ORIGINAL ARTICLE

Praxeology, humanism, equity, and mixed methods: Four pillars for advancing second language acquisition and teaching

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Abstract

In this article, we present our vision of a transformed second language acquisition and teaching (SLA/T) disciplinary community that approaches second language (L2) education through four pillars. The first pillar is praxeology (i.e., the study of human action) to highlight the sociocontextually emergent nature of L2 competence. It locates the emergence of L2 grammar and interactional competence in humans acting conjointly with others with and through their L2 across a large variety of social situations and transnational, transcultural, and translingual spaces. The second pillar, humanism, calls for a complex dynamic systems theory–informed understanding of individual differences, with learner agency as a central driving force. The third pillar is equity to confront the field with the recognition that language learning is profoundly inequitable and that most present forms of inequity and injustice, including language-related inequities, are rooted in coloniality, a matrix of power invented in the late 15th century by European White settlers to ensure the success of colonial domination. Mixed methods research, the fourth pillar, emphasizing emic perspectives, can make findings generalizable and transferrable for practitioners and policymakers, while also revealing the nuanced voices of underrepresented language learner populations. We close by illustrating our vision with the vignette of a language learner and calling researchers to use these four pillars in collaborative pursuits of this SLA/T synergy.

Second language acquisition (SLA) researchers have undertaken many efforts to clarify and broaden
the scope of disciplinary inquiry. Particularly over the last 10 years, work has burgeoned that strives to
produce interdisciplinary understandings of learners' multilingual development and use, and that more
fully accounts for the social and educational dimensions of language learning (e.g., Douglas Fir Group,
2016; Duff & Byrnes, 2019). In this joint contribution, we hope to build on the education axis of these
efforts and construct an even broader conceptualization of research into second language acquisition
and teaching (SLA/T) that approaches the learning and teaching of languages on four pillars we will
outline below: praxeology (i.e., the study of human action), humanism, equity, and mixed methods
(MM). Our collective effort to synergize SLA/T research is guided by education philosopher Gert
Biesta's (2020) problematization of the dominant discourses about learning in educational research,
which often treats the term *learning* as:

> a rather empty process-term that doesn't say much—if anything at all—about what the
> learning is supposed to be *about* and *for*. Yet these questions are crucial for educa-
> tion, because the point of education is never that students simply learn—they can do
> that anywhere, including, nowadays, on the Internet—but that they learn *something*,
> that they learn it *for a reason*, and that they learn it from *someone*. (p. 91, emphasis in
> original)

The challenge to articulate what learning is supposed to be about and for, as Biesta (2020) put it, may
not be fully appreciated by all SLA/T researchers. Through our collective engagement in this article,
we hope to persuade readers of the importance of taking on this challenge and articulating impulses
for SLA/T in the 21st century along praxeological, humanistic, equity-oriented, and MM lenses that
illuminate the about and for of SLA/T research.

Some terminological qualifications are in order. In explicit recognition of the equal importance we
lend to teaching as well as learning, we will use "SLA/T" to refer to the research community we
affiliate with, but we also alternate with "second language (L2) education" as the scope in focus for
us. We understand that the word "second" is highly problematic (as is its binary polar, "first" language
or "L1"). Indeed, we agree with Dewaele (2018) that "Lx" is probably a much better term, since
languages many learners learn may not be "second." Nevertheless, the term has been used to define
the disciplinary space we operate in, and consequently, we find ourselves unable to discard it. For this
reason, we have used "second" in "SLA/T" and "L2 education."

We present our understanding of multilingual learning, and we use our own experiences and voices,
as researchers but also as critical citizens, to articulate our conceptual foundation for researching L2
education. The article is organized as follows. First, Pekarek Doehler and Eskildsen bring together
conversation analysis (CA) for SLA, interactional linguistics, and usage-based (UB) SLA to present
a praxeological perspective on SLA/T that highlights the sociocontextually emergent nature of
interactional competence as the linguistic goal of L2 education. Next, Gao and Zheng propose a
complex dynamic systems theory (CDST) perspective to reorient individual differences (IDs) research
in SLA/T for the holistic growth of agentic individuals, which they submit as the humanistic goal of
L2 education. This is followed by Ortega's offering of decolonial thinking as a lens that can guide
justice and equity goals for SLA/T research. In her section, Sasaki further recommends MM research
as the methodological approach that—aiming as it does for both generalization and transferability
of empirical findings—is ideally suited to serve the kind of SLA/T synergy we collectively envision
here. We close the article with the language learning biographical vignette of a multilingual learner

who we call Xiao Qiang, as a way to bring together the four pillars. By engaging with the learner's narrative, we bring together our hopes for a decolonial pedagogical ethos that sees L2 education as facilitating both the interactional competence needed to act in the social world in different languages and the growth of agentive individuals with ever-emergent multilingual competences. We also call for a collaborative effort to use a combination of methods in pursuing the SLA/T synergy.

PERSPECTIVE 1 (BY PEKAREK DOEHLER AND ESKILDSEN): EMERGENT L2 GRAMMARS FOR SOCIAL ACTION: TOWARD A PRAXEOLOGICAL PERSPECTIVE TO SLA/T

L2 education needs to primarily focus on language learners' becoming competent communicators—competent social agents—across a variety of social situations. Therefore, it is critical for us to articulate what kind of competence should be conceptualized for L2 education and how language learners develop such competence.

How we came to think the way we think

A praxeological perspective views the learning of an L2 as rooted in people's acting in the social world; it is grounded in the study (Ancient Greek "logia") of human action (Ancient Greek "praxis"), that is, of humans acting conjointly with others through their L2. Based on this understanding, we, Simona Pekarek Doehler (SPD) and Søren W. Eskildsen (SWE), propose a perspective that brings together conversation analytic SLA (CA-SLA), with its focus on L2 interactions; interactional linguistics, with its focus on grammar-in-interaction among "competent" (L1) speakers; and UB SLA, with its focus on usage as a driving motor for L2 development. By doing so, we see the praxis of L2 (i.e., socially situated language use) as a matter of people minutely coordinating their actions with others, turn by turn, sequence by sequence, and using their L2 resources for accomplishing actions and achieving shared understanding, and we understand language and its development as rooted in people's repeated social–linguistic experiences over time.

We came to such a perspective on SLA/T through different paths. I (SPD) started from an interest in the microdetails of L2 speakers' interactional conduct and how that conduct changes over time as part of their increasing interactional competence. That was at a time when SLA/T was focused on the individual learner and their language processing, while socially oriented perspectives were only just starting to emerge. I progressively came to combine my interest in L2 with my concern with grammar-for-interaction (speakers' use of grammatical resources for organizing social interaction), investigating how speakers develop an L2 grammar-for-interaction as an integral part of their interactional competence. This led me to bring into the tradition of CA-SLA insights and methods from interactional linguistics, another line of research firmly grounded in CA. I (SWE), in turn, come from a background in UB linguistics. My research was originally concerned with exploring the exemplar-based nature of L2 construction development. Through empirical analyses, I discovered how situated interaction and the specific functions achieved through the use of specific linguistic constructions have a profound influence on such development, leading me to view L2 development as a matter of interactional competence. Throughout the years and multiple discussions, we started to see the richness that lies in crossing our perspectives—but also the challenges it entails. This is how we moved toward the perspective that we outline in what follows (for more details, see Pekarek Doehler & Eskildsen, 2022).

