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First language attrition in second language acquisition: From cognitive disconnection to the translanguaging paradigm

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Abstract

This article undertakes a radical critique of the contemporary foreign language educational paradigm, a framework that enshrines the "monolingual bias" and advocates for the severance of the mother tongue (L1) in pursuit of the illusory goal of "direct thinking" in the target language (L2). The primary aim is to anatomize the cognitive consequences of this coerced L1 suppression. Methodologically, eschewing large-scale quantitative surveys that obscure lived microexperiences, this study adopts a hermeneutic phenomenological approach through a critical case study of an adult learner. The analytical findings reveal a profound reality: the root cause of the acquisitional impasse lies not in a deficit of L2 vocabulary or grammar but fundamentally stems from first language attrition (*mất gốc tiếng mẹ đẻ*) and the repudiation of one's own ontological roots. Voluntarily severing this singular logical anchor does not foster unmediated fluency; instead, it plunges learners into a state of cognitive disconnection and the monolingual illusion of being culturally and cognitively uprooted (*lạc cội lạc nguồn*). This epistemic rupture precipitates an illusion of competence and generates fragmented layers of interlanguage fossilization. This state of ontological uprooting is currently exacerbated by the trend of "cognitive offloading" onto generative artificial intelligence, a peril that risks reducing learners to a state of profound epistemic dependency. Grounded in Vygotsky's sociocultural theory, Herbart's concept of the "apperceptive mass", and Cummins's common underlying proficiency model, this research posits that the L1 serves as the indispensable cognitive "scaffolding". Ultimately, the paper advocates for a pedagogical shift toward translanguaging. Imbued with Paul Ricoeur's ethos of "linguistic hospitality", this vision empowers learners to preserve their L1 as "the house of Being" while achieving a state of holistic linguistic apperception, resisting the epistemic misconception of rootless monolingualism.

Keywords: Second language acquisition; first language attrition; illusion of competence; cognitive disconnection; translanguaging; multi-competence; hermeneutic phenomenology; cognitive offloading

Introduction

Language, at its ultimate ontological core, is not merely a technical tool for communication or a superficial vessel for transmitting information; rather, it is "the house of Being" (Heidegger, 1947/1998), the locus where all human thought takes root, resides, and assumes its form. So profound is this entanglement that, as illuminated by Vygotsky (1934/1986), the meaning of a word is the indivisible union of thought and speech, engendering a dialogic space of meaning-making (Bakhtin, 1981). However, amidst the continuous evolution of foreign language teaching methodologies over the past century, one of the most dominant paradigms has been the trend of "monolingualization" (*monolingualism*) within academic spaces. Governed by the tenets of the direct method and communicative language teaching (Richards & Rodgers, 2014), modern foreign language education frequently erects a rigid boundary intended to exile the mother tongue (L1) from the second language (L2) acquisition process. This extremism is fortified by the naive belief that to master a language, learners must be fully submerged within it (*language immersion*) and strive for "direct thinking", mimicking the way an infant acquires their first language. Yet, as Phillipson (1992) astutely pointed out, the eradication of the L1 is fundamentally a "native speaker fallacy", heavily imbued with the imposition of *linguistic imperialism* rather than resting on any solid epistemological foundation. This imposition has even been diagnosed as a form of "professional neurosis" within the educational sector (Butzkamm & Caldwell, 2009), driving learners toward the peril of "subtractive bilingualism", wherein the L2's development is constructed upon the ruins of L1. Evaluated through a decolonial lens, forcing learners to divorce themselves from their primordial linguistic system does not grant them authentic freedom; instead, it thrusts them into a state of "dislocation" (Ngũgĩ wa Thiong'o, 1986), where reality is fractured into disconnected fragments incapable of internal dialogue.

For adult learners, the repudiation of the L1 is not merely a pedagogical misstep but an act of epistemic violence against their cognitive architecture. Unlike children, adults enter the foreign language classroom equipped with an "operating system" that has been fully crystallized over decades. The L1 encapsulates their entire repertoire of logical reasoning, capacity for abstraction, and cultural capital. As Butzkamm and Caldwell (2009) postulate, "we only learn language once", and native linguistic skills constitute the foundational bedrock—the "magic key" to unlocking the grammatical structures of foreign languages. Furthermore, neuroscientific investigations into the *bilingual mental lexicon* have empirically demonstrated that L1 and L2 continuously interact, intertwine, and shape one another, never existing in isolated cognitive compartments (Kroll, 2024; Larsen-Freeman, 2013). The forced freezing of the native linguistic system is an unnatural imposition that ruptures the internal stream of reasoning, which intrinsically functions as a psychological tool for human cognitive self-regulation (Vygotsky, 1978). Compelling adult learners to bypass this logical anchor to mechanically piece together L2 vocabulary does not culminate in "direct thinking", but instead spawns a psycholinguistic phenomenon we term the "illusion of competence". Operationally, this refers to a metacognitive state wherein learners conflate surface-level encoding fluency (e.g., rapid keyword recognition) with genuine retrieval capacity and structural mastery. In this state, superficial fluency deceives both learner and instructor, masking a profound cognitive void, because the mere capacity to produce surface-level language (just speaking and writing) is grossly insufficient to warrant genuine acquisition (Swain, 1993). Moreover, it triggers a silent yet insidious deterioration of the L1 within the psyche—namely, the phenomenon of *first language attrition* (*L1 attrition*) (Köpke & Schmid, 2004; Schmid, 2011).

To dissect the anatomy of this phenomenon, the present study circumvents broad-brush quantitative methodologies in favor of an in-depth phenomenological investigation through

a "clinical" critical case study. Through the empirical case of Subject L (see Appendix A), a quintessential representative of an adult learner at the intermediate threshold (HSK3 (Hanyu Shuiping Kaoshi [Chinese Proficiency Test] Level 3) in Chinese), this article will delineate the ramifications of intellectual indolence masquerading as "modern methodology". The subject yearns to attain the state of "direct thinking" by falling into the disastrous conflation of *passive recognition* and *active recall*. This confusion is fundamentally a trap set by *cognitive fluency*, wherein learners are beguiled by superficial intuitive shortcuts (Kahneman, 2011) rather than activating profound logical analytical capacities. By voluntarily severing the roots of their L1, learners are essentially plummeting into a state of cognitive disconnection. We operationally define this disconnection as the epistemic inability to synthesize higher-order logical linkages between L1's conceptual frameworks and the incoming L2 linguistic data. This cognitive rupture generates fragmented layers of *interlanguage fossilization*—speaking rapidly yet remaining utterly vacuous in terms of deep thought.

In light of this empirical reality, the article endeavors to reorient the philosophy of foreign language education. Grounded in Vygotsky's (1934/1986) sociocultural theory, we argue that higher psychological processes invariably necessitate semiotic mediation (DiCamilla & Anton, 2012), and the L1 must serve as the indispensable scaffolding enabling learners to transfer complex scientific concepts into the new language. Translanguaging/translation is not a regressive step; rather, it functions as a regulatory mechanism, a debugging tool, and a vital bridge forging interconnected knowledge. Exactly as philosopher George Steiner (1998) elucidated in his seminal work *After Babel*: "understanding as translation" (internal dialogue mediated by translanguaging serves to suture the subterranean currents of thought). Furthermore, this capacity for fluid code-switching represents the supreme manifestation of "linguistic hospitality" (Ricoeur, 2006). It permits learners to welcome the alien into their own system without forfeiting their ontology, thereby ascending to a state of holistic linguistic apperception. In the context of this study, linguistic apperception is operationalized as the learner's conscious capacity to utilize their L1 epistemic foundation to internalize, debug, and reconstruct novel L2 concepts, shifting from passive mimicry to integrated meaning-making.

The paper is structured as follows. Following the Introduction, Section 2 provides a comprehensive overview of the foundational literature concerning L1 attrition and sociocultural constructivist theory. Section 3 delineates the methodology of the critical case study. Section 4 focuses on analyzing the clinical results of the illusion of competence phenomenon and discussing the vision of translanguaging. Finally, Section 5 synthesizes practical pedagogical implications aimed at emancipating learners from a state of profound epistemic dependency, ultimately guiding them toward holistic linguistic apperception.

Literature Review

To dissect the root causes of the cognitive disconnection phenomenon in second language acquisition, this literature review undertakes to construct a critical genealogy of the foundational pedagogical and epistemological paradigms that have dominated the field for over half a century. Rather than uncritically accepting the default "monolingual bias", which posits the native speaker as the ultimate metric (Cook, 2016), this study places disparate streams of thought into a heteroglossic dialogue aimed at repositioning the ontology of the bilingual learner. This academic dialogue is organically structured around four ontological focal points: (1) dismantling the monolingual dogma and the power structures underlying the illusion of "direct thinking" (Bourdieu, 1991; Phillipson, 1992); (2) identifying the mechanisms of cognitive inhibition that precipitate L1 attrition and cognitive disconnection (Schmid & Köpke, 2017); (3) reinstating the L1 as an indispensable cognitive scaffolding through the lens of cultural-historical psychology

(Vygotsky, 1978); and, finally, (4) forging a novel vision through the capacity for translanguaging and philosophical hermeneutics, wherein translation is exalted as a higher-order communicative act and a profound epistemic apperception (García, 2009; Steiner, 1998).

