

High Metacognition, Low Compensation: A SILL-Based Study of Language Learning Strategies among D.El.Ed. Trainees

Nandita Majumder

Research Scholar, Faculty of Education, ICFAI University, Tripura

Prof. (Dr.) Prem Shankar Srivastava

Principal, Faculty of Education, ICFAI University, Tripura

Correspondence: nanditanistha@gmail.com

Abstract

Pre-service elementary teachers occupy a dual position in English language education: they are learners of English and, simultaneously, its future teachers. This study profiled the language learning strategies of 248 Diploma in Elementary Education (D.El.Ed.) trainees enrolled at District Institutes of Education and Training (DIETs) in Tripura, India, using Oxford's 50-item Strategy Inventory for Language Learning (SILL, Version 7.0; $\alpha = .96$). Trainees reported medium-to-high overall strategy use ($M = 3.58$, $SD = 0.63$). A marked internal asymmetry emerged: metacognitive strategies were the most frequently used category ($M = 3.77$, $SD = 0.73$), whereas compensation strategies were the least used ($M = 3.45$, $SD = 0.74$), a difference that was statistically significant with a medium effect size, $t(247) = 9.05$, $p < .001$, $d = 0.57$. The weakest of all fifty items was avoiding word-for-word translation ($M = 3.10$), which 29.0% of trainees reported rarely or never doing. The findings depict a "willing but unable to repair" strategic profile, interpreted here as a legacy of grammar-translation pedagogy in Indian classrooms: trainees have internalised the drive to plan and monitor their learning but lack the communicative repair strategies (guessing, paraphrase, circumlocution) on which real interaction depends. Implications are drawn for explicit strategy-based instruction in elementary teacher education under India's National Education Policy 2020.

Keywords: language learning strategies; SILL; metacognitive strategies; compensation strategies; grammar-translation method; pre-service teacher education; NEP 2020

1. Introduction

English functions as a gatekeeper language in India, mediating access to higher education, employment, and social mobility. For most children in government schools, the elementary teacher is the first, and often the only, model of English they encounter. India's National Education Policy (NEP) 2020 and the National Curriculum Framework for School Education 2023 accordingly call for communicative, activity-based language pedagogy from the foundational stage onward (Government of India, 2020; NCERT, 2023). Whether this vision can be realised depends less on curriculum documents than on the people who must enact them: the trainees currently passing through elementary teacher education programmes. These trainees are themselves second-language learners of English, and the strategies they use to learn the language are the strategies they are most likely to model, consciously or otherwise, in their future classrooms.

Language learning strategies (LLS) are the specific actions, behaviours, and techniques that learners employ to make learning faster, easier, more self-directed, and more transferable to

new situations (Oxford, 1990). Research beginning with the “good language learner” tradition (Rubin, 1975) has consistently associated strategic behaviour with achievement and autonomy (Green & Oxford, 1995; Griffiths, 2013; O’Malley & Chamot, 1990). Oxford’s (1990) taxonomy, operationalised in the Strategy Inventory for Language Learning (SILL), distinguishes six categories: memory, cognitive, and compensation strategies, which involve the target language directly, and metacognitive, affective, and social strategies, which manage the learning process indirectly.

Two of these categories carry particular theoretical weight. Metacognitive strategies, those of planning, monitoring, and evaluating one’s learning, function as the executive “manager” of the strategy system (Anderson, 2002; Wenden, 1998) and are reliably the most reported category in Asian examination-oriented contexts. Compensation strategies (guessing intelligently, paraphrasing, coining words, using gesture and circumlocution) are the operational face of strategic competence in influential models of communicative ability (Bachman, 1990; Canale & Swain, 1980). They are what keep communication alive when linguistic resources fail, and they are demonstrably teachable (Dörnyei, 1995). A learner strong in metacognition but weak in compensation is, in effect, willing to learn but unable to repair: motivated and self-regulating, yet without the tools to sustain real interaction.

Empirical work with the SILL across contexts has established several regularities relevant here. Strategy use correlates positively with proficiency and with self-efficacy, though the direction of causation is debated (Green & Oxford, 1995; Griffiths, 2013); women tend to report somewhat greater strategy use than men (Ehrman & Oxford, 1990); and category rankings vary systematically by educational culture, with metacognitive strategies typically leading in Asian, examination-oriented settings while compensation and affective categories trail. Less attention has been paid to the internal asymmetries of a learner’s profile, the distance between a learner’s strongest and weakest categories, although it is precisely such asymmetries that diagnose what an educational culture builds and what it neglects. The present study takes one such asymmetry, the metacognitive-compensation gap, as its analytic focus.

