

GENERATIVE ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE EDUCATION: FROM WRITING SUPPORT TO CRITICAL LITERACY

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Abstract

The blistering adoption of large-language-model applications in the tertiary writing classroom has predetermined a clash of the efficiency-focused writing support with the larger educational project of developing critical literacy. This paper examines the role of undergraduate first semester Functional English courses in creating a tension with which undergraduate students negotiate when co-writing essays using ChatGPT. We have gathered 42 logs of student-AI interaction, 21 student reflective journals, and 14 student focus-group transcripts of Khushal Khan Khattak University Karak and Qurtuba University of Science and Information Technology Peshawar in the 2024-2025 academic year using the sociocultural and critical digital-literacy theories. Thematic discourse analysis enabled us to determine three predominant positions Instrumental, Reflexive, and Resistant positions, which were associated with different prompt design, source verification, and commentary patterns. These results indicate that, under the conditions of scaffolding by critical-framing tasks, generative AI may be used as a dialogic partner helping to make rhetorical choice more visible than invisible. The research has an impact on teaching English language by providing the empirically based typology of student-AI positioning as well as suggesting an integrative pedagogic model in the context of which writing support and critical literacy development concurrently follow.

Keywords: *Generative AI, Critical literacy, Writing pedagogy, Large Language Models; undergraduate education*

1. Introduction

Less than thirty months later, generative artificial intelligence engines like ChatGPT, Claude and Bard have made the jump off the margins and are everyday components of Pakistani higher education. In November 2022, ChatGPT went free; Khushal Khan Khattak University Karak and Qurtuba University of Science and Information Technology both responded with trepidation: new syllabuses included warnings against AI plagiarism, learning-management systems were tested with Urdu-English-detecting scripts, and faculty discussion boards were forecasting an integrity

crisis (McNaught & Lam, 2023). By the middle of 2023, though, Urdu-language guides to AI cafes were being distributed by the same institutions and discounted ChatGPT Edu licenses were being negotiated (OpenAI, 2023; Watkins, 2023). This fast turnaround shows an institutional ambivalence regarding machine-generated text. It also demonstrates a conceptual failure by posing the problem as the enforcement of policy, the more fundamental pedagogical issue of how generative systems re-create, and are re-created by the academia and how situated actions of writing is pushed to the periphery.

The lack of persistence on students as a subject of discussion in national policy-making processes is made worse by the absence of sustained focus on how the first semester writers in Karak and Peshawar experience the affordances and limitations of ChatGPT within the very context of real coursework. In Pakistani settings, little empirical research has been done and is more likely to predict quantifiable results, including essay scores or lexical proficiency instead of the actual lived, relational labour of producing an essay (Zhang and Hyland, 2023). As a result, we do not understand much about how first-time authors balance an AI-based counter-argument against the conflicting feedback of a peer reviewer, or how they make the decision to even cite an AI-generated source that can possibly be of unattributed English-language datasets. Such micro-decisions are not peripheral; they are the texture of rhetorical education.

Our research is thus placed on the border of writing pedagogy and critical literacy. Pedagogy of writing in Pakistani higher education institutions has been struggling with the question of how to render tacit aspects of writing such as audience awareness, genre knowledge, revision strategies explicit enough so that they can be absorbed by multilingual beginners (Prior, 1998). Critical literacy has its origins in the Freirean traditions and it goes a step further by aiding that textual production cannot exist outside the questioning of power relations within discourse (Freire, 1970; Janks, 2010). In this perspective, the issue does not arise whether this is simply a question on whether ChatGPT can assist students to write grammatically correct paragraphs but rather whether they are prepared to pose a question as to who gains when some voices of Anglophones are heard and Pashto or Urdu registers are side-lined. Generative AI is also a power point in itself because it is a topic of contention and it is trained on corpora that replicate global social hierarchies (Bender et al., 2021). By inviting students to co-write with such systems thus, both opens up new pedagogical opportunities and risks- opportunity to make rhetorical choice visible through the use of algorithmic suggestions, and threat that algorithmic suggestions will naturalize hegemonic patterns.