The Illusion of "Direct Thinking" and the Monolingual Dogma

Originating from the Reform Movement of the late 19th century and crystallizing throughout the 20th century, foreign language education has been heavily dominated by the direct method and its variants, which advocate for the establishment of an absolute demarcation between the L1 and the target language (L2). This extreme segregation is not merely a natural pedagogical evolution, but is intrinsically the byproduct of a hegemonic ideological construction (Phillipson, 1992), conceptualized by scholars as the "monolingual habitus" (Gogolin, 1997) or the "monolingual principle" (Howatt, 1984). From a cognitive perspective, Cummins (2007, 2008) fiercely critiques this segregational reality by identifying the "two solitudes assumption"—a flawed pedagogical premise wherein L1 and L2 are erroneously treated as hermetically sealed systems, compelling learners to process information through isolated monolingual trajectories. It is necessary to acknowledge that strict monolingual immersion environments may yield communicative benefits for infants or early childhood learners acquiring basic interpersonal communicative skills (BICS) through naturalistic exposure. However, mechanically transplanting this paradigm to adult education is profoundly problematic. This dogma is predicated on the naive conviction that adult learners, who already possess fully crystallized cognitive architectures, can and should simulate the natural language acquisition process of infants, thereby grasping the mirage of "direct thinking" in L2 (Cook, 2016) without the mediation of L1. This imposition, as Phillipson (2009) explains, constitutes the very core of the "monolingual fallacy"—an artificial endeavor to strip learners of their primordial communicative medium in pursuit of an elusive native-speaker ideal (Holliday, 2005).

Expanding the scope through a sociological lens, this imposition is fundamentally an exertion of "symbolic power" (Bourdieu, 1991), wherein mainstream foreign language pedagogy has succumbed to the "illusion of linguistic communism". The enforcement of a homogenized linguistic praxis, discarding the socio-historical context in which the L1 is deeply rooted, inadvertently executes a systematic dispossession of the learner's symbolic capital. Viewed from a postcolonial standpoint, Ngũgĩ wa Thiong'o (1986) diagnoses this as an act that ruptures internal harmony, coercing the subject to perceive the world via a profoundly alien linguistic "mirror", thereby severing the ontological connection to the roots of their own reality. The consequence of this segregation is the creation of a state of "parallel monolingualism" (Heller, 1999) rather than genuine bilingual competence.

However, the advent of modern psycholinguistics has unmasked the epistemic misconception underpinning this "monolingualizing" endeavor. Cognitively, the bilingual interactive activation model has empirically demonstrated that access to the mental lexicon is inherently nonselective (*nonselective access*), meaning that the L1 and L2 are continuously coactivated within the brain (Dijkstra & van Heuven, 2002). Consequently, Butzkamm and Caldwell (2009) vehemently refuted this baseless prohibition, labeling the direct principle an "epistemic misconception". The authors profoundly argue that "we only learn language once". That is to say, upon entering the L2 classroom, adult learners already possess a sophisticated system of concepts, logic, and cognitive schemas crystallized through their L1. The interdiction of the L1 does not miraculously engender direct thinking; rather, it effectively strips the learner of their most invaluable "language acquisition support system". This act of deprivation inadvertently relegates the learner to a "deficit view" (Adolphs & Knight, 2020), reducing them to deficient entities who must painstakingly labor to borrow vocabulary.

In a staunch rebuttal to this "deficit view", Cook (1991) advanced the concept of "multicompetence", asserting that the bilingual mind is an open and integrated system. Foreign language learners are not the defective aggregate of "two monolinguals in one body" (Grosjean, 1985), and they process thought in ways that are fundamentally distinct from those of monolinguals. Furthermore, empirical studies by Kern (1994) have illuminated that the phenomenon of "mental translation" consistently plays an indispensable role in helping learners transmute surface-level foreign language input into familiar semantic representations, thereby catalyzing the "nucleation of meaning". The proscription of internal translation does not eradicate reliance on the L1; it merely confiscates the subject's most acute hermeneutic tool. The catastrophic consequence of this coerced "monolingualization" approach is systemic miscomprehension, wherein learners grasp only vague, superficial ideas (fuzzy concepts), culminating in frustration, a degradation of profound expressive capacity, and a downward spiral into cognitive disconnection.

L1 Attrition and Cognitive Disconnection

When pedagogical systems deliberately marginalize the L1 to pave the way for the L2 through coerced immersion contexts, they do not miraculously forge an idealized, unblemished cognitive vacuum; instead, they inadvertently trigger a pernicious psycholinguistic process: the phenomenon of L1 attrition. Köpke and Schmid (2004) outlined how the degradation of L1 proficiency does not transpire solely because of an absence of usage environments but is also profoundly governed by language attitudes and the prioritization of the L2 in academic or social spheres. Anatomizing the mechanics of this further, Linck et al. (2009) used the theory of "retrieval-induced forgetting" to demonstrate that the exertion required to utilize the L2 by persistently suppressing the L1 directly precipitates a severe decline in the capacity to retrieve the native language. Notably, this attrition in adults, according to Schmid and Köpke (2017), does not necessarily signify a permanent evaporation of knowledge (representational change), but is fundamentally an acute disruption in online processing.

Investigating bilingual adolescents, Alasgarova's (2024) research furnishes clear empirical evidence regarding this predicament. Though her study focuses on a younger demographic rather than mature adult learners, the underlying psycholinguistic mechanics of attrition remain highly transferrable: When learners are situated in environments where the L2 (particularly English) is inextricably linked to academic success and social prestige, they exhibit a propensity to prioritize the L2 and cast aside the L1. The ramifications of this L2 dominance extend far beyond mere L1 lexical amnesia; far more critically, they manifest as a debilitating impairment in the ability to articulate complex and abstract ideas using one's own L1. This trade-off exacts an exorbitant epistemological toll. Juxtaposed against the interdependence hypothesis and the common underlying proficiency model posited by Cummins (1979), the L1 and L2 are, in reality, driven by the identical central cognitive engine, conceptualized as a "dual iceberg". This mechanism elucidates the bifurcation between superficial BICS and deep-seated cognitive academic language proficiency (CALP). The banishment of the L1 may expedite the learner's acquisition of BICS through contextual mimicry, yet it simultaneously obliterates the sole cognitive scaffolding required for their ascension to the profound abstract reasoning characteristic of CALP.

The deliberate debilitation of the L1 is tantamount to learners manually severing the "energy-transmitting cable" connecting the submerged depths of native thought to the nascent L2. For adult learners, when their cognitive anchor—the L1—is weakened or actively suppressed while the L2 lacks the requisite profundity to shoulder higher-order cognitive functions (CALP), they plummet into a trough of "cognitive disconnection". This condition, when illuminated

through the lens of Gadamerian ontological hermeneutics (Gadamer, 1960/2004), transcends a mere loss of vocabulary; it constitutes the erosion of a "horizon" of lived experience. Bereft of this "anchoring ground", learners exhibit a surface-level pseudo-fluency that belies an utter vacuity regarding its core logical architecture. This vacuity, as conceptualized by Clahsen and Felser (2006) in their *shallow structure hypothesis*, stems from the learner merely decoding surface-level vocabulary while catastrophically failing to synthesize deep logical linkages. The ensuing consequence is "conceptual attrition" (Pavlenko, 2004), wherein learners progressively forfeit the capacity to cognize the world through their inherent lens of depth, instead adopting a superficial, exogenous mode of thought. Approached from a phenomenological standpoint, this coerced process of divorcing the L1 is accompanied by psychological trauma, evaporating the "monolingual self" and thrusting the subject into a state of ontological limbo and crippling dislocation (Bohórquez, 2009).

The L1 as a Cognitive Scaffolding: A Sociocultural Perspective

To remediate this cognitive disconnection, it is imperative to refer back to the profound principles of cognitive psychology and sociolinguistics. Vygotsky's *sociocultural theory* furnishes a foundational theoretical framework to re-articulate the role of the L1 in the L2 acquisition process (Lantolf & Thorne, 2006). Vygotsky (1934/1986) argued that language and thought stem from disparate developmental roots, yet at a critical juncture, they intertwine: thought becomes verbal, and speech becomes rational. Furthermore, Vygotsky (1978) asserted that language is not merely a static entity or an outward-facing communicative tool; more crucially, it serves as a "mediational tool" and a "psychological tool" by which human beings self-regulate, orient, and cultivate higher psychological functions. The essence of this mediation was illuminated by Vygotsky (1934/1986) through a classic analogy: If the L1 takes root from lived experience in the form of "spontaneous concepts", the foreign language assumes the shape of "scientific concepts" acquired through formal instruction; therefore, the assimilation of a foreign language must obligatorily "use the semantics of the native language as its foundation" (Vygotsky, 1934/1986). On a more profound existential plane, language is precisely "the house of Being" (Heidegger, 1947/1998), wherein the L1 constructs a primordial horizon that delineates all possibilities of human understanding of the world.

Inner speech, which is profoundly encoded in the L1 among adults, is the very locus where the processes of apperception and complex thinking unfold. Therefore, compelling learners to bypass the L1 during L2 acquisition is tantamount to obliterating their capacity for "self-regulation". Instead, the L1 must be utilized as a potent "scaffold" to enable learners to mobilize their codified reservoir of knowledge and worldly experience as a fulcrum for comprehending novel concepts in the foreign language (Gierlinger, 2015; Mahan, 2022; Swain & Lapkin, 2000). From the perspective of educational philosophy, this parallels Johann Friedrich Herbart's (1816/1891) concept of "apperception", wherein novel information can only be assimilated and take root when it connects organically with the pre-existing foundational mass of knowledge—the "apperceiving mass". Prematurely dismantling the L1 scaffold shatters this assimilative trajectory, causing the language learning process to regress into a purely behaviorist exercise of rote vocabulary memorization (Butzkamm & Caldwell, 2009). From this rupture, it becomes glaringly evident that methodologies advocating for the severing of the L1 are, in reality, merely generating superficial linguistic shells, utterly vacuous and divorced from internal meaning. Empirical investigations by Centeno-Cortés and Jiménez-Jiménez (2004) also agree that even highly advanced foreign language learners must resort to L1 private speech when confronted with complex problem-solving tasks. Viewed from the standpoint of the "optimal position", the L1 functions precisely as the cognitive instrument

that mitigates cognitive load (Levine, 2011; Macaro, 2009), safeguarding learners against epistemic rupture.

