



Generative Artificial Intelligence and Linguistic Identity in Multilingual Academic Writing among Pakistani Postgraduate Learners

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ARTICLE INFO	ABSTRACT
Submission: July 05, 2026 Revised: July 20, 2026 Accepted: August 03, 2026 Available Online: August 27, 2026 Keywords: generative artificial intelligence; linguistic identity; multilingual academic writing; translingual agency; authorial voice; ESL/EAL postgraduate writers; Pakistan Corresponding author: Muhammad Aslam Khan Email: aslambaloch33@gmail.com	Generative artificial intelligence (GenAI) is transforming academic writing; however, its implications for the linguistic identity and authorial ownership of multilingual writers remain insufficiently understood, particularly in South Asian higher education. This cross-sectional correlational study examined the relationships among GenAI dependence, perceived linguistic identity erosion, and translingual agency among 92 university-level students. Data were collected using the newly developed 27-item Generative AI and Linguistic Identity Inventory (GAILI-27), comprising three nine-item subscales measured on a five-point Likert scale. The subscales demonstrated satisfactory internal consistency, with Cronbach's alpha values ranging from .847 to .877 and McDonald's omega values ranging from .882 to .903. GenAI dependence was positively associated with perceived linguistic identity erosion ($r = .43, p < .001$), whereas translingual agency was negatively associated with identity erosion ($r = -.46, p < .001$) and dependence ($r = -.37, p < .001$). These findings indicate that identity-related risk may depend less on how frequently multilingual writers use GenAI than on whether they critically evaluate, revise, and retain authority over machine-generated text. Because the evidence was cross-sectional and self-reported, causal conclusions are not warranted. Higher education institutions should therefore complement academic-integrity policies with explicit instruction in critical GenAI literacy and translingual agency.

Introduction

Academic writing has never been a neutral technical skill. It is a site at which writers are recognized, or fail to be recognized, as legitimate members of a discourse community, and the language they write in carries the history of how they came to it (Ivanič, 1998; Hyland, 2008). For multilingual writers who compose scholarship in English as an additional language, that recognition has always been unequally distributed. Lillis and Curry (2010) documented the labor, brokerage, and quiet self-editing that scholars outside the Anglophone center perform in order to be publishable, and Flowerdew (2019) argued that this labor constitutes a measurable disadvantage rather than a mere inconvenience. Hyland (2016) has contested the strongest version of the "linguistic injustice" thesis, pointing out that disciplinary insiders of every first language struggle with academic register; but even his corrective concedes that the multilingual writer must manage an additional layer of self-presentation.

Into this already asymmetric field, generative artificial intelligence arrived with unusual speed. Within two academic sessions of the public release of large language model interfaces, drafting, paraphrasing, restructuring, and register-shifting became available on demand to any student with a browser. Early scholarship on second language writing responded with a mixture of pragmatic enthusiasm and unease. Warschauer et al. (2023) framed the affordances of AI-generated text for second language writers as genuinely contradictory: the same tool that lowers the barrier to acceptable academic English can also displace the

writer from the text that carries their name. Godwin-Jones (2022, 2024) traced how intelligent writing assistance redistributes agency across the human-machine assemblage rather than simply adding to human capacity. Barrot (2023) catalogued both the pedagogical potential and the pitfalls of ChatGPT for second language composition, and Marzuki et al. (2023) found measurable effects of AI writing tools on the content and organization of student texts. However, the identity question has been studied far less. If a Saraiki- or Sindhi-speaking doctoral candidate at a Pakistani university routinely submits English that a machine has smoothed into a register she could not have produced unaided, whose writing is it? Does the smoothing erase the traces of her other languages, and does she experience this erasure as loss, relief, or neither? These are not rhetorical questions. They are empirical and have not been asked systematically of multilingual writers in the Global South, whose relationship to academic English is structured by colonial language policy, stratified access to English-medium schooling, and the symbolic capital that English confers in the local labor market (Rahman, 2002; Mahboob, 2009; Manan et al., 2017).

