revise → transfer. At the beginning of a cycle, teachers and learners identify a communicative problem that matters in their setting. They jointly decide which linguistic resources and contextual variables should be

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represented. During implementation, learners interact with GAI and retain a trace of the prompts and outputs. In the critique stage, they analyse both the interaction and the system's assumptions. Revision involves producing a more contextually defensible response, while transfer requires applying the principle to an unfamiliar situation. The teacher then uses learner evidence to redesign the next cycle. This architecture avoids two extremes. At one extreme, GAI is treated as a substitute teacher whose corrections are accepted without scrutiny. At the other, GAI is rejected because its outputs are imperfect. The proposed middle position is pedagogically more productive: the system is sufficiently capable to generate rich interaction but sufficiently fallible to require human judgement. Its errors, inconsistencies, and norm preferences become resources for developing critical awareness.

4.5 Suggested Activity Sequence

Table 3. Suggested activity sequence

Week/Stage	Core activity	Learner product	Primary construct
1. Mapping norms	Compare local, international and AI-generated Englishes.	Norm map and reflection.	Intercultural reflexivity
2. Persona design	Create contrasting pragmatic personas without stereotyping.	Persona prompt portfolio.	Pragmatic adaptability
3. Speech acts	Role-play requests, refusals and disagreement with GAI.	Interaction transcript and annotations.	Pragmatic adaptability
4. Breakdown and repair	Handle deliberate ambiguity and misunderstanding.	Repair log.	Pragmatic adaptability
5. Power and identity	Repeat tasks across changing status relations.	Comparative analysis.	Intercultural reflexivity
6. AI bias audit	Compare outputs under different linguistic/cultural prompts.	Bias-audit report.	Critical algorithmic literacy
7. Multilingual mediation	Use strategic translanguaging and test AI responses.	Multilingual dialogue and rationale.	Multilingual agency
8. Transfer	Apply principles to an unfamiliar intercultural scenario.	Reflective performance task.	Integrated competence

5. DISCUSSION

5.1 Redefining L2 Pragmatic Competence

The framework challenges the assumption that pragmatic competence is best represented by proximity to a native-speaker target. This does not make conventions irrelevant. Learners still need knowledge of recurring speech acts, discourse routines, politeness resources, and culturally salient expectations. What changes is the status of that knowledge. Conventions become resources for interpretation and choice rather than universal commands. A learner may need to know that a particular form is conventional in one community precisely so that they can recognize when a different form is preferable elsewhere. The proposed concept of pragmatic adaptability captures this shift. It is not the ability to please everyone, nor an invitation to abandon standards. It is the capacity to notice contextual differences and make defensible choices. Such adaptability includes sensitivity to interlocutor expectations, willingness to clarify, awareness of power, capacity to repair, and ability to explain why a particular form was selected. In multilingual communication, these capabilities may be more educationally consequential than the capacity to reproduce one idealized native variety. The model also expands the meaning of learner autonomy. In an AI-mediated environment, autonomy cannot mean simply using a tool independently. A learner who accepts every AI correction without evaluation is technologically active but epistemically dependent. Critical autonomy requires the learner to question the tool,

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compare outputs, identify uncertainty, and make the final communicative decision. This is why pragmatic adaptability and critical algorithmic literacy must be developed together.

5.2 Curricular Co-Design Principles and Teacher Workload

Six design principles guide implementation:

1. Context should precede correction. Teachers should begin with a communicative situation and its participants before deciding whether a form requires revision.
2. Variation should be represented as an analytical resource. Learners should encounter multiple legitimate ways of performing the same communicative action.
3. AI output should always be attributable to a prompt and treated as situated rather than universal.
4. Multilingual resources should be available where they support interpretation, identity, or meaning-making.
5. Students should participate in defining acceptable AI use and evaluation criteria.
6. Every AI-mediated activity should contain a human judgement stage in which learners explain, verify, revise, or reject model output.