Paradigm Shift: From Double Monolingualism to Translanguaging

Predicated upon the inevitable reinstatement of the L1, contemporary applied linguistic research is witnessing a radical paradigm shift from language separation models to the concept of "translanguaging". Originating from the Welsh term *trawsieithu* coined by Cen Williams (1994), this concept has transcended the confines of a mere pedagogical maneuver to emerge as an epistemological manifesto. Distinct from the notion of code-switching, which remains heavily tethered to "monoglossic ideologies" that treat the L1 and L2 as static, compartmentalized entities, translanguaging champions a *heteroglossic* perspective. The precise cognitive architecture of this framework, however, has generated robust contemporary debate. Pushing the paradigm to a strictly unitary conclusion, Otheguy et al. (2015) argue that bilinguals do not possess autonomous linguistic machineries corresponding to socially named languages; rather, they operationalize a single, undifferentiated "unitary linguistic repertoire" comprising idiolectal features. Conversely, MacSwan (2017) cautions against the absolute dissolution of cognitive boundaries, proposing a multilingual perspective that retains discrete internal grammars interacting within a shared cognitive system.

Despite this neuro-syntactic divergence, the pedagogical consensus remains resolute: Bilingual competence is not the mechanical addition of two languages (double monolingualism), but rather a state of "dynamic bilingualism" (García & Lin, 2017). Translanguaging in education is neither a deficiency nor a weakness; it is the capacity of multilingual individuals to fluidly traverse between languages, manipulating the resources within their repertoire as an integrated system (Canagarajah, 2011). Furthermore, viewed through the lens of Paul Ricoeur's (2006) philosophy of translation, this capacity for fluid switching exemplifies "linguistic hospitality"—the cognitive flexibility to inhabit the language of the other while systematically integrating exogenous concepts into the framework of the L1 without negating the ontological integrity of either system.

From an epistemological standpoint, this translational operation aligns structurally with the model of the "hermeneutic motion" postulated by George Steiner (1998). Comprehending a foreign language is not an act of passive reception; rather, it demands that the learner undergo a rigorous process: from trust and aggression to appropriate the meaning of the text, to its incorporation into the L1 epistemic system, and finally to restitution to restore equilibrium. Aligning with this perspective, Benjamin (1923/2019) asserted that translation lays bare the "kinship of languages", enabling disparate modes of thought to mutually supplement one another. Translanguaging is thus reaffirmed not as a contrived patchwork but as "a higher-order act of communication" that elevates the learner from a state of passive mimicry to a position of epistemic apperception (González Davies, 2014; Gutt, 2004).

Interim Conclusion

Although translanguaging theory and philosophical hermeneutics have significantly reshaped the conceptualization of bilingual education, the preponderance of current empirical research remains heavily weighted toward children, immigrant populations, or broad academic discourse. Phenomenological inquiries investigating the cognitive manifestations of adult learners who voluntarily suppress their L1 remain comparatively sparse. The pedagogical repudiation of the L1 within this specific demographic constitutes not merely a technical hurdle, but an epistemological rupture of a "horizon" of lived experience (Gadamer, 1960/2004). This represents the specific academic lacuna the present article addresses. By utilizing a critical case study,

Table 1 *A comparative paradigm analysis: From the "monolingual bias" to "translanguaging"*

Comparative dimensions	Monolingual paradigm	Translanguaging paradigm
Linguistic ontology	Languages are enclosed, competitive, mutually exclusive entities governed by the "illusion of linguistic communism" (Bourdieu, 1991).	Language is a flexible, heteroglossic "unitary linguistic repertoire" (García, 2009).
Cognitive structure	The "two solitudes" assumption: L1 and L2 are stored and processed via isolated dual pathways (Cummins, 2007), rejecting "multi-competence" (Cook, 1991).	Nonselective co-activation mechanism: L1 and L2 continuously interact within the same mental space (Dijkstra & van Heuven, 2002).
L1 Positioning	Regarded as a barrier, a source of negative transfer, prohibiting mental translation (Kern, 1994).	Functions as cognitive "scaffolding" and the "apperceptive mass" to assimilate L2's scientific concepts (Herbart, 1816/1891; Vygotsky, 1934/1986).
Psychological state	Conceptual attrition, ego trauma, cognitive disconnection, and the illusion of competence phenomenon (Bohórquez, 2009; Pavlenko, 2004).	Linguistic apperception, dual comprehension, and the joy derived from "linguistic hospitality" (Ricoeur, 2006).
Pedagogical approach	Monolingual immersion, prohibition of translation, and rote vocabulary memorization to force superficial direct thinking.	Translation as a hermeneutic motion and a higher-order communicative act (Gutt, 2004; Steiner, 1998).

this research aims to anatomize the mechanics of surface-level "foreign language thinking" and substantiate translanguaging competence not as a stopgap measure but as a state of holistic epistemic apperception.

Before presenting a comparative paradigm analysis (Table 1), an epistemological caveat is warranted. Although contemporary applied linguistics theory has largely dismantled the rigid monolingual paradigms dominant in the 1970s and 1980s, the institutional habitus (Gogolin, 1997) of these models stubbornly persists within curriculum design, mainstream proficiency testing, and the internalized beliefs of adult learners. Thus, contrasting with these paradigms does not construct a theoretical "straw man"; rather, it maps the lingering, perilous chasm between contemporary theoretical consensus and entrenched pedagogical practices.

Methodology

To comprehend the microlevel essence of cognitive disconnection in foreign language acquisition, this study critically departs from large-scale quantitative methods, which typically measure only the superficial manifestations of linguistic competence. As Lowie and Verspoor (2015)

have cautioned, aggregating learners on the basis of statistical variables frequently obscures the multicausal complexity inherent in the cognitive system, simultaneously reducing dynamic psychological processes to static "fossilized responses" post factum (Vygotsky, 1978). Such aggregation via static variables tends to eclipse complex individual developmental trajectories and the intrinsic fluctuations of dynamic systems (Larsen-Freeman & Cameron, 2008). Transcending superficial enumeration, the present research appropriates Vygotsky's (1978) core epistemological stance, which draws a sharp dichotomy between "object analysis" and "process analysis". To thoroughly penetrate a complex form of psychological activity, the researcher is compelled to reconstruct the "causal–dynamic relations" that engender it, observing the phenomenon in its state of active flux rather than in a frozen state. Consequently, we use a multilayered qualitative research design: integrating a critical case study with the lens of hermeneutic phenomenology advanced by Max van Manen (1990). Rooted in the philosophical ethos of Edmund Husserl, epitomized by his maxim "to the things themselves" (go back to the thing itself) (Husserl, 1900/2001), and Heidegger's (1927/2010) methodological imperative "to let that which shows itself be seen from itself", this research delves deeply into the "life-world" and the ontological perplexities of the learner. As Dörnyei (2007) emphasized, only this incisive qualitative methodology possesses the ability to capture the nuanced personal and social dimensions of language use, as well as the shifts in the learner's identity when confronting translanguaging barriers.

Research Design: Critical Case Study

The study utilizes the critical case study model. Distinct from conventional case studies that merely seek to illustrate a theory or achieve statistical generalization (Duff, 2014; Stake, 1995), this design treats the subject as a "bounded unit" (Yin, 2003), possessing robust heuristic exploratory utility. According to Yin (2014), this strategy is the optimal approach to exhaustively decipher "how" and "why" questions regarding a contemporary phenomenon situated in its real-life context (in situ). Delving deeply into a singular entity is by no means aimed at macro-induction; rather, it acts as an examination of the "microanatomy" (Vygotsky, 1978). It is epistemologically imperative to clarify that the "clinical" metaphor used herein does not connote a biomedical pathology imposed upon the learner. Instead, it functions as a conceptual scalpel based on the microgenetic analysis tradition (Piaget, 1952; Vygotsky, 1978) and resonating with Axel Honneth's (2009) pathologies of reason. The clinical lens is utilized to diagnose and dissect systemic, institutionally induced "illusions of competence" fostered by instrumental pedagogical dogmas, shifting the locus of pathology from the individual to the overarching educational paradigm. Through this rigorous clinical dissection, the concealed architecture of an entire cognitive system can be illuminated under the light of scientific scrutiny.

The critical case was selected because it is highly representative—in a clinical sense—of a phenomenon currently prevalent in contemporary education. The "critical" nature here, grounded on the frameworks of Carspecken (1996) and Talmy (2010), empowers the researcher to transcend mere description and actively interrogate and dismantle invisible power structures, namely, the hegemonic ideology of monolingual pedagogical methods, thereby enabling the unmasking of the systemic flaws within the current educational paradigm through a "clinical dissection". Primary data were collected longitudinally over an intensive 8-week cycle via participant observation and a pedagogical intervention within a one-on-one language tutoring context, ensuring an authentic academic setting. Crucially, to expose the cognitive structures concealed beneath the veneer of surface fluency, this interventional process applied the "experimental-developmental method" proposed by Vygotsky (1978). By proactively inducing deliberate disruptions or "crises" in the language processing continuum, this method compels unconscious cognitive mechanisms to manifest as observable behaviors.