Linguistic Identity and the Writing Self

Ivanič (1998) established that writing is an act of identity in which the writer simultaneously performs an autobiographical self, a discursive self-constructed in the text, and a self as author who claims authority over content. Her framework remains the most useful entry point for the present study because it separates what a writer is from what a writer looks like on the page, a distinction that GenAI makes newly urgent. Norton (2013) added the crucial insight that identity in an additional language is not a fixed attribute but a site of struggle, continuously renegotiated in relation to unequal social structures; her notion of investment, later formalized with Darvin (Darvin & Norton, 2015, 2023), links a learner's desire to acquire a language to the capital that language is expected to yield. Bourdieu's (1991) account of the linguistic market underwrites both. Academic English functions in Pakistan as a form of symbolic capital whose distribution is stratified by schooling: English-medium private education confers fluency and, with it, access, while Urdu- and regional-medium state schooling does not (Rahman, 2002; Shohamy, 2006). A writer who arrives at postgraduate study with limited academic English is therefore not simply short of a skill; she is short of capital, and she knows it. This is the affective baseline against which GenAI is encountered. A tool that instantly supplies the missing capital is not experienced as a neutral convenience.

Multilingual and Translingual Academic Writing

The translingual turn reframed the multilingual writer's repertoire as a resource rather than an interference problem. Canagarajah (2013) argued that competent multilinguals do not switch between discrete bounded codes but deploy a single integrated repertoire strategically, negotiating meaning across difference; he later developed the idea of spatial repertoires assembled in situ (Canagarajah, 2018). Li (2018) advanced translanguaging as a practical theory of language in which named languages are social constructs and the speaker's idiolectal resources are primary, while García and Li (2014) worked out the pedagogical consequences for education. Cummins (2021), from a partly different position, insists that multilingual learners' first languages be treated as cognitive and identity assets in instruction. For academic writing specifically, the translingual position implies that traces of a writer's other languages in English academic prose are not errors to be scrubbed out but potential rhetorical resources, a claim that meets institutional resistance, since journals and examiners continue to reward a narrow-standardized register (Curry & Lillis, 2019). The multilingual postgraduate writer thus faces a double bind: her repertoire is theoretically a resource and practically a liability. GenAI enters exactly at this pressure point, offering to resolve the bind by removing the traces.

Generative AI in Second Language Writing

The empirical literature has grown quickly. Kasneci et al. (2023) mapped the general opportunities and risks of large language models for education; Crompton and Burke (2023) and Lo (2023) reviewed the field's state at its inflection point; Chan and Hu (2023) surveyed student perceptions and found a consistent pattern of enthusiasm shadowed by anxiety about dependence and academic integrity. Within second language writing, Barrot (2023) set out the pedagogical affordances and pitfalls of ChatGPT; Su et al. (2023) examined collaboration with the tool in argumentative writing classrooms; Escalante et al. (2023) compared AI and human feedback and found that students did not uniformly prefer the human; Steiss et al. (2024) benchmarked feedback quality directly. Yan (2023) reported, from a writing practicum, that learners valued the efficiency of ChatGPT while worrying about fairness and their own developing competence. Kohnke et al. (2023) considered the implications for language teaching, and Zhao (2023) examined a commercial writing assistant as a digital collaborator. Two findings recur across this work. First, students report improved surface quality and reduced writing anxiety. Second, they report an unease that they struggle to name a sense that the improved text has become less theirs. The literature has largely recorded this unease as an attitudinal by-product rather than examining it as an identity phenomenon in its own right. Warschauer et al. (2023) come closest, framing the contradiction explicitly, and Godwin-Jones (2024) supplies the conceptual vocabulary of distributed agency, but neither offers a measurement model.

Dependence, Delegation and the Loss of Interpretive Authority

Dependence in this study is not a moral category. It is defined behaviorally, as the extent to which a writer routes the generative work of composing through the tool rather than through their own linguistic resources: initiating drafts with a prompt, accepting output with minimal revision, and experiencing difficulty writing without support. This definition deliberately separates dependence from frequency. A writer may consult a model twenty times a day and remain the author of every sentence; another may consult it twice and hand over the argument. The theoretical risk of dependence, as defined here, is the loss of interpretive authority. Bhatt and MacKenzie (2019) described how frictionless digital retrieval can produce confident ignorance, in which the user cannot evaluate what they have obtained. Bearman et al. (2023) showed that dominant institutional discourses about AI in higher education construct students as passive recipients of technological change rather than as agents within it, and Selwyn (2024) has argued that such discourses systematically overstate what AI can do while understating what it displaces. Pennycook (2018), from a posthumanist position, cautions against treating the human writer as the sole locus of linguistic agency, though the present study retains the writer's experience of ownership as its outcome of interest, precisely because that experience is what institutions claim to be protecting.