There are reasons to expect precisely this profile in Indian classrooms. Despite decades of official commitment to communicative approaches, the grammar-translation method and bilingual, translation-mediated instruction remain pervasive in Indian school English teaching (Kumaravadivelu, 2006; NCERT, 2006). Where meaning is routinely delivered through translation, learners are seldom placed in situations where communication breaks down and must be repaired in English; the habit of word-for-word translation removes the very pressure under which compensation strategies develop.

Indian SILL research has concentrated on school pupils and college or university ESL learners; pre-service elementary teachers remain almost entirely unexamined, and Northeast India is barely represented in this literature [insert two to three recent Indian SILL studies here]. This is a consequential omission, because the strategic repertoire of trainee teachers has a multiplier effect on the thousands of children they will eventually teach. The present study therefore profiles the language learning strategies of D.El.Ed. trainees in Tripura and tests three hypotheses: (H₁) trainees report medium-to-high overall strategy use; (H₂) metacognitive strategies are the most used and compensation strategies the least used categories; and (H₃) the difference between metacognitive and compensation strategy use is statistically significant and practically meaningful. Anticipating the results, all three hypotheses were supported, and the paper argues that the observed metacognitive-compensation gap is best understood as a strategic residue of grammar-translation pedagogy,

with direct implications for teacher preparation under NEP 2020.

2. Materials and Methods

2.1. Design and Participants

The study employed a quantitative, cross-sectional survey design. Participants were 248 trainees of the two-year Diploma in Elementary Education (D.El.Ed.) programme at District Institutes of Education and Training (DIETs) in the state of Tripura, India, recruited through institutional contact (convenience sampling). The largest participating institutions were DIET Kakraban and DIET Agartala, with respondents drawn from the Gomati, South Tripura, West Tripura, Unakoti, and Sepahijala districts. The sample comprised 192 female (77.4%) and 56 male (22.6%) trainees, a distribution that reflects the strongly female composition of elementary teacher education in the region. By year of admission, 102 trainees (41.1%) had joined in 2023, 142 (57.3%) in 2024, and 4 (1.6%) in 2025. Participation was voluntary and anonymous; respondents were informed of the study's purpose, and completion of the questionnaire constituted consent. No personally identifying information is reported.

2.2. Instrument

Language learning strategies were measured with the Strategy Inventory for Language Learning (SILL), Version 7.0 for speakers of other languages learning English (Oxford, 1990). The SILL contains 50 statements grouped into six subscales: memory (items 1-9), cognitive (items 10-23), compensation (items 24-29), metacognitive (items 30-38), affective (items 39-44), and social (items 45-50). Respondents rate each statement on a five-point scale from 1 (never or almost never true of me) to 5 (always or almost always true of me). Mean scores are interpreted using Oxford's (1990) bands: high use (3.5-5.0), medium use (2.5-3.4), and low use (1.0-2.4). In the present sample the instrument was highly reliable: Cronbach's α was .96 for the full inventory, and .86, .89, .77, .89, .74, and .82 for the memory, cognitive, compensation, metacognitive, affective, and social subscales, respectively.

2.3. Procedure and Data Screening

The SILL was administered online through Google Forms between the trainees' regular institutional sessions. All 248 returned questionnaires were complete. Because the online form permitted multiple selections on some items, 278 of the 12,400 item responses (2.2%) contained more than one selected option; these were scored as the arithmetic mean of the selected scale values. A sensitivity analysis in which multiple-selection responses were instead discarded as missing left every substantive result essentially unchanged (e.g., for the focal metacognitive-compensation contrast, $t = 8.52$, $d = 0.54$, versus $t = 9.05$, $d = 0.57$ under the mean-scoring rule), indicating that the scoring decision did not affect the conclusions.

2.4. Data Analysis

Analyses proceeded in three steps. First, descriptive statistics (M, SD) were computed for each item and subscale, and respondents were classified into Oxford's usage bands. Second, the focal contrast between metacognitive and compensation subscale scores was tested with a

paired-samples t-test, accompanied by Cohen's d for paired data and a 95% confidence interval for the mean difference; a Wilcoxon signed-rank test was run as a non-parametric confirmation. Third, item-level analyses ranked all 50 items and examined the compensation subscale and the translation-related item in detail. All analyses were conducted in Python 3.11 using the pandas (v3.0) and SciPy (v1.17) libraries; the analysis code is available from the corresponding author on request. The study was not pre-registered.