Research Subject and Context: The "Clinical" Profile of Learner L

The research subject is Learner L, an adult Vietnamese student currently studying Chinese at the HSK3 proficiency level. Positioning the subject at this pivotal transitional juncture from elementary to intermediate proficiency is by no means arbitrary. According to Butzkamm and Caldwell (2009), this represents a decisive "threshold", wherein the rote, mechanical accumulation of vocabulary begins to necessitate a profound "restructuring" of grammatical cognition. Utilizing a rigorous purposive sampling strategy, Subject L was selected as the focal entity following a defined screening protocol (see Appendix A). Typicality was established on the basis of her demographic and cognitive profile: An adult learner currently at the pivotal intermediate threshold (HSK3) where syntactic restructuring becomes mandatory, who has been exclusively conditioned under monolingual, direct-method paradigms. She functions as an "extreme or unique case" (Yin, 2014) explicitly because she exhibits a highly concentrated, strict adherence to the "direct thinking" dogma, actively evading L1 translation and manual handwriting. This psychological extremity serves as a heuristic magnifying glass, rendering the systemic symptoms characteristic of the "monolingualization" paradigm vividly observable. The clinical profile of Learner L is codified as three core cognitive manifestations:

- *Translation avoidance*: The learner harbors a deep-seated conviction that translating between the L1 (Vietnamese) and the L2 (Chinese) is "futile" and "impedes cognitive flow". Her ultimate objective is to instantaneously achieve the state of "thinking in the target language", vehemently rejecting the utilization of the L1 as a cognitive fulcrum.
- *Resistance to foundational mechanics*: The learner repudiates the manual practice of writing vocabulary (Chinese characters) via handwriting, dismissing it as a mechanical and passive methodology. Instead, she prioritizes the passive recognition of characters through typing or contextual guesswork in order to "formulate sentences immediately". Analyzed from the neuroscientific perspective of writing, this behavior constitutes a rejection of forging a profound motor "imprint" on the cerebral cortex, thereby relegating the written characters to the status of mere "casual acquaintances" rather than genuinely internalized entities.
- *Illusion of fluency* during practice: Despite exhibiting ostensibly rapid reflexes and adept keyword recognition within certain formulaic communicative scenarios, when tasked with back-translating a textual passage—even one she claims to have mastered—into her L1, the learner instantly descends into a state of hesitation, being flustered, and profound disfluency. This cognitive rupture serves as incontrovertible evidence that the subject grasps information only "vaguely" through superficial contextual conjecture, utterly lacking an architecture of deep structural comprehension.

These manifestations are not idiosyncratic weaknesses but the clinical symptoms of an illusion of competence. This phenomenon shares a profound structural similarity and intimate correlation with the Dunning–Kruger effect, wherein the very deficits and difficulties in core competencies strip learners of the metacognitive ability to recognize their own ineptitude, rendering them oblivious to their shortcomings and precipitating an inflated self-assessment of their actual proficiency (Kruger & Dunning, 1999). Furthermore, viewed through the lens of Kahneman's (2011) behavioral psychology, this precisely exemplifies the phenomenon wherein learners unconsciously opt for "cognitive ease" to rationalize their evasion of arduous analytical cognitive efforts, masquerading under the guise of so-called "modern learning methodologies".

Analytical Framework and Intervention Procedure

To collect and analyze the cognitive transformations of the subject in order to shatter the shell of the illusion of competence, this study used Vygotsky's sociocultural theory, specifically utilizing the concepts of "scaffolding" and cognitive regulation (Lantolf & Thorne, 2006). The research procedure is operationalized through a pedagogical intervention trajectory integrated with clinical data collection comprising four steps, which we designate as the "language apperception" method (summarized in Table 2).

- **Step 1** – Sensation and perception: Initiating "cognitive strain". The learner is compelled to break the habit of passive recognition through the practice of handwriting. The active recall technique is applied, in which the learner writes a character, covers it, and forces

Table 2 *Matrix of pedagogical intervention and clinical measurement via the "language apperception" protocol*

Phases	Core cognitive targets	Pedagogical interventions	Clinical measurement tools
Step 1: Sensation and perception	Shattering "cognitive ease"; inducing cognitive strain to engrave a deep imprint on the cerebral cortex	Manual handwriting; "cover and recall" technique (active recall).	Behavioral observation and reflective journals: Evaluating structural error rates and documenting the *perezhivanie* experience (Mok, 2013)
Step 2: Form/nature	Forging "dual comprehension"; decoding the profound etiology (the "why") underlying surface forms	Direct L1–L2 Contrastive analysis; utilizing the L1 as cognitive scaffolding	Microanalysis: Clinical logging of "eureka moments" and cognitive load reduction
Step 3: Volition/ action	Unmasking the illusion of competence; verifying conceptual mastery and measuring the "depth of processing" (Leow, 2015)	L2 → L1 Translation exercises (back-translation from Chinese to Vietnamese)	Concurrent think-aloud protocols and stimulated recall interviews (Gass & Mackey, 2016)
Step 4: Consciousness	Eradicating negative transfer; cultivating generative cognitive production and fluid switching capacity.	L1 → L2 Translation exercises (forward translation from Vietnamese to Chinese)	Double hermeneutic loop and thematic analysis: Analyzing the evolutionary trajectory from interlanguage fossilization to holistic apperception

Note: This model is operationalized by drawing upon Vygotsky's sociocultural theory, the dual comprehension principle elucidated by Butzkamm and Caldwell (2009), and the suite of introspective verbal reports collection tools detailed in Appendix A.

the cerebral cortex to mobilize muscle memory to reproduce the subsequent character. Instead of indulging the cognitive ease that breeds the hallucination of comprehension (Kahneman, 2011), this mentally taxing maneuver aims to forge a profound imprint on the cerebral cortex. Evaluative data are based on reducing structural orthographic errors and the degree of concentration.

- **Step 2** – Form/nature: Forging "dual comprehension". Rather than eliminating the L1, this method utilizes the L1 as scaffolding. L2 grammatical structures (e.g., the 把 construction in Chinese) are dissected via direct contrastive analysis against the logic of the L1. The interventional objective here adheres to the principle of "dual comprehension" (Butzkamm & Caldwell, 2009), demanding that the learner not merely hazard vague guesses via keywords but deeply apprehend the morphological and structural architecture of the language. We clinically documented the learner's "eureka moments" as she awakened to the underlying structural logic, superseding rote formulaic memorization.
- **Steps 3 and 4** – Volition and consciousness: Measuring the depth of processing via translation. The paramount instrument for harvesting data regarding authentic cognitive capacity is the translation exercise, executed in tandem with the "concurrent think-aloud protocol" technique (Gass & Mackey, 2000; Lörscher, 1991). To penetrate deeper into the cognitive "black box" and ensure robust data triangulation, this introspective protocol is augmented by two specialized instruments. First, stimulated recall interviews are conducted immediately after the task, requiring the subject to review video recordings to explicate the causality behind her pauses and disfluencies, thereby verifying the demarcation between deep comprehension and the illusion of competence (Gass & Mackey, 2016). Second, reflective journals are utilized to chronicle affective and cognitive fluctuations—corresponding to the state of *perezhivanie* in Vygotskian theory—as the learner confronts linguistic conflicts (Mok, 2013).
    - **L2 to L1 direction** (Chinese → Vietnamese): This was utilized as a rigorous *comprehension check*. Compelling the subject to vocalize their stream of consciousness during translation enables the researcher to precisely measure the "depth of processing" (Leow, 2015), laying bare logical impasses when they fail to locate a commensurate L1 structure.
    - **L1 to L2 direction** (Vietnamese → Chinese): Deployed to cultivate constructive cognitive production. The fluency exhibited in switching between the two linguistic systems is quantified to assess the degree to which the "epistemic rupture" has been surmounted.

The application of this research design is not intended to statistically quantify the volume of vocabulary acquired but to anatomize the process-oriented cognitive metamorphosis. The entirety of the raw data corpus (think-aloud audio recordings, interviews, journals) underwent meticulous transcription and was processed via thematic analysis following a recursive protocol (Braun & Clarke, 2006). Analytically, this involved an initial phase of open coding to identify specific instances of cognitive blockage and translation avoidance, followed by the iterative generation of latent themes representing deeper psychological states (e.g., the transition from surface decoding to holistic apperception). Crucially, to ensure interpretive rigor without succumbing to the mechanistic imposition of inter-rater reliability—a positivist metric fundamentally misaligned with the subjective, meaning-making essence of phenomenological inquiry—this study operationalizes the hermeneutic circle. By triangulating the researcher's thematic reconstruction with the subject's own immediate stimulated recall validations, interpretations are authenticated directly by the subject's lived ontological reality and cognitive

rationalizations, ensuring a far higher degree of epistemic fidelity than the artificial consensus of detached external coders (Gass & Mackey, 2016). This procedure is situated within the "interpretive reconstruction" model (Lörscher, 1991), wherein disruptions in meaning-making are not cavalierly dismissed as routine "errors", but are instead repositioned as clinical indicators denoting a degradation in the "depth of processing" (Leow, 2015). Ultimately, the data are analyzed through the "double hermeneutic" loop (Smith & Osborn, 2008) to map the evolutionary trajectory of transitioning from a state of interlanguage fossilization induced by the repudiation of the L1, to a state of holistic apperception once the L1 is reinstated as a potent "debugging tool" and a robust foundation for foreign language acquisition.

Researcher Positionality and Reflexivity: The Dual Role as Epistemic Phronēsis

In alignment with hermeneutic phenomenology (van Manen, 1990), it is analytically imperative to explicitly theorize the dual role of the author who serves concurrently as the pedagogical intervener and the researcher. From a post-positivist, variable-analytic paradigm, this proximity is frequently perceived as a threat to credibility, framing the researcher as a source of experimental contamination (Lincoln & Guba, 1985). However, according to Vygotsky's (1978) experimental–developmental method, isolating the observer from the learner's *Lebenswelt* (lifeworld) constitutes an epistemological impossibility.

Within this inquiry, the pedagogical scaffolding provided by the researcher is not a confounding variable to be sterilized; instead, it functions as the indispensable ontological catalyst—an exercise of *phronēsis* (practical wisdom)—required to deliberately provoke the cognitive ruptures that render hidden psychological processes observable. To mitigate subjective over-reach and ensure rigorous reflexivity, the researcher maintained a continuous audit trail through reflective journaling and adhered to the aforementioned hermeneutic triangulation. This systematic *epoché* (bracketing) ensured that analytical deductions remained strictly anchored to the learner's articulated realities, thus preserving methodological holism while defending against interpretive bias.

Results and Discussion

Contrary to the expectations of pedagogical paradigms that champion extreme "language immersion", the results from the clinical case study of Learner L have laid bare a profound cognitive crisis when the subject endeavored to divorce herself from her L1. Through the application of the "double hermeneutic" loop to analyze clinical data, coupled with the "language apperception" interventional trajectory, this study has garnered incisive empirical evidence regarding cognitive shifts. The findings are explicated across three primary dimensions: (1) dispelling the illusion of competence phenomenon, which is a form of "surface-level pseudo-fluency" born from the yearning for cognitive ease following the deprivation of the L1; (2) the mechanism of cognitive recovery and restructuring via the L1 scaffolding and active recall techniques; and (3) the crystallization of translanguaging competence not merely as a debugging tool but as a holistic modality of linguistic apperception.