Translingual Agency as a Protective Resource

If dependence is the risk, agency is the candidate protection. Translingual agency and repertoire mobilization, as operationalized here, is the disposition to treat machine output as one option among several, to evaluate it against one's own meaning-making, to retain deliberately chosen features of one's other languages, and to be able to articulate the reasons for those choices. This is close to what Godwin-Jones (2024) means by claiming a position within a distributed assemblage, and to what Li (2024) describes as transpositioning. The proposed mechanism is straightforward. A writer with high translingual agency uses the same tool but performs a different act with it: selection rather than adoption. Because the resulting text still encodes her decisions, the discursive self in Ivanič's (1998) sense remains continuous with the autobiographical self, and no erosion is experienced. A writer with low agency performs adoption, and the discursive self becomes a stranger. This predicts an interaction, not merely two main effects the central hypothesis of this study.

The Pakistani Multilingual Context

Pakistan provides a strong test case. Most postgraduate students command a regional first language (Saraiki, Punjabi, Sindhi, Pashto, Balochi), Urdu as national lingua franca, and English as the medium of higher education and scholarly publication, a stacked repertoire in which English sits at the top of the prestige hierarchy while being, for many, the least secure (Rahman, 2002; Manan et al., 2017). Mahboob (2009) documented the local appropriation of English into culturally specific meanings, evidence that a Pakistani academic English with its own features already exists. Whether GenAI, trained overwhelmingly on centre-Anglophone text, standardizes such varieties out of student writing is an open and consequential question.

Research Gap and Conceptual Framework

Three gaps emerge. There is no instrument that measures dependence, identity erosion, and translingual agency together. There is almost no quantitative evidence on GenAI and writer identity from South Asian multilingual populations. No study has tested the moderation hypothesis that would distinguish a quantity-based account of harm from an agency-based one. The conceptual framework adopted here places dependence as the exogenous variable, perceived linguistic identity erosion as the outcome, and translingual agency in a dual role as a negative predictor in its own right, as a moderator of the dependence path, and as a partial mediator through which dependence exerts some of its effect. Ivanič's (1998) tripartite writing self-supplies the outcome construct, Canagarajah (2013) and Li (2018) supply the agency construct, and Godwin-Jones (2024) supplies the account of how agency is redistributed when a generative system enters the writing process.

Statement of the Problem

Institutional responses to GenAI in higher education in Pakistan and elsewhere have converged on detection and prohibition. Plagiarism-adjacent frameworks have been extended to cover AI-generated text, and students are increasingly asked to declare, minimize, or avoid its use. This response rests on an untested assumption: that the harm of GenAI to student writers' scales with the quantity of their use, so that reducing quantity reduces harm. If that assumption is wrong, if what damages a writer's relationship to their own language is not how much they use the tool but how they position themselves in relation to it, then detection-and-prohibition regimes are expending institutional effort on the wrong variable while leaving the actual mechanism untouched. The problem this study addresses is therefore twofold. First, there is no validated instrument that measures, in a single administration, how dependent multilingual writers have become on GenAI, how much linguistic identity erosion they perceive, and how much translingual agency they exercise over machine output. Second, there is no evidence about how these

three constructs relate to one another in a multilingual South Asian postgraduate population, and in particular, no test of whether agency buffers the relationship between dependence and identity erosion.

Research Questions

- **RQ1.** Does the GAILI-27 recover a three-factor structure corresponding to dependence, identity erosion, and translingual agency, with acceptable internal consistency?
- **RQ2.** What are the levels of generative AI dependence, perceived linguistic identity erosion, and translingual agency among Pakistani multilingual postgraduate writers?
- **RQ3.** How are the three constructs related to each other and to background variables?
- **RQ4.** Do dependence and translingual agency jointly predict perceived linguistic identity erosion, and does agency moderate the effect of dependence?
- **RQ5.** Does dependence exert an indirect effect on identity erosion by suppressing translingual agency?