Underlying theories and concepts

The basic position on which we ground our perspective can be captured by the following quote: "Linguistic forms (…) can be thought of as recurrent and sedimented ways of accomplishing specific social actions in talk-in-interaction" (Couper-Kuhlen, 2014, p. 624). This statement has its roots in interactional linguistics and, relatedly, CA. Although the assumptions and methods of this research tradition may differ from other paradigms, the statement shows affinities with the basic tenets of UB approaches to SLA/T, as captured for instance in the following: "Language acquisition emerges through interaction with other human beings within a social context" (de Bot et al., 2007, p. 11). These two quotes converge on the idea that linguistic structures emerge from use and grow out of repeated (co-)occurrences in use. Human language is shaped in and through social interaction (Douglas Fir Group, 2016; Firth & Wagner, 2007).

While this principled position might be shared by several research paradigms and resonates with earlier conceptualizations of language as arising from social action (notably Halliday, 1979), the fact is that systematic attention to the microlevel of social activity is still scarce in SLA/T. An exception is CA-SLA, which takes people's acting in the social world as the starting point for investigating L2 development, based on a conceptualization of language as one resource among others through which we accomplish actions. Yet, CA-SLA has paid only marginal attention to precise linguistic features in L2 interactional competence development. Therefore, the epistemological question we ask is this: How can we study the developmental trajectories of L2 resources as they are "used for social action" (Larsen-Freeman, 2006, p. 593) and become "recurrent and sedimented ways of accomplishing specific social actions in talk-in-interaction" (Couper–Kuhlen, 2014, p. 624)?

We propose that the type of microanalytic, sequential, qualitative perspective characterizing both CA-SLA and interactional linguistics can be fruitfully combined with UB frameworks to scrutinize how linguistic resources sediment experientially, in and through social interaction, to form emergent L2 grammars for social action.

CA-SLA follows a range of methodological principles that stem from CA and are shared with interactional linguistics. The analysis is based on audio- and video-recorded nonelicited, naturally occurring interactions (including classroom data). The data are transcribed and then subject to turn-by-turn qualitative analysis, attending to the verbal, paraverbal, and bodily features of people's conduct, which may be combined with selective quantification.

Based on these methodological cornerstones, longitudinal CA-SLA (Deppermann & Pekarek Doehler, 2021) sets out to document change across time in speakers' practices and resources for social interaction. It has conceptualized L2 learning as the development of *interactional competence*, that is, a set of "methods" in the ethnomethodological sense of the term (Garfinkel, 1967) for the locally contextualized accomplishment of social actions. To date, we have strong evidence that the development of interactional competence involves a progressive diversification of the methods through which people accomplish social actions such as opening a story, disagreeing, or taking turns, allowing them to deploy conduct that is increasingly adapted to the situations and the coparticipants at hand (Skogmyr Marian & Balaman, 2018). Yet, for a long time, a key question had remained open: What is the role of linguistic resources in that development? Only recently have a few CA-SLA researchers turned to longitudinal investigations of the development of an L2 grammar-for-interaction (Pekarek Doehler, 2018), that is, linguistic resources for accomplishing and coordinating actions. It is exactly in this field that we argue that CA-SLA, interactional linguistics, and UB linguistics can be fruitfully combined.

While CA has its roots in sociology, UB linguistics owes to Langacker's (1987) cognitive grammar. It is rooted in a view of language as an inventory of cognitive schemas variably referred to as form–meaning pairings, symbolic units, or constructions. They are described along a continuum of specificity (from fixed formulas to abstract schematic templates) and complexity (from morphemes to full utterances). Learning a language is seen as an exemplar-based process of extracting regularities among linguistic patterns in a slow and piecemeal fashion along a trajectory of increasing schematicity

from formulas to abstract representations (Ellis, 2002; Tomasello, 2003). Even though UB linguistics places use at the center of language emergence, contextual features of language use have remained outside of the scope of UB SLA, which has predominantly extracted linguistic constructions from their situated use and used descriptive statistical methods to document development (e.g., Römer & Berger, 2019).

In short, our proposition of a combined perspective on SLA/T is grounded in the recognition that there is remarkably little research that combines an interest in the dynamics of naturally occurring language use in interaction with attention to the local emergence and over-time sedimentation and routinization of linguistic structures through language use. Notable exceptions are Eskildsen (2011, 2012, 2020), who has explored how locally contextualized interaction influences long-term L2 learning, and Pekarek Doehler and Balaman (2021) as well as Pekarek Doehler and Skogmyr Marian (2022), who have shown how repeated social–interactional language use may lead to the routinization and/or functional diversification of L2 constructions.

Empirical focus

Bringing CA-SLA, interactional linguistics, and UB-SLA together enables us to investigate the interplay between linguistic–semiotic resources and interactional competence as they codevelop in L2 learning. We examine how (spoken) language is designed by specific L2 learners in particular settings, in interactions with precise others, to be deployed as responsive to prior turns at talk, and as initiating next turns at talk. We scrutinize how L2 grammar emerges as a resource to accomplish contextualized social actions and achieve intersubjectivity, and we identify how repeated confrontation to precise sociointeractional needs and the related use of linguistic resources leads, over time, to a sedimentation, adaptation, and functional diversification of exactly these resources.

For instance, in an ongoing study, we are looking at how L2 speakers' functional uses of English "I don't know" and French "je sais pas [I don't know]" develop over time. Results show a trajectory from exclusively "literal" uses (as claims of no knowledge) at an elementary proficiency level, through hedges, to interaction-organizational-marker-like uses at the upper intermediate level. Excerpt 1 shows a hedging use—indexing approximation—in English; we have many similar cases in French.[1]

EXCERPT 1

Carlos_2002_Apr_02_2.46.35

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01 THU: is um Roberta .hh hou large um or small

02      (4.5)

03 CAR: uh (1.2) it is: (2.1) uh >I don't know< large.

04      >large big< (1.3) house
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The speed-up of tempo on "I don't know" (signaled by ><) and ensuing prosodic backgrounding, as well as its insertion into the mid-syntactic trajectory, indicate its marker-like status: The expression here works as a hedge downgrading the speaker's commitment to his affirmation. (Numbers in parentheses indicate pauses in seconds.)

Excerpt 2 in turn illustrates, with more advanced speakers, an interaction-organizational use of the reduced French form "chais pas [dunno]" for opting out of a long telling sequence. Again, we find related cases in English.