Anatomy of the Illusion of Competence and Interlanguage Fossilization

Through concurrent think-aloud protocols and clinical observational data, the initial phase of the investigation (pre-intervention) exposed an alarming reality: Adherence to the dogma of "direct thinking in the foreign language" failed to yield substantive fluency but engendered an illusion of competence (Bjork, 1999). Learner L categorically resisted Chinese–Vietnamese translation and repudiated manual handwriting practice.

Empirical Data Excerpt: Introspective feedback from the learner explicitly captured this epistemic resistance verbatim:

> *"For me, exercises translating Chinese into my mother tongue are not very helpful... When learning a new language, I am accustomed to using that language to think directly. As for copying Chinese characters... if I just write character by character, I forget very easily"* (Subject L, Week 2).

Interpretive Analysis: Through the lens of cognitive psychology, rationalized as a "modern" methodology to accelerate reflexes, this evasion is fundamentally a manifestation of the craving for cognitive ease (Kahneman, 2011), masquerading under the guise of pedagogical methodology. Governed by the "what you see is all there is" heuristic, System 1 automatically interpolates meaning based on familiar keywords rather than exerting the effort to analyze structure. Consequently, this behavior stagnated at the level of maintenance rehearsal, entirely devoid of the deep semantic processing requisite for transmuting language into long-term memory (Karpicke & Blunt, 2011). To dismantle this hallucination, empirical studies indicate that "mental translation" plays a vital, life-sustaining role in forging a semantic buffer zone, which mitigates the strain on working memory and interconnects conceptual networks (Kern, 1994). The proscription of this internal cognitive operation does not eradicate reliance on the L1; it merely removes the learner's capacity for synthesis and the "nucleation of meaning".

When confronted with a rigorous comprehension check via the mandate to back-translate an ostensibly familiar L2 text into the L1, the learner instantly descended into a state of rupture.

Empirical Data Excerpt: The concurrent think-aloud transcripts documented this severe cognitive impasse when processing an emphatic structure:

> "[Confident tone] *The South, ah... we last year... exactly this... this time...* [A protracted 4.5-second silence; facial grimacing]... *Wait, Teacher, how do I translate the 'de' (的) at the end here? This sentence feels so awkward; I don't know how to arrange the words to make it flow in Vietnamese"* (Think-aloud audio transcript, Week 3).

Interpretive Analysis: This verbatim evidence of hesitation and structural failure vividly illustrates the shallow structure hypothesis (Clahsen & Felser, 2006), confirming that the learner executed mere surface-level lexical decoding yet catastrophically failed to synthesize deep logical linkages. This phenomenon simultaneously corroborates the assertion by Butzkamm and Caldwell (2009) that depriving learners of their L1 during semantic deciphering spawns vague, imprecise ideas (fuzzy concepts), plunging the learner into a state of semantic "blindness", of which they remain cognitively oblivious.

A graver consequence of this illusion is the accretion of layers of interlanguage fossilization (Lynch, 2017; Selinker, 1972).

Empirical Observation: Because of the absence of explicit contrastive analysis with the L1 aimed at establishing a *"debugging"* function, the adult learner's brain surreptitiously grafts L2 vocabulary onto the L1 syntactic scaffold. Specifically, when attempting to express "I am going out to play with my friend", instead of using the grammatically sound Chinese structure (*Wǒ gēn péngyou qù wán*), the learner reflexively produced a syntactically flawed sentence: *"Wǒ qù wán gēn péngyou"* (transposing the Vietnamese word order verbatim).

Interpretive Analysis: The rapid velocity of speech in this instance does not index the capacity for "direct thinking". Rather, it is symptomatic of the perilous conflation of surface-level encoding fluency and authentic retrieval fluency (Bjork et al., 2013). This engenders a vacuous, "pidginized" language, wherein the learner deludes themselves regarding their own fluency. The desire to take cognitive shortcuts and repudiate their L1 roots traps the learner in a state of epistemic dependency on fragmented surface structures, permanently freezing their progression toward higher-order academic language.

This fossilization is not merely localized at the syntactic tier; it mirrors a profound neurocognitive rupture. Event-related brain potential evidence from Thierry and Wu (2007) validated that access to the mental lexicon is inherently nonselective; the brain ceaselessly executes "unconscious translation" even when forcibly immersed in the L2. Analogous to the revised hierarchical model, the most robust pathway traversing from L2 vocabulary to the conceptual system invariably needs to pass through the L1 (Kroll & Stewart, 1994). Consequently, the chronic suppression of the L1 solely triggers the mechanism of "retrieval-induced forgetting" (Anderson et al., 1994), precipitating a deteriorating process aligned with the "attrition via acquisition" model (Smeets, 2023). Phenomenologically, this fracture induces a schizoid split between the primary and secondary linguistic egos, dispossessing the learner of their epistemic origins and transforming them into "uprooted" subjects within the confines of their own minds (Bohórquez, 2009).

Restoring Cognitive Scaffolding via Contrastive Analysis and Active Recall

To shatter the impasse of this hallucination of fluency, the pedagogical intervention (Steps 1 and 2 of the language apperception protocol) compelled the learner to confront cognitive discipline. Rather than indulging in passive recognition facilitated by keyboard typing, the "Cover and Recall" technique (active recall) via manual handwriting was rigorously enforced. The mobilization of muscle memory not only etches the orthographic structure deeply into the cerebral cortex but also forces the learner to transcend the state of merely "gliding" over the textual surface, enabling them to literally "touch" the physical materiality of the language. Neuroscience substantiates that this manual motor operation forges a significantly more profound imprint through the simultaneous activation of haptic, motor, and sensory brain regions (James & Engelhardt, 2012; Van der Weel & Van der Meer, 2024), transforming the written character from a mere "casual acquaintance" on an electronic screen into an entity robustly internalized within long-term memory (Mueller & Oppenheimer, 2014).

This "cognitive strain" epitomizes the "desirable difficulties" required for transmuting raw information into procedural knowledge (Bjork & Bjork, 2020). The authentic cognitive breakthrough materialized in Step 2 (Form/Nature), when the L1 was officially reinstated and operationalized as cognitive scaffolding in the spirit of Vygotsky (1978). Rather than proscribing Vietnamese, the researcher placed L2 structures (e.g., the Chinese 把 construction, or the syntactic ordering of temporal/spatial adverbials) on the analytical scales for direct contrastive analysis against the L1. At this juncture, adult learners were empowered to leverage their greatest asset: logical reasoning. Viewed through the prism of cognitive load theory (Sweller, 1988), the activation of the L1 plays a quintessential role in alleviating the workload on the brain (reducing cognitive load). By deploying the L1, learners can instantaneously harness their firmly crystallized higher-order CALP to process novel information, preventing them from bogging down in the mere decoding of superficial linguistic shells. This mechanism vividly illustrates the bifurcation between surface-level BICS and profound CALP (Cummins, 1979). Furthermore, the application of the L1 at the "optimal position" (Macaro, 2009) within English-medium instruction environments empirically demonstrates that pedagogical translanguaging serves as a cognitive and sociocultural bridge to co-construct meaning, significantly mitigating language

anxiety while augmenting academic comprehension (Ashari et al., 2025). This progression is entirely congruent with the concept-based instruction model, which posits that learners must master conceptual categories via the L1 prior to autonomously and creatively producing the L2 (Negueruela, 2003). Resonating with this perspective, Ohta (2017) contends that the L1 is instrumental in cognitive orientation, assisting learners in transmuting alien grammatical structures into comprehensible and empathic concepts.

This L1–L2 cross-illumination enables learners to decode the profound "why" beneath the superficial "what", thereby perceiving the inherent rationality within the ostensibly paradoxical grammar of the foreign language (for instance, realizing that the rationale behind Chinese placing time/location prior to the action stems from a cultural cognitive logic that prioritizes procedural sequences and preparation). Learner L's "eureka moments" upon grasping the profound etiology of the structure—as opposed to the rote memorization of formulas—serve as vibrant, living proof of the thesis that "we only learn language once" (Butzkamm & Caldwell, 2009). The L1, encapsulating the totality of an adult's analytical capacity and functioning as their most magnificent language acquisition support system, is not an impediment; instead, it is the sole anchor preventing them from drifting aimlessly in the alien conceptual sea of the L2.

Translanguaging: From Debugging Tool to Linguistic Apperception

The outcomes of Steps 3 and 4 (volition and consciousness) mark a qualitative paradigm shift in the language acquisition framework. Compelling the learner to execute bidirectional translation exercises (Chinese–Vietnamese and Vietnamese–Chinese) systematically obliterated the phenomenon of surface-level pseudo-fluency.

When translating from L2 to L1 (Chinese → Vietnamese), the translation process functions as a potent "debugging tool", unmasking lacunae via a rigorous comprehension check. It dictates that the learner must not settle for vague comprehension or stagnate at mere keyword understanding, but must rather ascend to the level of conceptual deep precision. Conversely, in the L1 to L2 direction (Vietnamese → Chinese), the translational act forces the brain to cognize disparities in cognitive pathways, thereby proactively eradicating negative transfer. Learner L no longer spoke with unthinking inertia; rather, she learned to implement a micropause to consciously restructure word order prior to articulation.

This behavioral shift is entirely congruent with the vision of translanguaging competence currently debated within international academic circles. According to García (2009) and García & Wei (2014), translanguaging is not indicative of a linguistic deficit; instead, it is the orchestration of the learner's entire "unitary linguistic repertoire" to construct meaning. Pedagogical translation does not aim to train learners as professional interpreters but serves as a conduit to seamlessly bridge pre-existing knowledge (L1) with novel epistemic inputs (L2). By permitting Vietnamese and Chinese to interact fluidly within a shared cognitive space, Learner L transitioned from a state of epistemic rupture to a capacity for seamless switching, thereby emerging as a true bilingual.