Method

Research Design

A cross-sectional, quantitative, correlational design was adopted. The design was chosen because the study aims are associational rather than causal: the interest is in whether dependence, identity erosion, and agency co-vary in the predicted pattern within a naturally occurring population of GenAI-using multilingual writers, not in manipulating exposure. Data were collected at a single time point through a self-administered questionnaire. Where the analysis speaks of prediction or moderation, these are statistical relationships in cross-sectional data; the causal ordering is theoretical, not established by the design, and Section 7 returns to this constraint.

Population and Sampling

The target population was postgraduate students enrolled in M.Phil and PhD programmes at public-sector universities in Pakistan who wrote academic assignments, theses, or articles in English and who reported at least occasional use of generative AI tools. Purposive sampling with a convenience component was used because the population of interest is defined by a behavior (GenAI use) that is not recorded in institutional records. Screening required that the respondent (a) was enrolled in a postgraduate programme, (b) reported a regional language or Urdu as their first language, (c) wrote academically in English, and (d) had used a generative AI tool for academic writing at least once in the preceding semester. A total of 92 usable responses were retained. An a priori power analysis (Faul et al., 2007) for a multiple regression with three predictors, $\alpha = .05$, power = .80, and a medium effect ($f^2 = 0.15$) indicated a minimum of 77 cases; the achieved sample exceeded this for main effects, although it remained modest for the detection of interaction terms, which typically require larger samples. Table 1 summarizes the sample.

Table 1: Demographic Profile of Participants

Characteristic	f	%
Gender		
Male	46	50.0
Female	46	50.0
Degree level		
MPhil/MS	62	67.4
PhD	30	32.6
Discipline		
Applied Linguistics/English	34	37.0
Social Sciences	26	28.3
Education	17	18.5
Natural/Applied Sciences	15	16.3
Frequency of GenAI use		
Sometimes (1-2/wk)	33	35.9
Often (3-5/wk)	27	29.3
Rarely (<1/wk)	17	18.5
Daily	15	16.3

Note. Mean age = 27.37 years (SD = 3.62, range 21–36). Mean length of English-medium schooling = 11.22 years (SD = 3.09). Percentages are column percentages and may not total 100.0 owing to rounding.

Instrumentation

The Generative AI and Linguistic Identity Inventory (GAILI-27) was developed for this study. Item generation followed DeVellis and Thorpe (2022). A construct definition was written for each of the three dimensions from the literature reviewed in Section 1; an initial pool of 41 items was drafted and reduced to 27 items (nine per dimension) after review by three specialists in applied linguistics and educational measurement for relevance and clarity. All items were answered on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), and higher scores indicated more of the named construct. No item was reverse-keyed; although this may reduce confusion, it can increase acquiescence bias. Scale scores were calculated as item means; therefore, all three scales retained the 1–5 metric. The complete wording, expert-review criteria, and scoring key must be supplied in Appendix A before submission so that the instrument can be evaluated and replicated.

Data Collection Procedure

The questionnaire was distributed online and in print through departmental contacts from January to June 2026. Participation was voluntary and not compensated. The participant information sheet explained the study purpose, stated that responses were anonymous, and clarified that non-participation would carry no academic consequences. Ninety-two complete responses that met the eligibility criteria were analyzed in this study. Before submission, the authors must report the number of participants approached, returned, excluded, and retained, together with the response rate if distribution records are available.

Data Analysis

Data were screened for missing values, univariate outliers (absolute $z > 3.29$), and distributional shape. Skewness and kurtosis were evaluated against ± 2 , and Shapiro–Wilk tests were applied to scale scores (Field, 2024). Item-level descriptive statistics were calculated. Internal consistency was estimated using Cronbach's alpha and McDonald's omega, and composite reliability and average variance extracted were also reported as preliminary convergent-validity evidence (Fornell & Larcker, 1981). Group differences were examined using independent-samples t-tests and one-way ANOVA with Tukey's HSD comparisons, with Cohen's d and eta squared as effect sizes. Pearson correlations and hierarchical multiple regression were used for association and moderation analyses. Continuous predictors were mean-centered, their product term was entered in the final step, and conditional effects were estimated at the mean and ± 1 SD of translingual agency (Hayes, 2022). Statistical significance was set at $\alpha = .05$. The software and version used for all analyses must be identified before submission. Exploratory factor analysis and mediation claims have been removed because the manuscript did not report the required model statistics or complete supporting tables.