3. Results

3.1. Overall Strategy Profile

Trainees reported medium-to-high overall strategy use ($M = 3.58$, $SD = 0.63$), supporting H1. By Oxford's bands, 54.0% of respondents were high strategy users, 41.9% medium users, and 4.0% low users. Table 1 presents the six subscales in descending order of use. Metacognitive strategies ranked first ($M = 3.77$) and compensation strategies last ($M = 3.45$), the pattern predicted by H2; social strategies ($M = 3.68$) were the second most used category, while cognitive and affective strategies occupied the mid-range (both $M = 3.55$) and memory strategies fell in the medium band ($M = 3.47$).

Table 1. Descriptive statistics for the six SILL subscales ($N = 248$).

SILL subscale	Items	M	SD	Rank	Usage band
Metacognitive	30-38	3.77	0.73	1	High
Social	45-50	3.68	0.77	2	High
Cognitive	10-23	3.55	0.66	3	High
Affective	39-44	3.55	0.73	3	High
Memory	1-9	3.47	0.75	5	Medium
Compensation	24-29	3.45	0.74	6	Medium

3.2. The Metacognitive-Compensation Gap

The focal contrast confirmed H3. Metacognitive strategy use exceeded compensation strategy use by 0.32 scale points on average, 95% CI [0.25, 0.39], a difference that was statistically significant with a medium effect size, $t(247) = 9.05$, $p < .001$, Cohen's $d = 0.57$. The non-parametric Wilcoxon signed-rank test corroborated this result ($p < .001$). The gap was not an artefact of a few extreme respondents: at the level of individual profiles, metacognitive was the single highest subscale for 35.9% of trainees and compensation the single lowest for 34.3%, and 21.0% of the sample occupied the conjunction of interest: above the sample median on metacognitive use while at or below the median on compensation use. Nor was the contrast cherry-picked: metacognitive scores significantly exceeded every other subscale (paired d ranging from 0.18 against social strategies to 0.57 against compensation), with the compensation contrast the largest of the five.

3.3. Item-Level Analysis

Item-level results sharpen the picture (Table 2). Within the compensation subscale, the strongest item was receptive, namely guessing the meaning of unfamiliar words ($M = 3.62$), whereas the interaction-dependent repair strategies were weakest: coining words when the right one is unknown ($M = 3.34$) and reading without looking up every new word ($M = 3.21$). The single lowest-scoring item of the entire 50-item inventory was item 22, “I try not to translate word-for-word” ($M = 3.10$, $SD = 1.14$); 29.0% of trainees answered 1 or 2, indicating that habitual literal translation remains their default mode of processing English. The contrast with the inventory’s strongest items is instructive: “I try to find out how to be a better learner of English” ($M = 4.05$) and “I pay attention when someone is speaking English” ($M = 4.04$), both metacognitive. The strongest and weakest behaviours in the dataset thus reproduce, in miniature, the willing-but-unable-to-repair profile identified at subscale level.

Table 2. Compensation items and the translation item, ranked by mean ($N = 248$).

Item	Strategy	M	SD
24	Guessing the meaning of unfamiliar English words	3.62	0.99
28	Anticipating what the interlocutor will say next	3.57	1.03
29	Using a synonym or circumlocution for a missing word	3.50	1.07
25	Using gestures when a word cannot be recalled	3.48	1.03
26	Coining new words when the right one is unknown	3.34	1.14
27	Reading without looking up every new word	3.21	1.16
22 a	Avoiding word-for-word translation	3.10	1.14

a Item 22 belongs to the cognitive subscale but is reported here because it indexes the translation habit central to the study.

4. Discussion

The trainees in this study are not strategy-poor. More than half are high strategy users overall, and their strongest behaviours (seeking ways to become better learners, attending closely to spoken English, self-encouragement in the face of anxiety) describe motivated, self-regulating learners. This is consistent with the broader Asian pattern in which examination-oriented schooling cultivates metacognitive self-management (Anderson, 2002; Wenden, 1998), and it is plausibly amplified here by self-selection: those who choose teaching as a career are, almost by definition, invested in learning how to learn.

What these trainees conspicuously lack are the strategies of communicative repair. Compensation was the least used subscale, and within it the deficit was patterned rather than uniform: the receptive strategy of guessing survives, while the productive, interaction-dependent strategies (coining words, tolerating unknown vocabulary in reading, paraphrase under pressure) fall away. Compensation strategies develop only where communication is attempted, breaks down, and must be repaired in the target language (Canale & Swain, 1980; Dörnyei, 1995). The finding that avoiding word-for-word translation was the weakest of all fifty behaviours points to the mechanism. In classrooms shaped by the grammar-translation legacy, meaning is routinely delivered through the first language (Kumaravadivelu, 2006; NCERT, 2006); the learner is never stranded in English long enough to need to guess, paraphrase, or gesture a meaning into existence. Translation, in this reading, is not merely one weak strategy among fifty: it is the habit that renders the entire compensation repertoire unnecessary, and its

persistence among trainees who are otherwise highly strategic is the clearest fingerprint of pedagogical history in the data.