Implementing critical algorithmic literacy alongside pragmatic instruction places additional cognitive and preparatory demands on language teachers. Teachers require more than operational knowledge of prompting; they need pragmatic knowledge, sociolinguistic awareness, data and privacy literacy, and the ability to recognise when AI is producing a superficially polished but culturally narrow response. Practical scaffolding strategies can mitigate workload:

i. start with a small set of reusable persona templates that teachers adapt rather than inventing each scenario from scratch;
ii. share curated prompt libraries and annotated model outputs across departmental teams;
iii. schedule short collaborative planning sessions in which teachers and more advanced learners co-design one activity per module;
iv. use low-bandwidth alternatives (teacher-curated transcripts, downloadable task packs) so that teachers are not required to manage live AI access in every lesson; and
v. integrate bias-audit checklists that learners complete independently before class discussion.

Professional development should therefore move beyond 'how to use ChatGPT' toward 'how to teach with, against, and beyond AI'. This is consistent with the broader call for sustained educator capacity building and human-centred governance in UNESCO's guidance [18]. Assessment must also change. If learners are graded only on whether their final response resembles a standardised model, the curriculum will reproduce the very normativity it seeks to challenge. Assessment should reward the quality of contextual reasoning, the range and justification of alternatives, interactional repair, verification of AI claims, and reflection on power and identity. A rubric can still include comprehensibility and linguistic accuracy, but those dimensions should be interpreted alongside pragmatic and critical criteria.

5.3 Ethical Considerations

Algorithmic hallucination is the first ethical concern. LLMs can generate plausible but unsupported explanations, citations, or cultural claims. In pragmatic education, this is especially dangerous because invented cultural rules can become stereotypes. The curriculum therefore requires verification and teaches students to label uncertain interpretations as possibilities rather than facts. Privacy is the second concern. Learners may inadvertently disclose names, personal conflicts, workplace information, family

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matters, or identifiable classroom data when using public AI systems. Miao and Holmes [18] emphasise data protection and human-centred governance. Teachers should establish clear rules about what information may be entered into a model, use anonymised scenarios, and avoid requiring students to disclose sensitive personal experiences simply to make an activity realistic. Digital inequality is a third concern. Access to fast internet, paid AI subscriptions, modern devices, electricity, and private study spaces is uneven. A curriculum that assumes constant premium access risks converting technological privilege into academic advantage. The model should therefore support low-bandwidth alternatives, teacher-curated transcripts, downloadable task packs, peer collaboration, and non-AI versions of core activities. GAI should enrich the curriculum, not become a gatekeeper to participation. Stereotyping is a fourth concern. Persona prompting can easily become caricature if teachers equate national identity with fixed communication styles. The solution is not to avoid cultural variation but to teach variability within cultures. Persona descriptions should use multiple contextual dimensions and explicitly mark them as hypothetical. Learners should compare several possible interpretations and be encouraged to challenge the persona itself. Explicit safeguards include: avoiding nationality-as-personality prompts; requiring multiple plausible personas; preferring locally validated examples; and requiring learners to justify every assumption. Finally, the curriculum must address dependency. If every communicative problem is delegated to GAI, learners may reduce opportunities for spontaneous human interaction. The proposed architecture therefore treats AI as one interlocutor among many. Peer dialogue, teacher interaction, authentic communication, community engagement, and reflective writing remain indispensable. The long-term goal is not dependence on an AI conversational partner but greater competence in human communication.