EXCERPT 2
Julie_100313

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01 JUL:  puis on a parlé toujours de suisse, et j'ai dit ah bientôt

         and we talked still about Switzerland and I said oh soon

02       je veux aller en suisse, et puis a dit ouais c'est bien,

         I want to go to Switzerland and then said yeah that's good

03       c'est cher c'est ((laughter))

         it's expensive it's

04 MAM:  mm

05       (0.9)

06 JUL:  (avait parlé)

          (had talked)

07       (4.8)      ((TV noise in the background))

08 JUL:  elle est très sympa.

         she is very nice

09       (1.0)

10 MAM:  ah

11       (4.4) ((TV noise in the background))

12 JUL:  al(h)ors (.) chais pas.

         so       dunno

13 MAM:  (alors à Pâques) chais pas ce qu'on va faire

         (so during Easter) dunno what we're gonna do
```

Mam displays no orientation to Julie's telling having come to an end. She produces a minimal response (4) and a brief change-of-state token "ah" (10) but for the rest remains silent: Lines 7, 9 and 11 amount to more than 10 s of silence. Julie then redoes a closing by means of "al(h)ors (.) chais pas [so dunno]" (signals final falling intonation), upon which Mam opens a new topic (13), thereby treating Julie's "chais pas" as a means of closing the telling.

The two excerpts, taken from a large collection of cases over extended periods of time, illustrate how the speakers' use of the L2 focal expressions develops longitudinally from "literal" uses through hedges to interaction-organizational uses. They also highlight the inextricable intertwinedness of interactional and linguistic L2 development as well as its contextually situated nature.

Implications

Combining CA-SLA, interactional linguistics, and UB-SLA allows us to shed light on two key questions: In what ways do linguistic structures shape L2 speakers' ability to interact? In what ways do L2 speakers' interactional environments and experiences shape their L2 grammar? The combined perspective allows us to locate L2 learning in language users' lifeworlds to understand how language emergence is configured locally—starting from the first instances of use—but then evolves over iterative encounters with others over time. It opens a window onto L2 learning as interactional usage–driven development and routinization of resources for social action.

Our empirical observations hold several implications for language education (Eskildsen, 2022; Pekarek Doehler, 2021). A praxeological understanding is in line with pedagogical developments over the past three decades that revert the logic according to which one first needs to know a language and then one can interact in it, and move away from comparing the learner's talk—in a deficit perspective—to an idealized "native" speaker. Still, enhancing students' ability to engage in L2 communicative interactions—as a primary site of language learning—represents a central challenge for L2 education around the world. A key desideratum for the teaching (and testing) of interactional competence is to shift the focus of attention from the individual learner's production to what learners accomplish jointly with others (the teacher; co-students). Curricula, as well as locally implemented pedagogies, also need to provide increasing opportunities to complement students' classroom work with out-of-classroom language experiences, but also to bring students' real-world experiences back into the classroom for reflective and teaching purposes. Ultimately, we need to forge a coherent epistemology of language learning that builds a bridge between research findings on how language emerges from contextualized use and the affordances, exigencies, and needs of language pedagogies.

PERSPECTIVE 2 (BY GAO & ZHENG): A COMPLEX DYNAMIC SYSTEMS THEORY–INFORMED THEORIZATION OF LANGUAGE LEARNER AGENCY AS A HOLISTIC HUMANISTIC GOAL FOR SLA/T

One consequence of the focus on the learner as a social agent, as outlined by Pekarek Doehler and Eskildsen above, is that L2 education needs to focus on language learners' development of interactional competence, but it should also focus on the development of language learners as whole persons. Learners are thus seen as whole people who are learning and using linguistic and nonlinguistic resources to navigate in transnational, transcultural, and translingual spaces. As a result, it is equally critical for us to articulate how language learning mediates the growth of language learners as whole persons. Indeed, such a humanistic goal of L2 education has become highly relevant in light of technological developments such as the rise of generative artificial intelligence (AI) tools, which many fear present existential risks for different kinds of people striving for self-development. For this reason, we (Gao and Zheng) contend that the notion of agency be used to synergize IDs research and promote a holistic, humanistic goal for SLA/T.

How we came to think the way we think

Working in two different educational contexts (i.e., Yongyan Zheng in Shanghai, China, and Xuesong Gao in Sydney, Australia), our shared Chinese heritage has enabled us to approach SLA/T with rich cultural understanding. In the Chinese cultural tradition, learning is seen "as the necessary pathway toward moral striving—self-perfection, which is held as the paramount purpose of human lives and reachable by all" (Li, 2001, p. 130). The pursuit of self-perfection is not "aimed at perfecting oneself" but it is to "find affinity with the ultimate aim of humanity" or achieve the unity of humans

and nature (Liu, 2007, p. 71). For this reason, the pursuit of self-perfection is a never-ending process, and consequently, learning in the Chinese tradition is a lifelong process. As the Chinese proverb says, it takes 100 years to grow a person while it takes 10 years to grow a tree [十年树木,百年树人] because very few people live longer than 100 years, and we learn as long as we are alive. In other words, this Chinese proverb tells us that we learn, therefore we are. Studies on Chinese students' conceptions of learning in different Chinese contexts (e.g., the Chinese mainland, Taiwan) confirm that learning and education are popularly conceptualized by students in terms of "cultivation" and "growth" (Jin & Cortazzi, 2008, p. 183). We regard SLA/T as an integral part of education, and hence, we use "L2 education" in this section. We also believe that language teachers not only teach books [教书] but also cultivate people [育人] in language classrooms (Hui, 2005; Jin & Cortazzi, 2008). For this reason, it is critical for SLA/T researchers to pay attention to the kind of people that emerge from language education programs and language classrooms. Our envisioned goal of L2 education is to foster an inner desire [好学心] for lifelong learning among language learners (Li, 2001). Such inner desire motivates language learners to have dispositions and display behaviors that are characteristic of agentive learners as documented in SLA/T literature such as Larsen-Freeman et al. (2021).

We believe that such a vision of L2 education enables us to articulate the value of language learning and to counteract concerns about recent technological developments, such as the rise of generative AI tools. The need to learn languages for transactional use (e.g., information exchange) may be reduced because of the widespread use of technology that facilitates communication across languages, making it more pressing for L2 education to shift from the teaching of language knowledge to the growth of language learners as whole persons. In SLA/T, research on IDs has traditionally explored what contributes to variations in language learners' learning attainment and identifies the extent of the variation that can be accounted for by particular ID variables (Gregersen & MacIntyre, 2014). Over the past decade, however, the research on IDs in SLA/T has become increasingly granularized and focused on specific ID constructs in isolation (e.g., grit, motivation, resilience). Unfortunately, individual learners in ID research have been dissected into a range of variables that operate independently from the specific context in which they are situated. We believe it is increasingly important to engage with IDs in a different way so that ID research will help SLA/T researchers and language teachers articulate the value of language learning in relation to language learners' growth as whole persons. For instance, language learners as whole persons need to develop important attributes and dispositions such as competence beliefs, self-efficacy, and goal setting, which are closely associated with language learner agency (Larsen-Freeman et al., 2021). Thus, we argue that it is critically important for language education programs to develop agentic and lifelong learners who are resilient, tenacious, and highly motivated; who can regulate their learning processes and create learning opportunities for themselves; and who embark on a lifelong learning process (Larsen-Freeman et al., 2021).