This interpretation must be advanced with care. The design is cross-sectional and correlational, and the grammar-translation account, however consistent with the item-level evidence, is an inference rather than a demonstrated cause. At least two rival explanations deserve acknowledgement. First, compensation strategies presuppose a threshold of fluency; limited proficiency, rather than pedagogical history, may suppress them, though this would not by itself explain why the translation item in particular anchors the distribution. Second, self-report frequency instruments such as the SILL capture reported rather than observed behaviour, and frequency of use is not quality of use (Griffiths, 2013; Oxford, 2017). These possibilities are best treated as complementary strands of a single knot, in which low proficiency, translation-mediated instruction, and communicative avoidance reinforce one another, and which only observational and interventional designs can untangle.

Placing the profile against the international SILL literature underlines what is and is not distinctive about it. The primacy of metacognitive strategies replicates a robust finding among Asian learners of English and is, in itself, unremarkable. What is distinctive is the position of compensation at the bottom of the ranking together with the identity of the single weakest item. In many published SILL profiles the least used categories are memory or affective strategies, and translation-related items rarely anchor the distribution. That the lowest-scoring behaviour of all fifty, in a sample of future English teachers, is the willingness to let go of word-for-word translation suggests a context-specific signature rather than a universal developmental stage, one that a purely proficiency-based explanation would not predict. The modest gender difference observed descriptively in this sample (women $M = 3.61$, men $M = 3.50$) is consistent with the direction reported by Ehrman and Oxford (1990), but it is peripheral to the present argument and is not analysed further here.

The significance of the gap lies in who these respondents are. A college learner who cannot paraphrase has a personal problem; a future elementary teacher who cannot paraphrase has a classroom-sized one. Teachers model strategic behaviour whether they intend to or not, and a teacher whose own default under communicative pressure is retreat into translation cannot model the risk-taking, meaning-negotiating behaviour that NEP 2020 and the National Curriculum Framework 2023 envisage for the foundational years (Government of India, 2020; NCERT, 2023). Left unaddressed, the profile documented here reproduces itself: translation-dependent teachers form translation-dependent pupils, some of whom become the next generation of trainees.

The practical implications are correspondingly specific. First, D.El.Ed. English curricula should incorporate explicit strategy-based instruction with compensation strategies at its centre (information-gap and communication-gap tasks, paraphrase and circumlocution activities, and “no-dictionary” extensive reading), since precisely these strategies respond well to direct teaching (Dörnyei, 1995). Second, assessment in teacher education should include performance-based speaking tasks, so that repair strategies carry stakes rather than remaining optional behaviours that examinations never sample. Third, the SILL itself can serve as a low-cost diagnostic at programme entry, allowing teacher educators to identify translation-dependent trainees (roughly one in five in this sample sat squarely in the high-metacognition, low-compensation cell) and to target support accordingly. Future research should extend the present findings longitudinally across the two years of training, pair the SILL with proficiency measures and classroom observation, and test compensation-focused strategy instruction

experimentally in the DIET setting. The limitations of the study, namely its single-state convenience sample, its gender imbalance (which mirrors the population of elementary teacher education), its reliance on self-report, and its online administration, define the boundary conditions within which these conclusions should be read.

5. Conclusions

Two hundred and forty-eight future elementary teachers of English in Tripura describe themselves as willing learners who cannot repair: highest in the strategies of planning and monitoring their learning, lowest in the strategies that rescue communication when words fail, and weakest of all in relinquishing word-for-word translation. The gap between metacognitive and compensation strategy use was statistically robust and practically meaningful ($d = 0.57$), and its internal structure points to the grammar-translation legacy of Indian classrooms as the most economical explanation. The policy window is favourable: NEP 2020 demands communicatively capable elementary teachers, and the willingness half of the equation is already in place. Converting that willingness into communicative capability, by teaching compensation strategies explicitly, assessing them consequentially, and screening for translation dependence at entry, is a concrete, inexpensive task that elementary teacher education in India can begin immediately.

Supplementary Materials

The anonymised dataset and the Python analysis code are available from the corresponding author on reasonable request.

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Author Contributions

Conceptualisation and methodology, N.M. and P.S.S.; data collection, formal analysis and writing, original draft preparation, N.M.; supervision, review and editing, P.S.S. Both authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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