5.4 Positioning the Framework Against Current GAI Language-Education Research

Recent reviews show that research on GAI in language education has expanded quickly but remains concentrated in higher education, English, writing, learner perceptions, and short-term designs [3,13,16,20,28]. Pragmatic interaction is emerging as a more focused area, with Sim et al. [25] demonstrating the feasibility of GAI role-play for speech-act learning. The present framework extends this trajectory in three ways. First, it makes pragmatic adaptability not merely speech-act production the central outcome. Second, it places algorithmic critique inside the curriculum rather than treating AI limitations as a background warning. Third, it connects GAI pragmatics to ELF, World Englishes, and translanguaging, thereby making linguistic diversity foundational rather than supplementary. The framework also responds to a conceptual problem in AI-assisted language learning: personalisation can coexist with standardisation. A model can generate highly tailored feedback while still defining 'better' English through dominant textual patterns. Personalisation of delivery does not automatically produce pluralism of norms. Critical co-design is therefore needed to determine what kinds of difference the system should preserve, what kinds of adaptation are pedagogically warranted, and who gets to decide. The proposed architecture is deliberately technology-agnostic. It can be implemented with different GAI systems, provided the system permits interactive dialogue and educators can inspect prompts and outputs. This reduces dependence on one vendor and keeps the pedagogical principles separable from rapidly changing product features. It also allows future empirical studies to compare models, languages, learner populations, and institutional settings.

5.5 Propositions for Future Empirical Testing

The following propositions are offered as testable conjectures. For each, possible measures, comparison conditions, learner populations, and evidence sources are indicated.

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P1: Learners participating in critical GAI-mediated pragmatic tasks will demonstrate greater ability to generate and justify context-sensitive alternatives than learners receiving form-focused AI correction alone. Possible measures: rubric scores on alternative generation and justification quality; discourse analysis of interaction transcripts. Comparison: critical co-design condition versus form-focused AI correction. Populations: intermediate-to-advanced L2 learners in tertiary or upper-secondary settings. Evidence: pre-/post-task performance, prompt logs, stimulated-recall interviews.

P2: Explicit AI-bias auditing will improve learners' ability to identify over-correction toward dominant English norms. Possible measures: accuracy on bias-detection tasks; quality of bias-audit reports. Comparison: modules with versus without explicit bias-audit instruction. Populations: multilingual classrooms in postcolonial and ELF-dominant contexts. Evidence: coded audit reports, verification task scores, reflective journals.

P3: Co-designed pragmatic tasks will produce greater learner-reported ownership and contextual relevance than teacher-designed AI tasks implemented without learner participation. Possible measures: ownership and relevance scales; qualitative interview themes. Comparison: co-design condition versus teacher-only design. Populations: secondary and tertiary cohorts with varied access conditions. Evidence: questionnaires, focus-group interviews, participation logs.

P4: Exposure to contrasting AI personas and multilingual prompts will increase learners' recognition of pragmatic variability while reducing reliance on a single normative model. Possible measures: variability-recognition scores; reduction in single-norm preference ratings. Comparison: multi-persona condition versus single-default-persona condition. Populations: mixed-proficiency groups. Evidence: pre-/post-surveys, persona-comparison tasks, discourse analysis.

P5: The benefits of GAI-mediated pragmatic learning will be moderated by access conditions, teacher AI literacy, learner proficiency, and institutional policies. Possible measures: interaction effects in multilevel models; qualitative accounts of access barriers. Comparison: stratified samples across high- and low-resource settings. Populations: multi-site cohorts. Evidence: access inventories, teacher-literacy inventories, institutional policy documents, outcome measures from P1–P4.

5.6 Limitations

As a conceptual review article, this paper does not report empirical data from classroom implementation. The proposed modules, constructs, and design principles therefore remain untested conjectures whose educational value must be established through subsequent mixed-methods and design-based studies. The literature synthesis, while purposeful and theory-driven, is not a systematic review and may under-represent studies published in languages other than English or in regional journals outside major indexing databases. The framework is technology-agnostic in principle, yet current LLM capabilities, alignment practices, and interface designs change rapidly; some recommended activities may require adaptation as models evolve. Finally, the ethical safeguards and low-bandwidth alternatives outlined above address known risks, but they cannot eliminate structural inequalities in access to digital infrastructure or the broader political economy of commercial AI systems.