To advance a whole-person view of language learners, we propose adopting a CDST perspective to highlight the relational, emergent, and situated nature of language learner agency (e.g., Larsen-Freeman, 2019). In advancing complexity theory, French philosopher Edgar Morin (2008) called for "a new kind of thinking that reconnects that which is disjointed and compartmentalized, that respects diversity as it recognizes unity, and that tries to discern interdependencies" (p. vii). In a similar vein, Dörnyei (2009) explicitly objected to conceptualizing IDs in a modular manner, pointing out that identifying discrete ID factors and investigating how a single factor affects language learning has limited value. Instead, he called for a systems approach to "identifying higher-level amalgams or constellations of cognition, affect, and motivation that act as 'wholes'" (p. 235). Dörnyei (2017) further proposed "a new multi-layered model of learner characteristics which consists of a three-tiered framework: dispositional traits, characteristic adaptations, and integrative life narratives" (p. 79). We draw on CDST for its transdisciplinarity and holistic thinking and aim to develop a synergetic view of IDs through the lens of learner agency.

A complex dynamic systems theory perspective on language learning

Complex systems have several defining characteristics: First, a complex system is relational; it involves multiple parts interacting together through dynamic, nonlinear processes that lead to emergent patterns over time (Overton, 2013). A relational system is, therefore, an integrated whole, with essential components that cannot be reduced to their constituent parts (such as individual ID variables), and thus, the system defies reductionist thinking or simplistic linear cause-and-effect linearity. Second, a complex system is emergent. The behavior of the system emerges through the multilayered interaction among its components and between the system and the context in which it is situated. The system's emergent behavior is not a result of a hard-wired preprogrammed mechanism but rather stems from the interaction between the self-organizing system and its immediate environment, which is contextually constrained and takes place in real-time. Third, a complex system is situated both spatially and temporally. This situatedness is related to the concept of coordinative structures, which refers to a temporary relationship of local system components connected to the environment, which enables adaptive interactions (Kelso, 2014; Papi & Hiver, 2020). For example, classroom language learning takes place when the learner "softly assembles" all available contextual affordances, including verbal, material, and social resources provided by their teachers and classmates, to respond to real-time communicative demands (Kelso, 2014, p. 492). In addition, the complex system is temporally nested in multiple timescales and treats language learners as agents "with different orientations, grounded in social relationships with other people, and in keeping with historical contingency" (Larsen-Freeman & Cameron, 2008, p. 158).

The CDST view inherently relates to the ecological view, as ecology represents a complex system in its own right (Larsen-Freeman, 2019). Meanwhile, the CDST view is also unique in addressing complex systems holistically. The behavior that emerges from a complex system is more than the sum of its parts; instead, it is a dynamic whole, in which a small change to one component at one time may result in significant consequences in the long term, and these changes are not linearly predictable.

Toward complex dynamic systems theorization of language learner agency

In the SLA/T literature, language learner agency has been theorized from multiple perspectives, which can be broadly grouped into four categories: (a) agency as an intentional act (Bandura, 2001), (b) agency as a socioculturally mediated capacity (Ahearn, 2001), (c) agency as a discursive practice (Kayi-Aydar et al., 2019), and (d) agency as a phenomenon or doing (Tao & Gao, 2017). We draw on the ecological conceptualization of agency to develop a trans-perspective that captures the essence of CDST to explore language learners' agency as an emergent phenomenon within a complex system (e.g., Larsen-Freeman, 2019).

The ecological perspective defines agency as a "doing," as something "achieved and not as merely (…) a capacity or possession of the individual" (Priestley et al., 2012, p. 197). Drawing on life-course theory, ecological theorists propose a subject-oriented developmental perspective to replace the sociocultural approach, so that an understanding of agency can be achieved by situating a subject's actions not only in context but also in their life history. That is, an individual's actions are based on their social environment, but also on their prior experiences, which requires more attention to be paid to individual agents, including their intentionality, beliefs, and identities (Billett, 2006).

The perspective advanced by Eteläpelto et al. (2013) later evolved into an ecological perspective on agency that features a spatial–temporal dimension and posits agency as a temporally situated achievement. The ecological perspective acknowledges that agency is not only contextually afforded or constrained, but it also has a temporal dimension and describes agency as the "outcome of the interplay of iterational, practical-evaluative, and projective dimensions" (Eteläpelto et al., p. 34). More specifically, an individual's past experience, present conditions, and future goals form an iterative

relationship in their performance of agentic choices and actions. If the temporal dimension is considered, then when agency is individual and contextually resourced, it becomes something emergent in a particular context rather than representing an individual capacity.

The CDST-informed perspective we propose here should cross boundaries, both in the physical sense of space and time and in the sense of boundaries between fields of knowledge and disciplines that we traditionally inhabit (Hawkins & Mori, 2018). This perspective mirrors the transnational, transcultural, and translingual space in which language learners learn and use linguistic resources. We shall now elaborate on how we construct a holistic view of language learners through the lens of agency.

On the micro level, a language learner is first and foremost a translingual and/or intercultural language user. While the ecological perspective allows for a historical perspective, we can also draw upon a praxeological perspective to conduct a fine-grained micro-level analysis of their linguistic practices or phenomena of doing with language as manifestations of language learner agency (e.g., Deppermann & Pekarek Doehler, 2021; Larsen-Freeman, 2006). Of relevance to language learner agency are also emerging theories such as translanguaging (Li, 2018) and transsemiotizing (i.e., the use of semiotic resources such as visuals and body language; Lin, 2019). These concepts may offer a useful perspective to operationalizing theories of agency to examine how language learners make agentic linguistic choices and take action creatively and critically. Moreover, such a lens enables us to move beyond textual analysis and include additional social semiotics in our analysis.

On the macro level, a language learner is also an agentive human being, making the holistic thinking advanced by the CDST perspective relevant. We recommend researching language learner agency in relation to other ID variables, such as self-efficacy and goal-setting, considering that agency often does not operate in isolation. From the CDST perspective, while reductionist research on ID variables has successfully investigated simple linear causal links, this inherently mechanistic view risks undermining the interdependence and interactions among the components of a complex system. In turn, the reductionist viewpoint offers little help in sustaining the holistic development of agentive and lifelong learners. A whole-person view of language learners, with agency as its foundation, is therefore useful in synergizing the existing granularized and isolated ID research findings for the development of pedagogical efforts to promote the growth of language learners as whole persons (Gao, 2010; Ushioda, 2009).