Results

Preliminary Data Screening

The dataset contained no missing values. No case exceeded the z -value of 3.29 on any scale score; therefore, no outliers were removed. Skewness ranged from $-.31$ to $.23$ and kurtosis from $-.40$ to $.17$, well inside the ± 2 range, and Shapiro–Wilk tests were nonsignificant for all three scales (all $p > .05$), supporting the use of parametric procedures. Variance inflation factors in the regression models did not exceed 1.19, and the Durbin–Watson statistic was 1.62, indicating no multicollinearity or autocorrelation problems.

Item Analysis

Table 2: Item-Level Descriptive Statistics and Corrected Item-Total Correlations (N = 92)

Item	M	SD	Skew	Kurt
Generative AI dependence				
GAID1	3.34	.93	-.22	-.33
GAID2	3.33	.90	.03	-.41
GAID3	3.48	.83	-.40	.62
GAID4	3.45	.94	-.12	-.55
GAID5	3.45	.94	.04	-.86
GAID6	3.37	.91	-.09	-.48
GAID7	3.35	.91	-.30	.20
GAID8	3.40	.95	.05	-.90
GAID9	3.41	.99	-.56	-.03

Perceived linguistic identity erosion					
LIE1	3.11	.99	-.01	-.15	
LIE2	2.98	.84	-.07	-.17	
LIE3	3.01	.90	.26	-.69	
LIE4	2.97	.91	.25	-.11	
LIE5	3.09	.90	.01	-.09	
LIE6	3.03	.91	.39	-.41	
LIE7	3.00	.89	.29	-.18	
LIE8	3.05	.93	-.11	-.35	
LIE9	3.01	.85	.20	.04	
Translingual agency					
TAR1	3.73	.84	-.13	-.59	
TAR2	3.71	.98	-.38	-.49	
TAR3	3.60	.88	.09	-.74	
TAR4	3.54	.82	.04	-.48	
TAR5	3.65	.83	.15	-.71	
TAR6	3.60	.96	-.17	-.56	
TAR7	3.75	.72	-.12	-.19	
TAR8	3.59	.88	-.17	-.15	
TAR9	3.59	.83	-.28	.20	

Note. The complete item wording and scoring key must be provided in Appendix A, before submission.

Reliability and Convergent Validity

Internal consistency was acceptable to good for all three subscales. Cronbach's alpha ranged from .847 to .877, and McDonald's omega from .882 to .903, both exceeding the .70 threshold, and composite reliability exceeded .80 on every subscale. The average variance extracted, however, fell marginally below the .50 benchmark for GAID (.459) and LIE (.469). Fornell and Larcker (1981) permit convergent validity to be accepted when the AVE is below .50 but composite reliability exceeds .60, a condition satisfied here; nonetheless, this is an acknowledged weakness of the instrument in its present form and a target for item revision. Table 3 reports the estimates.

Table 3: Reliability and Convergent Validity of the GAILI-27 Subscales

Subscale	k	α	ω	CR	AVE
GAID	9	.847	.882	.882	.459
LIE	9	.855	.886	.886	.469
TAR	9	.877	.903	.903	.511

Note. k = number of items; α = Cronbach's alpha; ω = McDonald's omega; CR = composite reliability; AVE = average variance extracted. The loadings for CR and AVE were obtained from a single-factor solution within each subscale.

Descriptive Statistics for the Three Constructs

The mean scores are presented in Table 4. Translingual agency was the highest of the three ($M = 3.64$, $SD = .61$), sitting above the scale midpoint of 3.00 and indicating that participants generally saw themselves as making deliberate choices about machine output rather than accepting it wholesale. Generative AI dependence was moderate ($M = 3.40$, $SD = .62$), and perceived linguistic identity erosion sat almost exactly at the midpoint ($M = 3.03$, $SD = .61$), indicating an ambivalent population rather than a distressed one. The dispersion on all three scales was similar, and the full 1-5 range was not used on any scale, with observed minima between 1.78 and 2.11.

Table 4: Descriptive Statistics and Normality for the Three Constructs (N = 92)

Construct	M	SD	Min	Max	Skew	Kurt	S-W	P
GAID	3.40	.62	1.89	4.78	-.31	-.25	.977	.106
LIE	3.03	.61	1.78	4.78	.23	.17	.983	.278

Construct	M	SD	Min	Max	Skew	Kurt	S-W	P
TAR	3.64	.61	2.11	5.00	.12	-.40	.984	.321

Note. S-W = Shapiro-Wilk statistic. All $p > .05$, indicating no significant departure from normality. Scale range: 1-5, midpoint: 3.00.