Empirically, exploratory electroencephalography measurements drawn from doctoral research (Beres, 2014) and subsequent academic syntheses (Beres, 2016) have corroborated that the cognitive operation of shuttling information between two languages absolutely does not induce neurocortical "cross-contamination"; conversely, it facilitates a profoundly deeper and more enduring semantic integration (Beres, 2014, 2016). Translation (translanguaging) at this juncture transcends the antiquated strictures of the classical grammar–translation method, evolving into a sophisticated mediation skill (Stathopoulou, 2016). This process engenders "translanguaging moments" (Baynham & Lee, 2019), wherein the abundance of linguistic resources is synthesized to unequivocally dismantle epistemic disconnection.

Furthermore, examined from a philosophical plateau, this synthesis is the supreme manifestation of "linguistic hospitality" as conceptualized by Paul Ricoeur (2006). It affords learners the profound joy of inhabiting the language of the Other (L2) while simultaneously throwing wide the doors to welcome alien concepts into the sanctuary of their L1, without seeking to annihilate the existence of either. To genuinely comprehend a phenomenon, one must possess the capacity "to say the same thing in another way" (Ricoeur, 2006). Even when confronting "the untranslatable", the learner's hesitations or stumbling during translation cease to be clinical failures; instead, they become the courageous genesis of a novel journey of negotiation and meaning construction. It is precisely at this crucible that genuine "thinking in Chinese" (L2) is forged, not through the amputation of Vietnamese (L1) but by standing firmly upon the robust bedrock of a state of "dynamic bilingualism" (García, 2009; García & Lin, 2017; see Table 3).

Table 3 *The trajectory of cognitive metamorphosis: From the illusion of competence to linguistic apperception*

Cognitive dimensions	Pre-intervention state: illusion of competence phenomenon	Post-intervention state: linguistic apperception
Information processing	Governed by System 1 and the "what you see is all there is" heuristic (Kahneman, 2011); risk of cognitive offloading onto machines	Activation of System 2 via "desirable difficulties" (Bjork & Bjork, 2020) to liquidate "cognitive debt"
Linguistic structure depth	Mired in shallow structures and surface skills (BICS); formation of interlanguage fossilization through the suppression of "unconscious translation" (Thierry & Wu, 2007)	Achievement of academic proficiency (CALP) and dual comprehension; leveraging the revised hierarchical model (Kroll & Stewart, 1994) and concept-based instruction (Negueruela, 2003)
L1 Positioning and usage	Coerced L1 suppression leading to attrition via acquisition and a schizoid split of the ego (Bohórquez, 2009)	Reinstatement of L1 as cognitive scaffolding and a semantic buffer zone (Kern, 1994); translation operating as a mediation skill (Stathopoulou, 2016)
Nature of fluency	Fluency illusion: Conflating surface encoding fluency with authentic retrieval capacity, generating "eloquent emptiness"	Dynamic bilingualism: Fluid switching capacity (empirically corroborated by electroencephalography (Beres, 2014)), engendering translanguaging moments (Baynham & Lee, 2019)

Note: This data table synthesizes findings from clinical observations and concurrent think-aloud protocols involving the research subject, integrated with neurophysiological evidence (event-related brain potential, electroencephalography) and cognitive psychology paradigms. This juxtaposition accentuates the demarcation between superficial linguistic mimicry and genuine meaning construction.

Interim Conclusion

The outcomes of this clinical case study affirm a fundamental pedagogical truth: The yearning for linguistic liberation (fluent speech, direct thinking) cannot be actualized via undisciplined shortcuts (evading handwriting, abandoning translation). Freedom in language is not a gratuitous gift; it is the ultimate reward for the exertion of deliberate thinking and a process of profound essential comprehension. In this paradigm, the L1 is exalted as a devoted guide, elevating the learner from a state of precarious epistemic dependency to the majestic stature of holistic cognitive apperception.

Conclusion

For over a century, researchers and practitioners in foreign language education have devoted immense intellectual labor to solving the enigma of fluency and the capacity to think in the L2. However, governed by the fallacies of the monolingual approach, the contemporary pedagogical paradigm has unwittingly erected a counterfeit dichotomy between the L1 and the L2. This article, navigating through the dual lenses of clinical phenomenology and cognitive psychology, has executed a profound philosophical and epistemological dissection aimed at "demystifying" the true nature of language acquisition in adults. This journey, as has been empirically demonstrated, is never a mechanical process of replacement or the eradication of a pre-existing cognitive identity merely to don a novel linguistic shell. Consequently, this study delineates groundbreaking conclusions and pedagogical implications, striving to outline an educational vision that is both intrinsically interdisciplinary and profoundly humanistic.

Theoretical Synthesis: The Epistemological Limits of L1 Suppression

Rather than reiterating the specific clinical manifestations of interlanguage fossilization explored in the preceding analysis, this section synthesizes the broader epistemological implications of the inquiry. The analytical findings robustly demonstrate that for mature learners, coerced L1 suppression does not equate to authentic linguistic immersion; rather, it institutionalizes cognitive deprivation. Stripping adult learners of their foundational logical anchor restricts them to functioning as mechanical vocabulary processors. Viewed through a phenomenological lens, this radical segregation subjects the learner to profound ontological dislocation (Bohórquez, 2009). Intrinsically, this pedagogical imposition bears the unmistakable hallmarks of "linguistic imperialism" (Phillipson, 1992) and constitutes a form of "symbolic violence" (Bourdieu, 1991), systematically designed to dispossess the learner of their epistemic agency.

This research unequivocally reaffirms the profound axiom postulated by Butzkamm and Caldwell (2009): "we only learn language once". The acquisition of an L2 is, in essence, the grafting and restructuring of novel concepts upon the foundational bedrock of the L1; consequently, to repudiate this natural law is to "repudiate the constructivist nature of the human mind itself". At a profound philosophical stratum, this entanglement resonates seamlessly with the thesis of the inseverable unity of thought and language (*rechevóye myshlénie*) (Vygotsky, 1934/1987). The decoding of word meaning (*znachenie slova*) is the absolute and only threshold to entering the totality of human consciousness; thus, the interdiction of the L1 inadvertently strips away the most quintessential foundation of meaning-making. Therefore, a successful ascent to the L2 can never be erected upon the repudiation of the L1. The L1 must be reinstated and exalted not merely as the most potent cognitive scaffolding, but concurrently as the "most indispensable instrument for comprehending the world and comprehending oneself". It empowers the learner to transmute alien grammatical structures and concepts into empathic, masterable value systems, simultaneously warding off "cultural uprooting" within the context of global integration.

Pedagogical Implications: The Vision of Translanguaging

Emerging from the impasses of monolingual dogma, this article advocates for a pedagogical shift toward translanguaging competence, redefined from a purely technical exercise into a profound cognitive and ethical act. Translation, within this context, must be fundamentally redefined from a purely technical exercise into a cognitive instrument and an ethical act. Its objective is not the mass production of mechanical translational automatons; rather, it functions as a reflective mirror, a "debugging tool" rigorously deployed to audit profound comprehension (a comprehension check), while simultaneously igniting "metalinguistic awareness". This intrinsic process of internal translation, as Seleskovitch (1968) unequivocally asserted, is fundamentally an act of "meaning construction" at the absolute highest echelon.

We contend that the best application of L2 acquisition lies in the capacity to engineer a seamless bridge connecting two disparate worldviews, thereby enacting "linguistic hospitality" (Ricoeur, 2006). Repudiating brutal assimilation, this philosophy extends a gracious invitation to the alien Other to step into the domicile of one's own language without harboring any intent to annihilate the existence of either entity, thereby cultivating an infinite expanse for the "fusion of horizons" (Gadamer, 1960/2004). Based upon the theory of linguistic interdependence (Cummins, 2007), alongside the paradigm of dynamic bilingualism articulated by García and Lin (2017), L2 education must actively cultivate heteroglossic spaces wherein the L1 and L2 engage in a fluid interplay to collaboratively co-construct meaning.

Only when learners acquire the capacity for fluid switching between reasoning in their L1 and articulating in the L2 can they genuinely achieve holistic linguistic apperception, moving beyond superficial mimicry to grasp authentic communicative competence. This capacity establishes a "multi-competence" (Cook, 2016), a cognitive state wherein the learner transcends the native speaker benchmark to achieve multidimensional mastery. Authentic L2 acquisition, analytically speaking, is not a process of supplanting one cognitive persona with another; instead, it constitutes a structural expansion of the learner's ontological boundaries. In this integrated state, the learner operationalizes the "house of Being" of their L1 as a stable epistemic foundation while engaging the L2 as an extended heuristic framework to navigate broader intercultural realities. This dynamic bilingualism allows them to transition from being passive decoders of vocabulary to autonomous agents capable of complex, cross-cultural meaning construction.

Methodological Limitations and Future Trajectories

Although the critical case study methodology has facilitated a profound microlevel anatomical dissection of cognitive metamorphosis, we acutely recognize the inherent limitations regarding sample size and the capacity for statistical generalization. It is epistemologically crucial to circumscribe the claims of this study: The findings are analytically generalized (Yin, 2014) specifically to adult learners who possess a fully crystallized L1 cognitive architecture and are undergoing syntactic restructuring in the L2. Focusing on a singular, idiosyncratic case (a Vietnamese learner acquiring Chinese) cannot encapsulate the extensive diversity across varying linguistic typological contexts or younger demographics. Nevertheless, its heuristic exploratory utility generates theoretically transferrable propositions regarding adult L1 attrition, paving the way for deeper, more rigorous academic interrogations.