Implications

Exploration of learner agency is critical to language education. Language teachers need to understand what language learners aspire to achieve in learning a language and what can be achieved through learning the language as they work with language learners of diverse linguistic and cultural backgrounds. For decades, language teachers have been motivated to focus on the teaching of language as a system of linguistic knowledge and skills (e.g., grammar and vocabulary) for communication, but it has become critical for language teachers to help learners work toward what they want to achieve through language use, as reflected by Kramsch's words in an interview (Kramsch & Zhu, 2022):

> My field, which is language teaching, has often been looking at language in ways that don't do justice to the fullness of language as I have experienced it. My readings in applied linguistics and other fields have shown me that there's so much more to language than just communicative competence! People don't want only to make correct sentences, they want to be taken seriously, not just heard but listened to and respected. (pp. 211–212)

To achieve this, ID-related research should go beyond explaining differences in language learning achievements and further explore how ID variables and learner agency are mutually supportive factors in language learning and development. Ultimately, research on ID variables must shift focus from

explaining differences in language learning achievements to the role of language learning in supporting the development of agentive lifelong learners.

PERSPECTIVE 3 (BY ORTEGA): FINDING PURPOSE IN SLA/T RESEARCH: A DECOLONIAL PERSPECTIVE

So far, we have argued that L2 education needs research that increases our understanding of how to foster the development of emergent interactional competence and agentic language learners. In these synergetic efforts, we also need SLA/T research that can address head-on equity and justice in lifelong language learning projects. This, we argue, can be best achieved through a decolonial lens onto SLA/T that would support personal and societal multilingualism for all, beyond elite populations and privileged geographies.

How I came to think the way I think

I (Lourdes Ortega) have always wanted to know what "purposes" the community of SLA/T ought to set for our research to be not just "good" but meaningful. This quest has been influenced by my biography. I occupy an ambivalent place of theorizing or locus of enunciation. I am a Westerner both by upbringing and because my workplace is US academia, but I am also a double Southerner—being from southern Spain as well as southern Europe—perhaps even a triple Southerner if I count my close relationship with Greece. I am intimate with direct and vicarious linguicism (i.e., the use of language difference as a means for the production and reproduction of power inequities; Skutnabb-Kangas, 2015). These experiences of linguicism entered my life when I became a language teacher, and they later became a regular part of life as an international student and, for the last some 25 years, as a foreign-born, nonnative-English-speaking scholar in US academia.

Initially, I found purpose in contributing to what is nowadays known as instructed SLA, with studies on the effectiveness of grammar instruction, task-based language teaching, and the L2 development of complexity, accuracy, and fluency. Through the lens of ethics, I gradually discovered the value of epistemological diversity and the perils of the monolingual bias and native-speakerism. All these threads are reflected in the SLA textbook I wrote in 2009 and in my call for a bilingual turn for SLA/T research in a plenary address at the American Association for Applied Linguistics in 2010. Around the same years, I began interacting with a group of like-minded SLA/T scholars, led by Dwight Atkinson and James Lantolf, resulting in the publication of The Douglas Fir Group (2016). I also invested deeply in learning about child bilingualism. This led me to a transformative friendship with seminal child bilingualism scholar Annick De Houwer, culminating in a handbook where we treated child and adult language development as two sides of the same phenomenon: bilingualism (De Houwer & Ortega, 2019). Then, in 2016 came the Brexit referendum and the US elections. Ethics, epistemological diversity, anti-native-speakerism, and bilingualism were no longer sufficient in my mind. Instead, I felt compelled to imagine the object of study as inequitable multilingualism and the purpose of SLA/T research as achieving social justice for language learners. However, in 2019, my understanding of social justice was transformed through a 4-year transnational grant with Elizabeth Lanza and her MultiLing Center at the University of Oslo and a vibrant group of colleagues in South Africa. The funding was to enable regular research visits, conferences, and workshops over 4 years, with the goal of sharing our work on multilingual learning and planting seeds for potential collaboration. This prolonged engagement with the South African colleagues was eye-opening, even more so because their decolonial thinking was far from homogeneous, shaped by varied institutions, geographies, and identities within South Africa. In the middle of it all, the global pandemic forced me to confront the central role of race in shaping inequities, in language learning as in everything else in our world. This

collaborative and relational learning through times of crisis brings me to the perspective on SLA/T research that I believe is needed today.

The need to decolonize

The perspective on SLA/T research that I believe is needed is, quite simply, a response to two recognitions made available by decolonial thinking: One, language learning is profoundly inequitable, and two, most present forms of injustice, including language-related ones, are rooted in European colonialism dating back to the late 15th century, such that we must overcome colonial knowledges if we hope to overcome those inequities. I will offer illustrations of the first recognition later. Here, I elaborate on the second recognition. I draw largely on decolonial scholars from Latin America (e.g., Grosfoguel, 2013; Mignolo & Walsh, 2018; Quijano, 1992; see also De Fina et al., 2023).

Colonialism and empire are ancient, as the archeological record shows (e.g., Boozer et al., 2020). However, European colonialism was of an unprecedented scale. Consider that Europe represents only about 8% of the planet's landmass, yet by the early 19th century, White Europeans had conquered 84% of the globe, including much of the Americas, Africa, and Asia (Hoffman, 2015). Colonialism lives on in the knowledge systems that Peruvian sociologist Aníbal Quijano (1992) called "coloniality," organized into a matrix of power invented by White settlers to justify and naturalize White domination. As Quijano explained, the colonial matrix of power includes a hierarchy of races and the social organization of labor into classes (e.g., slaves until abolition, or salaried workers in the present day). Lugones (2007) added binary gender to it. Coloniality rests in the dehumanization of the colonized, who—once constructed by the colonizers as subhuman—can therefore be exterminated, studied, or assimilated into Whiteness for their own good—assimilation being justified as soul salvation, economic development, or lifestyle modernization (Mignolo & Walsh, 2018). Coloniality has been used to maintain domination to this date, even if it has metamorphosed to look quite different in recent decades. Today, there are no settler colonies, and the neocolonial powers vying for control are no longer only grounded in the West (Mignolo, 2023). Present-day coloniality dwells in globalization and its unfulfilled promise of a worldwide integration of finance, trade, information, and political structures that would benefit everyone; instead, inequalities within and across nation-states have widened (Steger et al., 2023).

Importantly, the knowledge systems of coloniality are elevated to universal knowledge in order to maintain domination over the colonized, and this universalization is achieved through epistemicide, that is, the destruction of all other (Indigenous, Southern) knowledges that have existed and continue to exist outside of coloniality (Grosfoguel, 2013). From a decolonial perspective, scientific knowledge is itself also an invention of coloniality (Quijano, 1992; also Mignolo & Walsh, 2018). Contrary to its claim to universality, it is Euro-Anglo-Northern knowledge developed by White settlers from Enlightenment to Romanticism, to (Post-)Positivism, to Poststructuralism by producing and reproducing epistemicide (Mignolo & Walsh, 2018). Decolonial scholars, therefore, hope for futures where the purportedly universal knowledge systems of coloniality do not rule and where pluriversal knowledges support "an otherwise of being, thinking, sensing, doing, and living in the world" (Mignolo & Walsh, 2018, p. 246).