Correlations among Constructs and Background Variables

Table 5 presents the correlation matrix. All three inter-construct correlations were significant and in the hypothesized directions. Dependence was positively related to identity erosion, $r = .43$, $p < .001$, supporting H1: the more a writer routes composing through the tool, the more distant she feels from the resulting text. Translingual agency was negatively related to erosion, $r = -.46$, $p < .001$, supporting H2, and negatively related to dependence, $r = -.37$, $p < .001$, supporting H3. According to Cohen's (1988) benchmarks, these are moderate effects. Notably, agency and dependence were only moderately negatively correlated, which means that they are not opposite ends of one dimension; a writer can be both fairly dependent and fairly agentive, and it is precisely that combination that the moderation analysis interrogates. Among background variables, length of English-medium schooling was positively associated with translingual agency, $r = .31$, $p = .003$, but unrelated to dependence, $r = -.06$, $p = .593$. Age was negatively associated with dependence, $r = -.31$, $p = .003$, and unrelated to erosion. The pattern suggests that longer immersion in English-medium instruction builds confidence to negotiate with machine output without reducing the amount of help sought.

Table 5: Pearson Correlations among Study Variables (N = 92)

Variable	1	2	3	4
1. GAID	-			
2. LIE	.43***	-		
3. TAR	-.37***	-.46***	-	
4. Years English-medium	-.06	-.18	.31**	-

Note. GAID, generative AI dependence; LIE, perceived linguistic identity erosion; TAR, translingual agency. * $p < .05$. ** $p < .01$. *** $p < .001$.

Group Differences

Independent-samples t-tests with Welch's correction found no significant gender difference on any of the three constructs. Levene's test was not significant throughout, and the largest observed effect was on translingual agency ($d = -.33$), a small effect in favor of women that did not reach significance, $t(90) = -1.58$, $p = .117$. H8 is therefore not supported. The absence of gender differences is worth stating plainly rather than burying: in a context where gendered access to technology is frequently assumed, these data give no evidence that male and female postgraduate writers differ in how they use GenAI or in what it costs them in Table 6.

Table 6: Independent-Samples t Tests by Gender

Construct	Male M (SD)	Female M (SD)	t	df	p	d
GAID	3.46 (.63)	3.34 (.61)	.94	90	.352	.19
LIE	3.06 (.59)	3.00 (.64)	.43	90	.666	.09
TAR	3.54 (.57)	3.74 (.64)	-1.58	90	.117	-.33

Note. $n(\text{male}) = 46$, $n(\text{female}) = 46$. d = Cohen's d . Welch's correction applied; Levene's test nonsignificant for all comparisons (all $p > .05$). No comparison reached significance.

Frequency of Generative AI Use

A one-way ANOVA across the four frequency bands produced the study's most consequential result. Frequency significantly differentiated participants on dependence, $F(3, 88) = 4.93$, $p = .003$, $\eta^2 = .144$, a large effect: heavier users do route more of the composing through the tool, exactly as one would expect. Tukey HSD comparisons located the difference between the rarely-

using group and both the often-using group (mean difference = $-.58$, $p = .009$) and the daily group (mean difference = $-.65$, $p = .012$); the three higher-frequency bands did not differ from one another. Frequency did not, however, differentiate participants on identity erosion, $F(3, 88) = 0.25$, $p = .860$, $\eta^2 = .009$, nor on translingual agency, $F(3, 88) = 0.43$, $p = .730$, $\eta^2 = .015$. Every Tukey comparison on identity erosion was nonsignificant (all $p > .84$). Daily users reported a mean erosion score of 3.04 against 2.95 for those using the tool less than once a week, a difference of .09 of a scale point. H7 is supported for dependence and not for the other two constructs. The implication is developed in Section 5: how often a multilingual writer opens a chatbot tells us almost nothing about whether her sense of authorship survives the encounter.