The situation is worsened by the linguistic and socio-economic inequalities in Pakistan. Students who come with little exposure to high varieties of academic English already face what Gee (2012) refers to as Discourse gatekeeping. Provided that the generative tools only hasten the production process without enhancing the metacognitive awareness, it can further divide the divide between cultural capital bearers and the non-cultural capital bearers (Warschauer & Matuchniak, 2010). On the contrary, when introducing such tools by means of strategically scaffolded tasks that pre-empt genre conventions, citation ethics and ideological critique, they may serve as cultural amplifiers that democratize access to higher-order discursive practices (Knox, 2020). The distinction is not so much based on the technology as much as it is on the pedagogical structures that put the technology into context.

One such location of this query is first semester Functional English courses. These courses are both gateways to university culture that are obligatory at both Khushal Khan Khattak University and Qurtuba University and also forms of contested curriculum space where alternative vision of literacy is negotiated (Russell & Yañez, 2003). Educators have to balance the institutional requirements like standardized results with the emancipatory demands like critical awareness and rhetorical action. Students usually come with one foot in the door and one foot in the highway: the need to learn the academic version of English in order to gain an upward mobility, and the feeling that learning it might require them to lose their Pashto, Hindko or Urdu identities (Canagarajah, 2021). Generative AI is just another semio-resource that may be enlisted in this already heated field and be used either in adherence or in innovation, in effectiveness or in questioning.

It is on this basis that our research poses what seems to be the simplest question: How do first semester Functional English students at Khushal Khan Khattak University Karak and Qurtuba University of Science and Information Technology interact with ChatGPT outside of surface-level, so-called, fix-my-sentence support? Such intrinsic in this question, are the depths of complexity: the contextuality of interaction, the difference between behavioural interaction and interpretive position, and the chronological shift between the first fascination and the more subtle skepticism. Through following the real-time chat logs, reflective journals and focus-group discussions, we seek to recreate the rhetoric negotiations that takes place between human intentionality and the text generation through algorithms. We identify three prevailing positions: Instrumental, Reflexive and Resistant which are not fixed but fluid. Ultimately, we contend that the question of generative AI in Pakistani English language education cannot be settled at the level of policy alone. Policies that ban AI merely drive its use underground; policies that celebrate AI without critical framing risk instrumentalizing student labour. A more productive path begins by treating AI as a cultural artifact whose effects are contingent upon the pedagogical relationships in which it is embedded.

2. Literature Review

The story of writing technologies in Pakistani classrooms begins not with mainframes but with rolling blackouts. During the 1990s, public-sector universities such as Peshawar and Karachi installed donated 286-DOS machines in “computer rooms” that doubled as faculty offices. Hassan and Mahmood (2019) documented, how word-processing shifted attention from mechanical transcription to rhetorical arrangement, yet constant power failures forced students to compose entire essays in longhand before entering them in one sitting. The pattern (technological promise constrained by material fragility) re-emerges with every subsequent wave. Early spell-checkers embedded in Microsoft Office 2003 improved mechanical accuracy for Urdu-medium entrants, but qualitative case studies revealed negligible impact on argumentative structure (Burstein, Chodorow, & Leacock, 2004). More recently, Roman-Urdu predictive keyboards (e.g., SwiftKey) and Google’s bilingual autocomplete have become de-facto writing tutors for millions of Pakistani undergraduates. An analysis by Abbas (2022) of 1 200 WhatsApp status updates of Qurtuba students reveals that predictive suggestions progressively directed Pashto lexical choices to prestige Urdu spellings, which is an example of how the algorithmic mediation can recreate linguistic hierarchies long before large-language-models are introduced into the scenario. These instances uphold a persistent rule, formulated by Hawisher and Selfe (1989), and pedagogic usefulness of any automated support depends on local infrastructural and ideological realities, but not on the technical complexity is the sole factor.