6. CONCLUSIONS AND IMPLICATIONS

Generative AI has arrived in language education at precisely the moment when established assumptions about English are being challenged by multilingual communication. Its ability to generate fluent dialogue creates valuable opportunities for pragmatic practice, but its fluency can also disguise normative preferences and cultural assumptions. Treating GAI as an unquestionable tutor would therefore risk reproducing the linguistic hierarchies that contemporary applied linguistics has spent decades interrogating. This paper has proposed a different role: GAI as a critical intercultural partner whose outputs are used, compared,

questioned, revised, and sometimes rejected. The proposed curriculum brings ELF, World Englishes, translanguaging, critical pragmatics, critical algorithmic literacy, and design-based research into a common pedagogical architecture. Its central organization: three modules enacted through a four-stage learning episode within an iterative co-design cycle moves learners from imitation toward adaptive communicative decision-making. The two principal outcomes, pragmatic adaptability and critical algorithmic literacy, supported by intercultural reflexivity and multilingual agency, recognise that effective communication in multilingual environments requires both sensitivity to people and scepticism toward systems.

The framework is intentionally conceptual. Its next stage is empirical validation across educational levels, languages, and institutional settings. Future studies should examine whether the proposed modules improve observable pragmatic performance, how learners' perceptions of linguistic norms change, which types of AI bias are most readily detected, and how teachers negotiate the additional demands of AI-mediated curriculum design. Comparative work should include African, Asian, Latin American, European, and multilingual postcolonial contexts rather than assuming that findings from English-dominant settings transfer automatically. A second research direction concerns languages beyond English. The same problem may emerge when AI systems mediate Arabic, French, Yoruba, Hausa, Mandarin, Vietnamese, Italian, or other languages with substantial internal variation. The critical question will be whether GAI can support local pragmatic repertoires without flattening them into standardised representations. Research should therefore investigate dialect diversity, minority languages, Indigenous language education, and multilingual classroom practices. Finally, future scholarship should treat equity as part of pedagogical effectiveness. A theoretically elegant AI curriculum is educationally weak if learners cannot access it safely and consistently. Research should therefore examine low-resource implementations, offline or low-bandwidth models, teacher-mediated access, privacy-preserving workflows, and institutional policies. The goal is not to make learners more dependent on machines. It is to prepare them for a communicative world in which machines increasingly participate in language practices while humans remain responsible for meaning, relationships, judgement, and ethical choice.

7. RECOMMENDATIONS

Future implementation should empirically test the proposed framework across diverse educational levels, languages, learner populations, and access conditions. Particular attention should be given to teacher preparation, low-bandwidth implementation, privacy protection, and the risk of algorithmic standardisation. Researchers should also examine whether the framework improves pragmatic adaptability and critical algorithmic literacy without reinforcing dependence on generative AI.

ETHICS STATEMENT

This conceptual study involved no human participants, personal data, or experimental intervention. Therefore, ethical approval was not required. The framework nevertheless addresses key ethical concerns associated with generative AI, including privacy, algorithmic bias, stereotyping, hallucination, digital inequality, and learner dependency.

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DATA AVAILABILITY STATEMENT

No empirical data were collected or analysed in this conceptual study. Therefore, there are no datasets to share.

CONFLICT OF INTEREST

The author declares no competing interests.

AUTHOR CONTRIBUTIONS

The author developed the conceptualisation, literature review, framework, analysis, methodology, writing, revision, and final approval of the manuscript. The author is solely responsible for the content of the manuscript.

DECLARATION ON THE USE OF GENERATIVE AI

ChatGPT was used solely for language refinement (grammar and spelling only) during the preparation of this study. The author independently conceived the study, developed the framework, evaluated the content, and takes full responsibility for the accuracy, originality, and integrity of the work. The author retains ownership of the paper and its intellectual content.

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