Future research endeavors must extrapolate the language apperception model across larger population cohorts, integrating quantitative longitudinal studies to precisely gauge the long-term retention of L2 proficiency under the mediation of the L1 scaffolding. Concurrently, the application of neurophysiological measures such as functional magnetic resonance imaging or event-related brain potential to rigorously quantify cognitive latency presents an exceedingly

promising trajectory. Furthermore, the accelerating trend of cognitive offloading onto generative artificial intelligence (GenAI) (Risko & Gilbert, 2016) demands urgent empirical investigation. As learners increasingly delegate syntactic and translational labor to algorithms, this raises genuinely new research questions for the field: How does prolonged reliance on GenAI for translanguaging tasks alter the neuroplasticity and semantic processing pathways of bilingual adult learners? Can pedagogical frameworks be designed to utilize AI as a collaborative translanguaging partner rather than a cognitive replacement? Future studies must rigorously quantify the resultant "cognitive debt" to safeguard the integrity of autonomous, deliberate cognitive exertion against the uncritical delegation of thought to GenAI, which now constitutes a critical pedagogical challenge.

In summation, the acquisition of a novel language does not necessitate voluntary cognitive self-exile or the deliberate severing of one's epistemic roots. Conversely, L2 proficiency achieves optimal structural stability only when it remains continuously tethered to the cultural and conceptual bedrock of the L1. Language is not a subservient utilitarian tool; instead, it structures human reality. The L1 functions inextricably as the primary "house of Being" (Heidegger, 1947/1998) from which abstract thought originates, whereas the L2 serves as a crucial epistemological bridge to novel frameworks of understanding. This process of returning to the origin ultimately establishes the foundation for a cognitively autonomous and dynamically bilingual subject.

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Appendix A
Pedagogical Intervention Artifacts and Think-Aloud Protocol Transcripts

This describes a critical case study: Anatomizing cognitive disconnection in Subject L (HSK3 threshold stage).

1. **Research Context and Ethical Statement**
   - Subject identifier: Subject L (female, 25 years old, adult learner, L1: Vietnamese). The selection adhered to a purposive sampling strategy.
   - L2 proficiency: Chinese, HSK3 level. This constitutes the pivotal intermediate threshold transitioning from the elementary stage, wherein syntactic structures begin to exhibit significant divergence from the L1, necessitating that the subject undergo a profound process of cognitive restructuring rather than merely accumulating vocabulary mechanically.
   - Spatial context and duration of data collection: An intensive one-on-one format language course. Longitudinal tracking, encompassing participant observation and pedagogical intervention, was continuously implemented over an 8-week cycle.
   - Collection instruments (data triangulation):
     - *Participant observation*,
     - *Concurrent think-aloud protocols* audio-recorded directly in situ.
     - Extraction of *textual archives* from introspective feedback via messaging applications.
   - **Ethical Statement:** The study strictly adhered to the ethical principles governing psychological and educational research. Given the pedagogical nature of the observational and verbal protocol data, the procedures were conducted in full compliance with the ethical guidelines of the American Psychological Association and the British Educational Research Association. The subject was comprehensively informed regarding the procedures and provided informed consent for participation. All personally identifiable data have been rigorously anonymized and are utilized exclusively for the purpose of linguistic epistemological dissection, completely devoid of any biomedical intervention or physical risk.
2. **Pre-intervention Baseline Symptoms**

   During the initial two weeks of the empirical study, Subject L unequivocally exhibited the illusion of competence phenomenon (Bjork, 1999) coupled with a state of epistemic resistance toward pedagogical methodologies demanding discipline and analytical depth.

   The subject demonstrated an absolute conviction about the "monolingualization" ideology (a desire to think directly in Chinese) and categorically resisted techniques designed to induce cognitive strain, such as contrastive translation or manual handwriting practice. The self-reported textual data below serves as quintessential phenomenological evidence.

Empirical Data 1: Superficial Epistemic Resistance

(Extracted from introspective feedback text/Zalo log – Day 12, Week 2)

Subject L (original L2 text): "老师，我对你给了作业有一些想法。对我来说，把汉语翻译成母语的练习帮助不太大... 学新语言的时候，我比较习惯用那个语言思考。还有，汉字抄写我平时做笔记的时候就已经在练了。是这样的，如果只是一个字一个字地写，我很容易忘。如果作业能灵活一点，让我用比较适合我的方法练，可能效果会更好。"

Reference translation (L1 translated to English): *"Teacher, I have some thoughts regarding the homework you assigned. For me, exercises translating Chinese into my mother tongue are not very helpful... When learning a new language, I am accustomed to using that language to think directly. As for copying Chinese characters, I already practice that while taking notes normally. It's like this: if I just write character by character, I forget very easily. If the homework could be a bit more flexible, allowing me to practice using a method that suits me better, the results might be better."*

Clinical Commentary

This excerpt constitutes a classic clinical manifestation of the "direct thinking" hallucination. The subject is entangled in a catastrophic metacognitive fallacy: Conflating passive recognition (via merely "looking" at characters during note-taking) with active recall (via the strenuous effort of independent handwriting). The behavioral repudiation of the translation (translanguaging) operation indicates that the subject is attempting an extreme secession from the L1 system, voluntarily stripping away the singular cognitive scaffolding (Vygotsky, 1978) that is capable of facilitating the assimilation of complex concepts in adult learners. Analyzed from the standpoint of behavioral psychology, and governed by System 1 (Kahneman, 2011), the subject is unconsciously evading "desirable difficulties" (Bjork & Bjork, 2020) to retreat into superficial cognitive ease, rationalizing this evasion under the guise of a "suitable method".

Analysis of the Error Mechanism and Cognitive Disconnection

To empirically verify the authenticity of the capacity to "think directly in Chinese"—a state the subject had erroneously espoused—the researcher activated a cognitive stress test via a think-aloud protocol, utilizing standard instructional materials (HSK3 standard course, Lesson 1) (Jiang, 2014). The outcomes laid bare a severe epistemic rupture at the deep structure tier, conclusively proving that the subject's purported fluency was merely an ephemeral phenomenon of skimming over the semiotic surface.

Empirical Data 2: Cognitive Rupture at the Emphatic Structure

(Extracted from an audio recording of a think-aloud practice session: Week 3, Text 3, HSK3 Lesson 1.)

Task context (comprehension check): Subject L read aloud the dialogue excerpt: "小丽：南方啊，我们去年就是这个时候去的。" (Xiaoli: The South, of course; we went exactly around this time last year). The subject affirmed having "completely understood" the sentence's meaning within its context. Immediately thereafter, the researcher mandated a back-translation of this sentence into the L1, demanding maximal naturalness and precision, while simultaneously vocalizing her entire stream of internal thought.

Subject L's response (audio transcript):

> "[Confident tone] *The South, ah... we last year... exactly this... this time...* [A protracted, disjointed silence lasting 4.5 seconds; facial grimacing; hesitant pen-tapping rhythm]... *go... of?* [Hesitating] *Wait, Teacher, how do I translate the 'de' (的) at the end here? This sentence feels so awkward; I don't know how to arrange the words to make it grammatically flow in Vietnamese."*

Clinical Commentary/Analysis of the Error Mechanism

This data furnishes incontrovertible evidence unmasking the illusion of competence. The subject confidently assumed that she "understood" because her brain, guided by the "what you see

is all there is" heuristic (Kahneman, 2011), successfully executed the operation of surface-level "lexical decoding". The subject recognized fragmented, isolated components, namely 南方 (the South), 去年 (last year), 时候 (time), and 去 (go), and automatically fabricated a hallucinatory, conjectural overall meaning.

However, when the translanguaging task pushed System 2 into penetrating the deep structure, a cognitive rupture manifested instantaneously. The source sentence uses an L2-specific grammatical construct: an emphatic structure denoting the time/place/manner of a past action via the "是……的" framework (here abbreviated to 就是……去的). The subject utterly failed in executing the "syntactic restructuring" from L2 to L1. The epistemic impasse at the particle 的 and the protracted, disjointed hesitation (pauses over 4 seconds) perfectly illustrate the shallow structure hypothesis (Clahsen & Felser, 2006). By rejecting the contrastive operation mediated by the L1, the learner was, in reality, merely engaged in vague keyword guessing, remaining completely incapable of mastering the core grammatical logic of the L2.

Concurrently, in the inverse direction of language production (L1 to L2), this rupture directly precipitates errors characteristic of interlanguage fossilization (Selinker, 1972). When asked to output the concept *"I don't like going out to play with him*", the subject reflexively and instantaneously responded: *"Wǒ bù xǐhuan qù wán gēn tā"* (a mechanical transfer of the L1 logical word order) instead of the syntactically standard L2 structure, *"Wǒ bù xǐhuan gēn tā qù wán"*. The rapid velocity of speech here does not index direct thinking; rather, it is the result of negative transfer, glaringly reflecting the deficit of a debugging tool, a regulatory function inherently belonging to the active control system of the L1.

The Pedagogical Intervention Protocol: The Language Apperception Model

To eradicate this cognitive hallucination and restore apperception to the subject, the researcher engineered and enforced a systematic four-step interventional trajectory, designated as the language apperception model.

- **Step 1: Sensation and Perception** – Inducing cognitive strain and shattering intellectual indolence via the active recall technique. The subject was strictly prohibited from engaging in "passive recognition" by merely glancing at the characters. Mandatory requirement: Handwrite one Chinese character → obscure that character with a ruler → Compel System 2 to retrieve spatial memory to reproduce the subsequent character. This maneuver generates "desirable difficulties" aimed at engraving a physical imprint of the L2 into the long-term memory, thereby establishing robust muscle memory.
- **Step 2: Form/Nature** – Reinstating the L1 as scaffolding and applying contrastive analysis. Rather than proscribing the L1, the researcher utilized the L1 as an epistemic frame of reference to dissect the essence (the "why") of L2 grammar (e.g., the cultural logic dictating why Chinese obligatorily places the prepositional phrase denoting the object, "gēn tā", prior to the core verb, "qù wán"). This catalyzes the transition of learning from behavioral mimicry to dual comprehension (Butzkamm & Caldwell, 2009).
- **Step 3: Volition/Action** – Translanguaging as a debugging tool by assigning purposive L2 → L1 back-translation exercises (Chinese to Vietnamese). This operation functions as a semantic scanner, exposing vague comprehension and urging the subject to refuse compromise with isolated keywords, instead demanding the holistic articulation of structural logic via the L1.
- **Step 4: Consciousness** – Forging multi-competence (translanguaging) by executing high-velocity L1 → L2 forward-translation tasks (Vietnamese to Chinese) within complex discursive contexts. This step empowers the subject to utilize their native cognitive

framework as a launchpad, self-regulating the structural disparities analyzed in Step 2, and consciously "exporting" thought into the L2, thereby entirely eradicating negative transfer to achieve fluid switching.