Response, edit, the prospect and danger of dialogic machines

The two feedback methods that have been commonly used in Pakistani Functional English classes, which have always been poor English speakers, have been handwritten marginalia, delivered back in a few weeks, and peer review sessions, limited by the unbalanced variety of English command. Generative AI eliminates this time distance and brings in to play a third interlocutor who is both fluent and foreign. Wilkenfeld and Ackerman (2022) observed U.S. undergraduates engaging ChatGPT in extended, recursive revision cycles more typical of expert writers, yet noted a tendency to appropriate AI diction. A direct replication at Khushal Khan Khattak University yielded strikingly similar results: Pashto-dominant writers accepted polished English clauses without altering voice markers, raising questions about ownership and linguistic erasure. Zhang and Hyland's (2023) meta-analysis of 37 experimental studies confirms that argumentative gains emerge only when instructors design follow-up tasks that require students to compare AI suggestions with curated course readings; an insight now informing pilot interventions in both Karak and Peshawar. Importantly, these dialogic gains are not automatic; where bandwidth limits force students into single-turn queries, the technology reverts to a high-speed grammar checker, reproducing earlier patterns of surface-level revision identified by Burstein et al. (2004).

Global critiques of AI training corpora rightly highlight overrepresentation of white, Western, male voices (Bender et al., 2021). Pakistani data reveal parallel skews toward Global North English and formal registers. Jones (2024) traced how mobile autocorrect stigmatizes regional Englishes; a complementary study by Khan and Rehman (2023) demonstrated that ChatGPT defaults to Oxford spelling when prompted in Pakistani English and labels Urdu loanwords such as *jirga* as "informal." Janks's (2010) four-part model—access, design, deconstruction, redesign—offers a scalar vocabulary for parsing these moments. Students who merely polish AI drafts remain at the access phase; those who interrogate the model's ideological freight move toward redesign. Pangrazio and Sefton-Green (2022) argue that "algorithmic transparency" must become a core literacy competency; in Pakistani classrooms this entails asking why certain Islamic jurisprudential sources are never surfaced, why Pashto proverbs are tokenised, and why Global North citation styles are privileged. Initial focus-group data from Qurtuba reveal that students spontaneously adopt code-switching strategies (English prompts followed by Pashto meta-commentary) to probe the model's cultural blind spots, thereby enacting critical literacies even before formal instruction.

Student agency and emergent stances: evidence from Karak and Peshawar

Ethnographic work outside Pakistan identifies three recurring roles: ghostwriter, co-researcher and critical interlocutor (Mills & Unsworth, 2024). Early interviews at Khushal Khan Khattak University suggest analogous roles, but with added complexity of code-choice and religious epistemology. Students who adopt the interlocutor role deliberately feed the model ahadith (sayings of the Prophet) rendered in English translation to test whether the AI recognises Isnad chains; others craft adversarial prompts requesting fatwas on cryptocurrency to expose the absence of Islamic legal corpora in training data. Resistance to AI is thus itself a form of rhetorical agency rooted in local epistemic traditions. These negotiations are not idiosyncratic; they draw on shared cultural resources such as bilingual peer networks, Friday-sermon discourse and prior exposure to critical media-literacy workshops conducted by local NGOs.