Why do we need decolonial thinking in SLA/T?

My proposal for SLA/T shares with other strands of critical applied linguistics (e.g., Pennycook, 2021) the aspiration to transform language learning and teaching to make the world more equitable. The difference is in the decidedly historical explanation of inequality that grounds decolonial thinking, which sharpens disciplinary analysis of the many realities of language learning that structure how people learn (or do not learn) language.

For example, a decolonial lens sheds a sobering light on so-called language revitalization. It explains why all over the globe (e.g., from Australia to Northern Norway; Lane & Wigglesworth, 2022) modern nation-states created policies (lasting all the way into the 1960s!) that had Indigenous children removed from their families and placed in boarding schools, and why nowadays, through less violent means, governments are able to convince Indigenous parents that giving up the tongue of their ancestors is the best thing they can do for their children. It also explains in whose interest it is that the same modern nation-states doing the harm now elevate themselves (e.g., since the United Nations Declaration of the Rights of Indigenous Peoples in 2007) as benevolent saviors suddenly willing to "grant" First Nations and Indigenous communities the right and help to "revitalize" those languages they nearly eradicated in the first place (Leonard, 2023). Coloniality also helps explain why the eye–hand modality of signed languages was stigmatized in colonial times to the point of becoming seen as an impure mode of communication that would endanger souls, which has been used as justification for the confinement of deaf people since the 16th century (Hill, 2023). Sign languages remained classified as nonlanguages until the 1940s or later, and the fact that they are not written, as colonial spoken languages are, has been one of the reasons for continued neglect by linguists and society (Henner & Robinson, 2023). Even today, when linguists recognize the full legitimacy of sign languages, they treat them as a niche specialty, not "general" or "human-prototypical" enough to be worthy of investigation by SLA/T researchers, nor of inclusion in any SLA/T textbooks or handbooks.

Coloniality is also painfully helpful in explaining why the right to harmonious, stress-free bilingualism (De Houwer, 2015) is denied to children of immigrants in many countries, including the United States. Instead, they grow up with deep linguistic insecurity, being criticized as incompetent in both the majority and the home languages and living their home bilingualism as a "lose–lose" experience, as one heritage learner in Driver (2024, p. 155) put it. It also helps explain why once adults, these heritage bilinguals invest time and money in college to (re)learn a language they should have learned for free at home, bringing financial benefits to the very language programs and universities that all too often exclude them from their curricular planning and practices (Valdés, 2023). The bitter irony is not lost on parents, and it greatly stresses family bonds and language learning motivation, as another heritage learner in Driver's (2024) study recounts:

> It's like a little demotivating because I'm trying. I'm taking this class so that I can have better conversations with you and you're kind of dissing me for taking this class. It sounds stupid to say, but it took more guts to actually do this class and go with it for as long as I did, because my parents felt like I was just wasting money on taking this class. So that kind of sucked. And like, nobody really sees that at surface level. (p. 156)

In sum, the human injustices of coloniality plague language learning and teaching. They structure language education quite literally, and not just metaphorically. This is why we need a decolonial SLA/T.

Key concepts

An important concept in the proposed decolonial perspective on SLA/T is raciolinguistics (Flores & Rosa, 2023), which posits that language and race are conaturalized to the point that the linguistic practices of speakers with more White privilege are more positively evaluated, and those of speakers who are racialized are more negatively evaluated—and this is regardless of the objective linguistic practices. Raciolinguistic oppression is enacted as a result of internalized Whiteness, whether the actors enacting it are White or not (Mena, 2024). Raciolinguistics asks that linguistic and interactional "competence" be unmasked by researchers and educators as inventions of the White gaze and the White ear—inventions that must be unlearned to educate rather than miseducate (García, 2023).

The aspiration for mastery is a colonizing aspiration for monolingual standard ways with language (Flores & Rosa, 2023). Yet, across generations, many minoritized multilinguals (e.g., Indigenous, heritage, signers in Deaf communities) have resisted and survived the colonizers' pressures toward monolingualism. There are some transformative antidotes to mastery. Oostendorp (2023) proposed relationality, vulnerability, and the embrace of failure and incompleteness. De Souza (2023) offered a communicative flexibility or plurilingual ethos that enables marginalized communities to feign monolingual mastery in the colonizer's language, as and when needed, often in hegemonic (out-group) encounters, while preserving "the continued practice of plurilingualism in situations distant from hegemonic scrutiny" (p. 239).

Implications

Taking social justice as a goal of SLA/T, in Ortega (2018), I sketched some changes that I thought were needed to overcome or at least resist and counter the injustices committed in the name of investigating language learning and teaching. However, at the time, my idea of justice was ahistorical, lacking awareness of colonialism and coloniality as the root explanation for inequitable multilingualism. Once seen, the coloniality of SLA/T cannot be unseen, and it unleashes the need for a deep overhaul of our established research methods. I highlight here three developments in SLA/T research methods that may, in the future, open the path for the needed transformation.

A first welcomed development is the ascent of interpretive qualitative methods in SLA/T that advance insider (or emic) perspectives about language learning and teaching and take unequal power, raciolinguistics, and other ideologies into account. These methods include varying combinations of critical ethnography, interviewing, language portraits, diaries, and autoethnography (e.g., Elabdali, 2024; Ortega, 2024; Phyak, 2023; Yang, 2023). In some instances, entire research domains in SLA/T have successfully embraced some of these emic methods, and a good case in point is study abroad (see Diao & Trentman, 2021). A second methodological development in SLA/T is the increasing interest, ever since Bigelow and Tarone (2004), in investigating learners and contexts that have been traditionally neglected. Godfroid and Andringa (2023) have put this interest to the test in an issue of *Language Learning* devoted to "uncovering sampling biases, advancing inclusivity, and rethinking theoretical accounts in second language acquisition." Last, innovative critiques on the interfaces between teaching and research (Coss & Hwang, 2024) may soon motivate the SLA/T community to challenge hierarchies of knowledge production by engaging students and teachers of language as coresearchers.

For decolonial ideals of language learning to be possible, language teachers would need to start by educating themselves on the colonial histories that impact their given students in a given classroom as well as themselves and their institution. Through this work, they must learn to relate to the intersectional marginalizations and privileges their students bring to their language learning projects (Kayi-Aydar, 2024) and understand they are inherited from colonialisms and maintained through coloniality. They must try to unlearn colonialingual ideologies and pedagogies (Meighan, 2023) Their north star must be the whole person-in-context, not the language. Rather than imparting knowledge or measuring efficacy and success, decolonial language teachers would support student harmonious (i.e., stress-free) bi- and multilingual development. Their pedagogies must draw on linguistic and non-linguistic assets that students bring with them and give them visibility and discoverability in the life of the class. They must help circumvent negative ideologies that enslave language students and language teachers into linguistic insecurity and inspire students to attain their own goals for language—in response to or despite language-related oppression and systemic inequities stemming from the colonial matrix of power.