Table 7: One-Way ANOVA by Self-Reported Frequency of GenAI Use

Group	n	M	SD	F	df	P
GAID						
Rarely (<1/wk)	17	3.02	.66			
Sometimes (1-2/wk)	33	3.30	.69			
Often (3-5/wk)	27	3.60	.46			
Daily	15	3.67	.40			
F test				4.93	3, 88	.003 ($\eta^2 = .144$)
LIE						
Rarely (<1/wk)	17	2.95	.65			
Sometimes (1-2/wk)	33	3.00	.55			
Often (3-5/wk)	27	3.10	.61			
Daily	15	3.04	.74			
F test				0.25	3, 88	.860 ($\eta^2 = .009$)
TAR						
Rarely (<1/wk)	17	3.65	.56			
Sometimes (1-2/wk)	33	3.71	.66			
Often (3-5/wk)	27	3.53	.62			
Daily	15	3.67	.57			
F test				0.43	3, 88	.730 ($\eta^2 = .015$)

Note. Groups: rarely (<1/week), sometimes (1-2/week), often (3-5/week), daily. η^2 = eta squared. The dependence differs by frequency; identity erosion and translingual agency do not.

Probing the Interaction: Simple Slopes

Conditional effects were estimated at one standard deviation below the mean of translingual agency, at the mean, and at one standard deviation above the mean (Hayes, 2022). At low agency, dependence was positively associated with identity erosion ($B = .327$, $SE = .084$, $t = 3.87$, $p < .001$). At the mean level of agency, the association remained significant, $B = .211$, $SE = .059$, $t = 3.61$, $p < .001$. At high agency, the conditional association was smaller and nonsignificant ($B = .095$, $SE = .070$, $t = 1.35$, $p = .181$). This pattern is consistent with buffering, but the interaction coefficient, its confidence interval, model R-squared change, and complete hierarchical regression table must be reported before claiming a statistically significant moderating effect.

Table 8: Conditional Effect of Dependence on Identity Erosion at Values of Translingual Agency

Level of TAR	B	SE	t	p
Low TAR (-1 SD)	.327	.084	3.87	< .001
Mean TAR	.211	.059	3.61	< .001
High TAR (+1 SD)	.095	.070	1.35	.181

Note. Values of the moderator are the mean ± 1 SD. Predictors were mean-centered.

Discussion

This study set out to test whether leaning on generative AI costs multilingual postgraduate writers their sense of linguistic self and whether that cost is unavoidable. The answer the data give is conditional, and the condition is the interesting part. Dependence and identity erosion are related, $r = .43$, but the relationship is not fixed. It is strong among writers low in translingual agency ($B = .327$, $p < .001$) and statistically indistinguishable from zero among writers high in it ($B = .095$, $p = .181$). Meanwhile, the variable that institutional policy actually regulates how often students use the tool predicted dependence

($p = .003$) but had no detectable relationship with identity erosion ($p = .860$, $\eta^2 = .009$). Taken together, these two results say that the harm institutions are trying to prevent is not distributed along the dimension they are measuring.

The positive association between dependence and identity erosion is consistent with the contradiction Warschauer et al. (2023) identified in AI-generated text for second language writers, and it gives that contradiction a measured magnitude. In Ivanič's (1998) terms, dependence decouples the discursive self and identity constructed in the text from the autobiographical self who is supposed to be behind it. The items that carried the strongest loadings on the erosion factor precisely describe this decoupling as an experience rather than an ethical judgement: reading one's own draft and not hearing oneself in it, feeling a distance from the writer in the text, and hesitating to claim full authorship. These are not statements about cheating. They are statements about recognition. It is worth noting that the mean level of erosion in this sample was almost exactly at the scale midpoint. Participants were ambivalent, not distressed. Public discourse about GenAI and student writing frequently assumes a crisis of authorship; these data suggest something more like a low-grade unease that becomes acute only in a specific subgroup. Chan and Hu (2023) reported the same double-sidedness in student perceptions, and the present findings locate where the negative side concentrates.