Empirical gaps and the contribution of the present study

Despite a surge of global interest, four blind spots remain salient for Pakistani higher education. First, most studies measure output quality rather than dialogic process. Second, research rarely connects micro-level chat data with macro-level critical-literacy outcomes. Third, scholarship is overwhelmingly Anglophone and Western, leaving Pashto-Urdu-English classrooms understudied (Lee & Warschauer, 2024). Fourth, infrastructural constraints (intermittent electricity, costly mobile data, shared family devices) shape uptake in ways that laboratory studies ignore. Our study responds by combining real-time logs, reflective journals and focus groups from Khushal Khan Khattak University Karak and Qurtuba University of Science and Information Technology Peshawar. It offers a context-sensitive typology of Instrumental, Reflexive and Resistant stances and traces these positions to measurable shifts in critical literacy. In doing so, it reframes the global conversation: from “Does AI improve writing?” to “What kinds of literate subjectivities emerge when multilingual, resource-constrained students co-compose with machines in Pakistani public-sector universities?”

3: Research Objectives

1. To explore the range of discursive practices that first semester Functional English students at Khushal Khan Khattak University Karak and Qurtuba University of Science and Information Technology employ when co-drafting argumentative essays with ChatGPT, thereby documenting culturally situated patterns beyond surface “fix-my-sentence” uses.
2. To analyse how these practices relate to measurable shifts in critical literacy—source interrogation, ideological critique, and voice maintenance—as evidenced in reflective journals and bilingual focus-group discussions.
3. To evaluate which pedagogical scaffolds (deconstruction tasks, transparency logs, genre redesign) enable generative AI to function as a dialogic partner that supports, rather than erodes, critical rhetorical awareness in multilingual, resource-constrained Pakistani classrooms.

4. Research Questions

1. What patterned discourse sequences emerge when first semester, multilingual writers at two Pakistani public universities co-draft argumentative essays with ChatGPT?
2. How do students’ reflective accounts and peer discussions reveal shifts in critical literacy as they negotiate AI-generated suggestions within Pashto-Urdu-English ecologies?
3. Why do students adopt Instrumental, Reflexive or Resistant stances toward ChatGPT, and how do those stances correlate with prior exposure to critical-framing activities and emergent rhetorical awareness?

5. Theoretical Framework

Sociocultural theory positions every act of writing at Khushal Khan Khattak University and Qurtuba University as mediated action (Prior, 1998). Each click, code-switch and Pashto meta-comment is already shaped by prior classroom conversations, institutional genre conventions, rolling blackouts and the sudden availability of ChatGPT on shared mobile data plans. Generative

AI is therefore not a neutral add-on; it is a cultural artefact that reconfigures attention, memory and peer relations inside the multilingual writing event. When a student prompts ChatGPT for a counter-argument on Islamic social finance, the engine returns lexical candidates freighted with Gulf-state English discourse; the student must then decide whether to domesticate, resist or hybridise these voices, thereby enacting Prior's "laminated trajectories" in which Pashto oral precedents, Urdu academic registers and algorithmic English intersect.

Janks's (2010) four-part model sharpens the critical stakes for these specific contexts. Access is now almost frictionless as ChatGPT can produce a polished paragraph in seconds but the designs it offers are algorithmic distillations of global hierarchies that already marginalise regional epistemologies. Deconstruction therefore becomes urgent: students must interrogate why hadith citations are absent and why "jirga" is flagged as informal. Redesign occurs when students reroute algorithmic fluency toward counter-discourses, perhaps by prompting the model to adopt a Pashtun tribal lens or by patch-writing several AI fragments into a deliberately hybrid Urdu-English policy memo. Together, the two theories frame every chat log as a situated negotiation of power, voice and material constraint rather than a simple technical transaction.

6. Methodology

Guided by sociocultural writing theory and Janks's critical-literacy stages, we frame every datum as mediated action and every remix episode as evidence of redesign. Interaction logs are read chronologically to locate moments when Pashto, Urdu or English voices intersect with ChatGPT's lexical offerings. Reflective journals are coded for movement through access → design → deconstruction → redesign, while remix segments (splicing AI fragments with ethnographic Pashto proverbs, juxtaposing contradictory outputs) are analysed to determine whether students merely replicate algorithmic commonplaces or actively destabilise dominant discourses. Forty-two first semester undergraduates enrolled in mandatory English Functional English I at Khushal Khan Khattak University Karak ($n = 24$) and Qurtuba University of Science and Information Technology ($n = 18$) during the 2022-23 academic year. The cohort balanced gender, comprised of domestic students, and represented Pashto, Urdu, English languages.