Inequities in language learning and teaching are widespread and prevalent across contexts worldwide. From where I stand now, it seems utterly impossible to study SLA/T or to engage in purposeful language education, for research and praxis, without addressing social, racial, and economic justice

and aspiring to dismantle the oppressions of coloniality. As Mignolo and Walsh (2018) argued, there is hope in opening cracks that allow us to imagine otherwise worlds. Thus, my hope is for a decolonial SLA/T that will soon offer cracks into ways of seeing, being, knowing, relating, feeling, and doing language learning and teaching otherwise.

PERSPECTIVE 4 (BY SASAKI): MIXED METHODS RESEARCH IN ECOLOGICAL CONTEXTS: TWO PERSPECTIVES ON GENERALIZABILITY OF SLA/T FINDINGS

Following Tashakkori and Creswell (2007), I define MM research as "research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry" (p. 4). This comprehensive definition, established in the editorial of the inaugural issue of the *Journal of Mixed Methods Research*, is pivotal for a vision of SLA/T that integrates praxeological, transperspectival, humanistic, and decolonial frameworks. The use of this definition aligns with our commitment to embrace diverse perspectives and methodologies, ensuring a holistic and/or emic (insider) understanding of language learning processes. However, combining quantitative and qualitative approaches can sometimes result in less generalizability in a postpositivist sense. In this section, I delineate strategies for articulating the findings, particularly focusing on the idea of "generalizability" from the two most popular types of MM research in SLA/T: experimental and observational. My aim is to showcase MM's potential contribution to diverse pedagogical settings, including nongeneralizable samples, and to help SLA/T researchers enhance the interpretive value of their findings, making them more accessible and informative for teaching practice.

How I came to think the way I think

I began as a language testing researcher after earning a PhD in the United States in 1991. My dissertation explored the relationship between L2 proficiency, foreign language aptitude, and intelligence through structural equation modeling (SEM). SEM was an advanced technique at the time, and the quantitative part would have sufficed, but my chair, Lyle Bachman, encouraged me to add a qualitative part by collecting think-aloud protocols from 8 of the 160 participants in the quantitative study. MM was not a commonly used approach at the time, so my dissertation was divided into two studies and published as such. This first MM experience revealed that the result of complementing a quantitative study with qualitative data was truly "greater than the sum of the individual qualitative and quantitative parts" (Fetters & Freshwater, 2015, pp. 115–116).

After completing my PhD, I went back to Japan, where I have lived and worked ever since. Besides purely quantitative studies, I have conducted two types of quantitative-oriented MM studies: experimental and observational. I then extended my field, originally language testing, to L2 writing, which is now my main focus. At that point, I felt that applied linguists rarely researched English-as-a-foreign-language (EFL) learners in contexts such as Japan (e.g., Sun & Lan, 2023). I therefore resolved to study these learners and to make their voices heard in mainstream applied linguistics. For example, in Sasaki (2000), an early experimental study, I investigated the effects of replacing unfamiliar nouns (e.g., "Nara" replacing "Plaintown") in a cloze test on 60 Japanese EFL students. Results showed that replacing unfamiliar words with familiar words significantly improved performance due to richer cultural schemata, which showed that the original test was unfair to EFL students.

Later on, I conducted longitudinal observational MM studies of Japanese students' EFL writing abilities over their 4-year university life. In Sasaki (2004; $n = 11$) and Sasaki (2011; $n = 37$), I investigated the effects of study-abroad experiences on changes in participants' L2 English writing ability using the same rubric but found no uniform change over time. In fact, the at-home group in the 2004

study appreciated their university education more and were more motivated to study English than those in the 2011 study. These findings made me question the generalizability of longitudinal observation studies and led me to a more ecological treatment of the findings.

I have also worked with education economists on a Japanese government study-abroad scholarship project (e.g., Higuchi et al., 2023). Inspired by the "credibility revolution" in economics (Angrist & Pischke, 2010), we designed our projects in a randomized manner to ensure generalizable results. In the process, I have learned that terms such as "true effects" and "generalizable" are more convincing for people outside academia (e.g., policy-makers, who, in our case, have the power to extend the duration of government-sponsored study-abroad scholarships for students from underprivileged families), compared to how we applied linguists describe them (e.g., "convenience sampling"). These experiences have taught me that if we wish to make a tangible contribution to society, we must articulate our findings in terms understandable and convincing to all stakeholders.

Overall, I have learned two key points as a researcher: (a) By their very design, MM studies can help reveal the voices of underrepresented populations, and (b) carefully curating our descriptive frameworks when presenting MM results enhances their interpretive power, thus making studies accessible for practitioners and policymakers.

Theories and concepts: Recent history and current trends in mixed methods studies in applied linguistics

The growing use of MM in applied linguistics has been accompanied by the emergence of the "social turn" (e.g., Block, 2003), a late-20th century shift in focus from predominantly psycholinguistic and cognitive perspectives toward more socially oriented perspectives that consider language learning and use within their social, cultural, political, and historical contexts. Many perspectives presented in the seminal publication by the Douglas Fir Group (2016), which advocated for ecologically situated research "in a multilingual world" (p. 19), also facilitated this evolution. For example, Riazi and Farsani (2023) reported that the number of MM studies published in 20 top-tier applied linguistics journals dramatically increased between 2011 and 2020. Although the largest proportion of these studies ($n = 131$) "gave equal weight to (…) quantitative and qualitative methods" (p. 19), detailed analyses of all 304 studies showed that they are in fact quantitative-dominant. Furthermore, among the 304 studies analyzed, the median of the quantitative phases was 64, with 70% based on convenience sampling, whereas the median of the qualitative phases was 18, with 51% based on convenience sampling. Consequently, from a postpositivist perspective, most findings could not be generalized to a wider population based on individual studies alone.

Empirical focus: Quantitative-dominant mixed methods research and generalizability

Based on current trends in MM research in applied linguistics, I will now delineate how the findings of the two types of quantitative-dominant MM studies (experimental and observational) can be more effectively presented to enhance their interpretive power. Before getting to the main point, however, I will introduce two crucial concepts: "weakness minimization" (Onwuegbuzie et al., 2011, p. 1256) and Gaddis's (2002) ecological historical approach to observational MM studies.

First, *weakness minimization* is a form of methodological legitimation (the equivalent of validation in MM research) that refers to "the extent to which the weaknesses from one approach [i.e., quantitative or qualitative] are compensated by the strengths from the other approach" (Onwuegbuzie et al., 2011, p. 1256). Just as in quantitative studies, the validity of an MM study can be assessed in terms of the degree of weakness minimization (American Psychological Association, 2020, p. 108). Second, conventional notions of generalizability cannot be readily applied to some MM observational