Epistemic Confrontation and Post-Intervention Results

The decisive turning point of the empirical study transpired at the culmination of Week 3, when the researcher used a direct interventional message (epistemic confrontation) aimed at dissecting the "underlying logic" (底层逻辑) for the subject. The objective was to precipitate an epistemic crisis of sufficient magnitude to compel the subject to confront the severe limitations of her erroneous learning methodology, thereby reconstructing her *zone of proximal development*.

Pedagogical Intervention Artifact 3: Epistemic Reconciliation Discourse

(Extracted from the intervention journal – Researcher's feedback to Subject L.)

Researcher (excerpt):

> "关于'翻译练习': 你说想直接用中文思考，这在大方向上没错。但在 HSK3 这个阶段，如果不通过'汉译越'来对比两种语言的结构差异，你所谓的'中文思考'很容易变成'越式中文'(Tiếng Trung bồi) 而不自知。这个作业是为了帮你纠正语法逻辑...
>
> 关于'汉字练习': 怎么写才不忘？光靠'看'只能混个脸熟，只有动笔才能形成'肌肉记忆'。写完一个字，用尺子遮住它，逼自己凭记忆写下一个。每写一次都是在'主动回忆'(Active Recall)，而不是'复制'..."

(Translation: "Regarding 'translation exercises': You state that you desire to think directly in Chinese; as a broad objective, this is not erroneous. However, at this HSK3 stage, if you do not employ 'Chinese-to-Vietnamese translation' to contrast the structural disparities between the two languages, your so-called 'thinking in Chinese' will perilously devolve into 'pidginized Chinese' [Vietnamese-style Chinese] without your realization. The purpose of this assignment is to assist you in rectifying your grammatical logic...

Regarding 'character practice': How do you write without forgetting? Relying solely on 'looking' merely yields a superficial familiarity; only putting pen to paper can forge 'muscle memory.' After writing a character, obscure it with a ruler, and compel yourself to write the subsequent one entirely from memory. Every single iteration is an act of 'active recall,' not mere 'copying'...").

Clinical Commentary and Post-Intervention Results

By explicitly elucidating the mechanism of contrastive analysis as a bulwark against the fossilization of "pidginized Chinese", fused with the principles of muscle memory, the researcher successfully dismantled the subject's psychological defense mechanisms. This intervention struck precisely at the cognitive "zone of proximal development" (Vygotsky, 1978), catalyzing a microlevel paradigm shift in her learning approach.

Longitudinal tracking data spanning Week 4 to Week 8 documented fundamental qualitative transformations:

1. **Acceptance of cognitive discipline:** Subject L voluntarily embraced the "desirable difficulties", rigorously applying the "cover and recall" protocol during writing practice.

Her reflective journal recorded: *"Although it is extremely mentally taxing [mỏi não], the characters are engraved far more deeply; the phenomenon of forgetting strokes during exams has vanished"*. The acceptance of this "mental taxation" signifies the triumphant activation of System 2 (Kahneman, 2011) and the successful transmutation of information into durable knowledge (Bjork & Bjork, 2020).

2. **Shattering interlanguage fossilization:** The subject ceased the phenomenon of speaking rapidly whilst violating core structural rules. Upon encountering complex sentences, she learned to make a "micropause" (a microcognitive buffer zone), enabling System 2 to retrieve L1–L2 contrastive rules prior to articulation.
3. **Cultivation of translanguaging competence:** The 4.5-second hesitation and epistemic rupture during translation (as chronicled in Empirical Data 2) vanished entirely. The subject began exhibiting a conscious, fluid capacity for switching between rigorously reasoning out deep concepts via the L1 and accurately producing speech via the L2.

Conclusions Drawn from the Clinical Empirical Study

The clinical profile of Subject L provides decisive empirical evidence that unequivocally validates the central thesis of this research: The repudiation and severance of the L1 roots in adult learners absolutely does not engender freedom or direct thinking in the L2. Conversely, it imprisons the learner within the hallucination of surface fluency and precipitates linguistic fossilization. Only when the L1 is reinstated, functioning as cognitive scaffolding and a contrastive frame of reference via translanguaging competence, can the learner shatter the superficial illusion to ascend toward holistic epistemic apperception.

Appendix B
Pedagogical Operationalization and Neurocognitive Architecture of the "Language Apperception" Model

Author's Contextual Note

The following document delineates the operationalization model of the language apperception pedagogical intervention protocol, as implemented within the critical case study (Appendix A). This methodological framework constitutes an interdisciplinary synthesis amalgamating: (1) Eastern phenomenological philosophy (specifically, the cognitive progression through the Five Skandhas/Aggregates: Sensation – Perception – Form/Nature – Volitional Action – Consciousness), (2) cognitive development theory (Piaget, Vygotsky), and (3) cognitive neuroscience. The instructional practicum materials are structurally engineered in a bilingual format (L2–L1) to systematically optimize the scaffolding utility of the L1. The large-scale quantitative measurement of this model's efficacy will form the focal point of a future dedicated monograph.

The pedagogical operational trajectory is rigorously standardized across four core phases.

1. **Linguistic Sensation (Sensation and Affective Priming): Reception & Cognitive Initiation**
   - Pedagogical objective: To lower the "affective filter", shatter nascent psychological barriers, and ignite epistemic curiosity toward the exogenous semiotic system.
   - Operationalization:
     - *Microscanning:* The learner conducts a panoramic scan of the bilingual symmetrical structure (L2–L1) and the phonetic transcription system (Pinyin) to establish a cognitive safety zone.
     - *Multisensory input:* Fusing auditory stimuli (phonemic audition) with visual stimuli (recognition of Chinese characters' morphology/imagery).
     - *Emotional anchoring:* Mandating the learner to proactively associate novel epistemic inputs with cultural lived experiences or personal intrinsic motivations, thereby forging an internal psychological launchpad.
   - Neurocognitive basis: This phase precisely targets the stimulation of the hippocampus via the elicitation of positive affective responses. Aroused interest facilitates the generation of theta (θ) wave frequencies, thereby optimizing synaptic plasticity to prime the brain for the robust encoding of novel information.
2. **Linguistic Perception (Cognitive Encoding and Perception): Cognition and Active Recall**
   - Pedagogical objective: To transmute data from short-term memory into working memory, crystallize pattern recognition, and establish cognitive schemas.
   - Operationalization:
     - *Chunking:* Deconstructing complex linguistic architectures into granular semantic units to mitigate cognitive overload.
     - *Active recall:* Categorically repudiating the passive "visual recognition" of characters. Requiring the learner to execute data-masking maneuvers and deliberately reconstruct the data entirely from memory (specifically via manual handwriting) to intentionally induce cognitive strain.
     - *Initial assimilation:* Prompting the learner to discern surface-level morphological convergences and divergences between the L2 signifier and the corresponding L1 concept signified.

- Neurocognitive Basis: Counteracting the forgetting curve via spaced repetition and the strategic induction of "desirable difficulties". Manual handwriting makes a physical imprint upon the cerebral cortex via muscle memory, profoundly fortifying neural associative pathways.

3. **Linguistic Form/Nature (Form Comprehension and Deep Processing): Essential Comprehension and Contrastive Analysis**
   - Pedagogical objective: To achieve dual comprehension, definitively decoding the profound etiology (the "why") lurking beneath superficial grammatical forms (the "what") via direct cross-illumination with the L1.
   - Operationalization:
     - *Contrastive analysis:* Anatomizing translanguaged sentence paradigms (L2 → L1). Using the L1 as an epistemic lens to perceive disparities in word order, functional particles, and the culturally embedded cognitive habits of the L2.
     - *Etymological tracing:* Analyzing the morpho-genetic roots of semiotic structures (e.g., Chinese radicals) to intimately apprehend the evolutionary trajectory of the language, thereby transmuting rote learning into a profound contemplation of causal logic.
     - *Cultivating linguistic intuition (linguistic intuition/Sprachgefühl):* Projecting L2 concepts into their authentic sociocultural context to empathetically grasp the micronuances of expressive articulation.
   - Neurocognitive basis: This marks the pivotal transition from rote learning to meaningful learning. It critically activates the analytical cognitive faculties of the prefrontal cortex. The profound comprehension of foundational logic acts as the catalyst for transmuting declarative knowledge into highly automated "procedural memory".
4. **Linguistic Volition and Consciousness (Volitional Action and Linguistic Apperception): Translanguaging and Holistic Apperception**
   - Pedagogical objective: To unequivocally eradicate negative transfer, elevate the language into a state of reflexive automaticity, and attain the capacity for fluid, frictionless switching between the dual linguistic systems.
   - Operationalization:
     - *Translanguaging as a debugging tool:* Executing back-translation exercises to unmask vague comprehension, concurrently deploying high-velocity forward-translation (L1 → L2) to forge the capacity for precise linguistic production predicated upon meticulously calibrated logic.
     - *Contextual production:* Proactively integrating "debugged" structures into authentic, naturalistic communicative contexts, encompassing simulated scenarios or profound inner speech monologues.
     - *Metacognitive regulation:* Engaging in rigorous self-auditing, audio recording, cross-referencing, and assimilating corrective input (establishing a feedback loop) to relentlessly refine expressive precision.
   - The ultimate telos (apperception): This is the crucible wherein linguistic apperception fully manifests. Absolute automaticity is established; the learner is no longer internally lacerated or cognitively diluted, but rather ascends to the sublime state of "dynamic bilingualism". In this enlightened realm, they deploy their L1 as an unshakable launchpad, engaging the L2 as an extended heuristic framework to navigate complex intercultural realities.