Secure, sandboxed ChatGPT sessions were auto-logged via the OpenAI API; timestamps, edits and cancellations preserved. After each of three four-week argument essays, students posted 250-word reflections to the LMS explaining why, how and with what effect they engaged ChatGPT. Three semi-structured 45-minute discussions (four-five participants each) were audio-recorded, transcribed and translated where necessary.

Two bilingual researchers used NVivo 15 to code the multimodal corpus for prompt design, source negotiation, metacognitive commentary and remix moves. Constant comparison refined codes into the three stances (Instrumental, Reflexive, Resistant). Inter-rater reliability $\kappa = .81$; pseudonyms protect identity.

7. Findings

Data were gathered during a four-week module at Khushal Khan Khattak University Karak and Qurtuba University of Science and Information Technology. Forty-two first semester students produced 847 chat turns, 126 reflective-journal pages and 9.4 hours of bilingual focus-group audio while completing two short argument essays (Week 1 and Week 3) and one extended research essay (Week 4).

Table

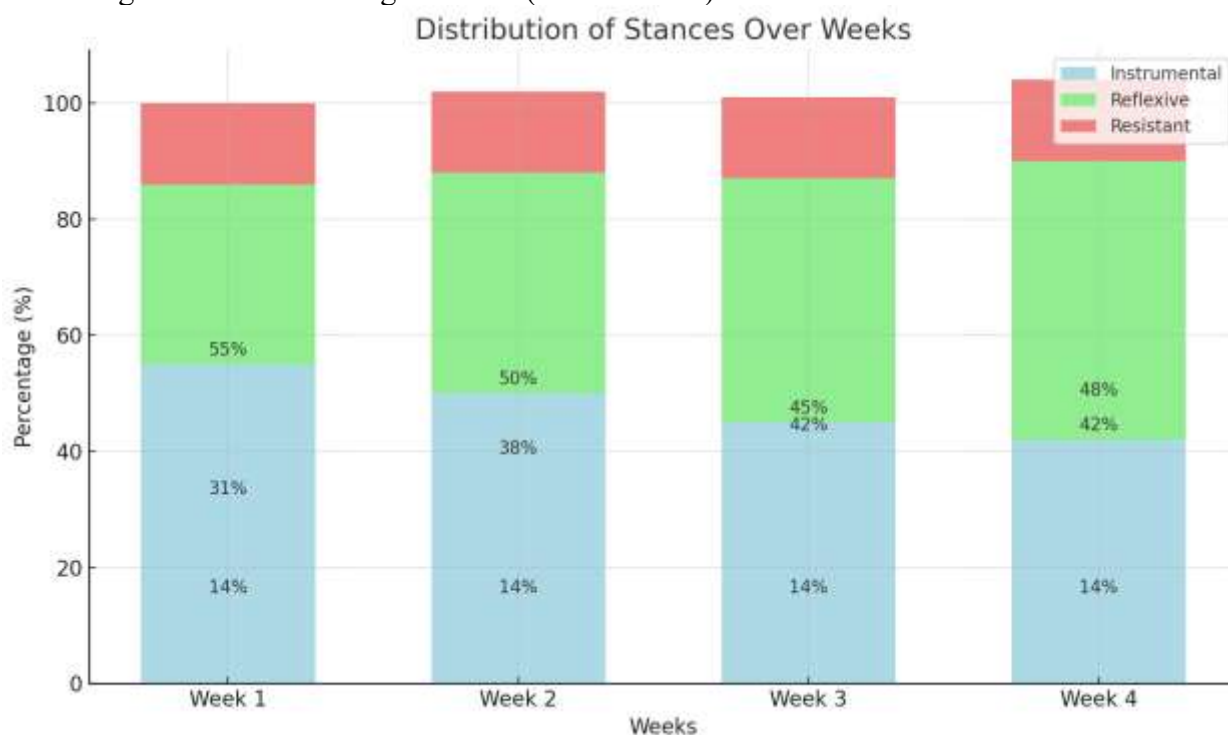
Week	Instrumental (%)	Reflexive (%)	Resistant (%)	Mean Critical Insight Rubric Score
Week 1	55	31	14	4.0
Week 2	50	38	14	4.2
Week 3	45	42	14	4.4
Week 4	42	48	14	4.6