The null result on frequency deserves to be treated as a finding rather than a failure. Daily users and rare users differed by .09 of a scale point on identity erosion, with every post hoc comparison returning $p > .84$. The frequency of use is the most easily measured and most frequently policed feature of student GenAI engagement, and it is what declaration forms, usage logs, and detection tools capture. If it does not track the outcome that matters, then a great deal of institutional machinery is well calibrated to the wrong target. Bearman et al. (2023) argued that dominant institutional discourses about AI in higher education construct students as passive recipients rather than as agents; a policy regime built on counting uses is exactly what that discourse produces, and this study offers quantitative grounds for suspecting it is ineffective. The distinction between frequency and dependence also matters conceptually. The two are related but not identical: frequency explained a substantial share of dependence variance ($\eta^2 = .144$) and none of the erosion variance. Dependence is a relational stance, not a count. A writer who consults a model constantly while retaining the decision about every sentence is doing something categorically different from a writer who consults it twice and hands over the argument, and only the latter is at risk.

The conditional-effect pattern aligns with the translingual position. Canagarajah (2013, 2018) and Li (2018) argued that competent multilinguals strategically deploy an integrated repertoire rather than switching between bounded codes; the TAR items apply this idea to writers' negotiation of machine output. Writers with high agency showed no statistically detectable dependence-erosion association, whereas the association was positive at low and mean agency. This result should remain provisional because the sample was modest for interaction testing and the complete interaction coefficient and model-change statistics were not available in the supplied manuscript. The cross-sectional design also prevents conclusions about temporal or causal direction. Longitudinal research is needed to determine whether dependence reduces agency, low agency encourages dependence, or both processes occur.

Two background findings speak specifically to the multilingual context. Length of English-medium schooling was positively associated with translingual agency ($r = .31$, $p = .003$) but unrelated to dependence ($p = .593$). Longer immersion, in other words, does not reduce how much help writers seek; it changes what they do with the help. This is consistent with Bourdieu's (1991) account of linguistic capital: those who arrive with more of it are better positioned to negotiate with an authoritative external voice rather than defer to it. In a system as stratified by medium of schooling as Pakistan's (Rahman, 2002; Manan et al., 2017), this means GenAI risks reproducing an existing inequality rather than levelling it, and the students with the least prior access to academic English are the ones least equipped to keep themselves in the text. The erosion item concerning the removal of mother-tongue expressions loaded solidly on its intended factor, which suggests that participants do perceive the standardizing pressure of models trained overwhelmingly on centre-Anglophone text. Mahboob (2009) documented a Pakistani English with its own culturally grounded features; if generative systems systematically edit those features out, the consequence is not merely stylistic. It is the quiet narrowing of what counts as legitimate academic English, achieved not by editorial fiat but by autocomplete. No construct differed by gender, with all effect sizes small and all comparisons nonsignificant. Given how often gendered digital access is assumed in South Asian educational research, the absence is worth reporting explicitly rather than omitting. Within this postgraduate population already selected for institutional access, male and female writers appear to use GenAI similarly and experience its identity consequences similarly. This does not speak to access at earlier educational stages, which was not sampled.

Implications

The practical recommendation that follows from these data is the reallocation of institutional efforts. Detection and declaration regimes measure frequency but do not predict the harm caused. Policies would do better to require a defensible account of use and a short reflective statement in which the writer explains which suggestions were accepted, which were rejected, and why, than to require a count or a prohibition. Such a requirement operationalizes the disposition that moderation analysis identifies

as protective and assessable. Writing centers and thesis supervisors in multilingual settings can directly teach translingual agency. Concrete practices implied by the TAR items include generating three machine versions of a paragraph and requiring the student to argue for one, asking students to identify what a model has removed from their draft, not only what it has added, and legitimizing the deliberate retention of L1-derived expression where it carries meaning the standard register cannot. The aim is not to reduce use but to make every use a decision. The study contributes a short, three-factor instrument that other researchers can administer and revise, and proposes translingual agency as the construct that connects the identity strand of applied linguistics to the empirical literature on GenAI in second language writing. Moderation model dependence as risk and agency as a buffer is offered as a testable alternative to quantity-based accounts of AI harm.

Conclusion

Among these 92 multilingual postgraduate writers, GenAI dependence was associated with greater perceived linguistic identity erosion, whereas translingual agency was associated with less erosion. The frequency of use differentiated dependence from identity erosion, suggesting that frequency alone is an inadequate indicator of identity-related risk. Conditional effects were consistent with the interpretation that agency may buffer the dependence-erosion association; however, this inference requires confirmation with a fully reported interaction model, a larger independent sample, and longitudinal data. Universities should therefore complement integrity policies with instruction that helps writers evaluate, revise, reject, and explain machine-generated language while retaining authority over their meaning and voice.

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