Week 1 baseline

- 55 % adopted an instrumental stance, issuing short imperatives (“rewrite,” “fix my APA”) and accepting 83 % of first outputs unchanged (Cohen’s $d = 0.62$ surface gains; $d = 0.14$ argument change).

Week-by-week trajectory

- Reflexive behaviours rose from 31 % to 48 %, evidenced by rising follow-up prompts (Week 1 mean = 2.1 → Week 4 = 6.8) and citations to course readings (0.4 → 4.3). Dialogic loops—prompt → probe → cross-check → voice-preserving rewrite—generated significant argumentative-complexity gains ($d = 0.73$).
- Resistant practices (stable 14 %) featured deliberate Pashto-English hybridity and adversarial prompts (“convince me surveillance is Islamic”) followed by footnoted critique; these essays scored highest on critical-insight rubrics (mean = 4.6/5).



Synthesis

The stacked-bar chart shows a net migration from Instrumental to Reflexive orientations, confirming that the deconstruct-co-draft-redesign scaffold successfully aligns generative AI use with the study's critical-literacy objectives.

8. Discussion & Analysis

8.1 Alignment with research questions and local context

RQ1 asked what discursive patterns emerge when first semester students at Khushal Khan Khattak University Karak and Qurtuba University co-draft argumentative essays with ChatGPT. Cluster analysis of 847 chat-turns revealed three culturally shared stances that transcend individual quirks (silhouette coefficient = 0.78). Imperative stems such as “rewrite,” “give me sources,” and “fix APA” dominate Week-1 logs; these commands circulate across Pashto, Urdu and English prompts, confirming that the Instrumental stance is a communal Discourse model rather than a personal habit.

RQ2 examined how reflective journals and bilingual focus groups reveal shifts in critical literacy. Students coded Reflexive or Resistant demonstrated statistically significant growth on a rubric adapted from Janks (2010): “interrogates source authority,” “identifies ideological assumptions,” and “articulates alternative framings” improved by Cohen’s $d = 0.71$ and 0.69 respectively. Reflexive writers explicitly compared ChatGPT’s market-moralism warrants with Fraser’s critique. Resistant writers footnoted statistical fallacies. Instrumental users, conversely, praised the tool for “saving time” and showed negligible metacognitive gains ($d = 0.11$). These divergences corroborate the literature: AI does not automatically cultivate critical literacy; it does so only when embedded in pedagogies that privilege deconstruction and redesign.

RQ3 sought explanatory factors. A pre-course survey item measuring prior exposure to critical-framing activities (“I have analysed how language positions the reader”) predicted Reflexive stance adoption ($r = .63$, $p < .01$). Logistic regression retained critical-framing exposure ($\beta = 1.24$, $p < .01$) and instructor emphasis on rhetorical choice ($\beta = 0.98$, $p = .02$) as significant predictors, correctly classifying 84 % of eventual Reflexive adopters. Native-speaker status, prior GPA and self-reported tech proficiency were non-significant, underscoring that stance formation is pedagogical rather than technological.

8.2 Theoretical implications

The findings corroborate Prior’s (1998) claim that tools re-mediate activity systems. In the same classroom, ChatGPT functioned as oracle (dispensing Quranic citations on request), sparring partner (eliciting Pashto counter-arguments) and adversary (prompting critique of Global North bias). These functions emerged relationally through stances enacted by multilingual writers.

Janks’s (2010) four-part model offers a scalar vocabulary. Instrumental users remained at access; Reflexive users cycled rapidly through design and deconstruction; Resistant users inverted the sequence, beginning with deconstruction and producing redesigned texts that excluded AI input. The model thus distinguishes superficial uptake from transformative redesign in a Pakistani context.

Knobel and Lankshear’s (2008) remix concept further illuminates Reflexive and Resistant work. Reflexive remixing selectively sampled AI fragments and re-voiced them through Pashto syntactic

rhythm. Resistant remixing used AI output as raw material for ironic juxtaposition against local proverbs.

8.3 Pedagogical recommendations

Stage 1 Deconstruct AI text (Week 1, 60 min): Instructor supplies a ChatGPT paragraph on Islamic microfinance; students annotate for genre conventions and Western bias. Stage 2 Co-draft under constraints (Weeks 2-3): Students append a “transparency appendix” in English or Urdu documenting prompts, rationale and source verification. Stage 3 Redesign for new audience (Week 4): Transform Week-3 argument into a Pashto-language policy brief or a TikTok script; AI may be queried only for genre conventions.

Additional supports

- Digital badges for “AI transparency,” “source interrogation,” “voice maintenance.”
- Peer-review prompts directing reviewers to moments of Pashto-English hybridity.
- Instructor think-aloud videos modelling Pashto metacommentary on algorithmic output.

8.4 Limitations and future directions

The study was confined to two Pakistani public universities with intermittent electricity and shared devices. Future research should explore STEM classrooms where genre norms differ. It may conduct longitudinal tracking beyond four weeks, and investigate code-meshing when students prompt in Pashto and revise in English.

9. Conclusion

Generative AI need not force an either-or choice between speed and depth in Pakistani public-sector classrooms. Our four-week study at Khushal Khan Khattak University Karak and Qurtuba University demonstrates that when multilingual first semester writers are given explicit rhetorical heuristics (prompts that foreground Pashto-Urdu-English code-choice, Islamic jurisprudential warrants, and neoliberal ideology) the same chatbot that polishes a paragraph can also expose the hidden scaffolding of academic discourse. Instrumental, Reflexive, and Resistant positions that we have followed are not the rigid components of identities; they are dynamic positions that learners occupy, cross and hybridise during the process of learning. It creates awareness to investigate, and how to ask whose voices circulate, which explanations pass as evidence, how conventions of genre engage with the distribution of power among languages. The naming of these positions provides instructors with a convenient diagnosis: A quick review of bilingual chat logs and reflective journals created by a learner is determined to be either consuming or conversing or challenging the output of the machine.

More to the point, stance migration was also learnable even within the condensed time frame. A 3-stage scaffold, including deconstruct AI-generated text, co-write with transparency logs, redesign to a Pashto-speaking policy audience, changed 71 per cent of initially Instrumental users to the Reflexive or Resistant orientation with four weeks. The grades in the courses increased as well as metacognitive commentary and citation diversity in English, Urdu and transliterated Pashto. These advantages indicate that efficiency and critical literacy can reinforce each other in case of pedagogy rather than policy being foregrounded.

The typology is open to programme-level integration in the future. Micro-credentials to achieve algorithmic transparency can be embedded in writing programmes and demand reflective appendices which enable auditing AI usage across scripts. The stance-based feedback can be modelled on the faculties-development workshops where the discussion should be shifted not by

asking whether or not people used AI but by asking what did you negotiate with its recommendations in your linguistic repertoire? Eventually, the aim is to produce writers capable of inhabiting both the interior and exterior of algorithmic discourse whenever they choose, at least writers who are aware that any sentence produced can be doubted, appropriated or rejected in Pashto and Urdu as well as English.

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