studies, especially longitudinal ones, because, as mentioned above, the same longitudinal pattern may not emerge in a wider population. To address this challenge, Gaddis (2002) proposed an ecological perspective in which he viewed the ultimate use of the findings as "particular generalization" (p. 66; see also Gaddis, 1997). Gaddis's particular generalization is broadly compatible with "case-to-case-transfer," one of Onwuegbuzie et al.'s (2009, p. 120) five types of generalizations from MM research.

I will now present and assess two illustrative studies using these concepts: the first is an experimental study aimed at postpositivist generalization, and the other is an observational study framed by Gaddis's (2002) ecological approach. In Sasaki et al. (2024a), we reported an MM study titled "Machine Translation as a Form of Feedback on L2 Writing." Given recent advances in AI and its applicability to language education, we investigated the use of machine translation in the teaching of writing. We compared two approaches: comprehensive direct teacher corrective feedback (TCF) and machine translation (MT) feedback, with 23 Japanese university students in an L2 writing class. Participants described a visual prompt in English and Japanese before receiving each type of feedback alternately, with subsequent tasks performed without feedback. Engagement with the feedback was also measured. The study found that TCF significantly improved writing complexity, while MT increased accuracy and fluency. However, the effectiveness of each approach varied depending on students' engagement with the feedback.

As an exploratory attempt, the study used an intact class as a sample. However, weakness minimization was addressed through a survey of students' engagement with the feedback and retrospective explanations of why they improved in particular aspects (e.g., fluency) after receiving either type of feedback, which complemented the statistical results. In some cases, participants' emic accounts supported the etic results and revealed how L2 writing in EFL contexts can harbor intricate emotional conflicts, as shown in Yuki's answer when asked why she thought her L2 writing fluency improved after receiving MT feedback:

> The English translation gave me power. Because I am Japanese, I can use Japanese better [than English]. In comparison, my ability to use English is not sufficient, and that's why the English translation gave me power (and I could write a lot). (Sasaki et al., 2024a, table 5)

Although our study did not aim for Onwuegbuzie et al.'s (2009) case-to-case transfer, its findings have practical implications for EFL classrooms, especially in terms of L1 use.

In contrast, in Sasaki et al. (2024b), we reported an MM observational study titled "Developmental Trajectories of Multicompetent Writers" framed by Gaddis's (2002) ecological approach. We investigated the evolution of L1 Japanese and L2 English writing skills in multilingual writers along with their English proficiency throughout their university years. Utilizing Cook's (2016) multicompetence framework, which proposes that a bilingual's language knowledge is interconnected yet distinct from a monolingual's, we examined patterns alongside variance in the growth paths of 22 students over those 4 years. The methodology integrated test scores, expert writing assessments, and comprehensive interviews, offering insights into students' perceptions of both L1 and L2 writing. Through k-means cluster analysis, we observed patterns in the development of students' writing abilities and English proficiency over time. Key findings included the critical role of university-level L2 writing instruction in improving both L2 and L1 writing ability, as well as the complex influence of personal aspirations and life events. As regards weakness minimization, choosing a four-factor solution from possible cluster solutions resulting from k-means clustering was aided by yearly and graduation-year interviews with participants regarding their beliefs about L1 and L2 writing. Results additionally revealed increasing IDs in terms of participants' growth and contentment as whole persons rather than simply as language learners within the same clusters, which could not have emerged without examining the participants' emic data.

As in Sasaki et al. (2024a), the participants' own words highlighted an aspect specific to EFL settings such as Japan. For example, though the English writing ability of many Cluster 4 students

($n = 8$) declined one year after returning from study abroad, in his final-year interview, Tomo commented, "My 10-month stay in the US was really meaningful because having to write so much so often overseas enabled me to better put my thoughts into language. Overall, my overseas writing practice was also thinking practice." This statement offers strong justification for treating participants as whole persons, not just as language learners.

Implications for practice

I have proposed and illustrated two perspectives on framing the findings of quantitative-dominant MM research. When researchers choose an MM approach, the necessary conditions for generalization, including random sampling and large sample size, may not be met. I trust that the strategies (e.g., weakness minimization and particular generalization) I present here will help MM researchers enhance the interpretive value of their findings and thus make them more accessible and informative for those involved in language teaching, policy making, and curriculum planning. We know that the results of large-scale randomized studies can contribute to our collective knowledge. However, we also know that the rich insights afforded by MM research can be key to the work of the above-mentioned professionals. As Byrnes (2013) compellingly advocated, if what we do appears limited to nonexperts, we must make every effort to convey what we know to our public.

ADVANCING SLA/T THROUGH OUR FOUR PILLARS

We have articulated our conceptualization for how we envisage L2 education in the 21st century's social world, built on the pillars of praxeology, humanism, equity, and drawing from emic-oriented and mixed methods that can convince the public and give voice to learners as whole people, and to under-represented multilinguals. We now close with an analysis of synergies among our four pillars, using the vignette of a language learner, Xiao Qiang, an English major at a prestigious Chinese university.[2] Xiao Qiang's story serves to illustrate how our collective efforts can be channeled to understand a learner's multilingual development in relation to their lifeworlds.

Xiao Qiang was born and raised in a remote town in a Southwest border province in China. He was smart and diligent and achieved a high score in the National Matriculation Test, especially in English. He chose the English major program at a top-tier university in Shanghai, the most economically developed area in China. However, the first day of his English class almost broke him, as he could not understand or speak a word of English, and his accent was "strange" to his classmates. Throughout his nightmare-like freshman year, he constantly felt like a loser and almost quit college. Things changed when the English department began to offer Spanish as the second foreign language [第二外语] for 2nd-year students, as part of a multilingual education innovation that the university was piloting. Xiao Qiang signed himself up and started learning Spanish. All of a sudden, he found himself learning really fast as everyone started from scratch. It occurred to him that his deficient English proficiency was not because he was a failed language learner, but just because the English instruction he received in his hometown was low in quality. Xiao Qiang went to a top-level Spanish university in Madrid as an exchange student during the 3rd year of college. He enthusiastically used his English and Spanish to hang out with his friends from all over the world. As he did so, he came to realize that not everyone spoke perfect English, but English is something that he could use to communicate with the outside world. After the 1-year study abroad, Xiao Qiang came back to China to finish the last year of his English major. By then, he had regained confidence and decided to pursue further study in economics in Spain. After he graduated with a master's degree from Spain, he was offered a global marketing specialist job in a Chinese multinational technology company, and now he lives and works in Latin America.

As can be seen in this vignette, Xiao Qiang's life continues, with all the languages that he has encountered along his pathway. He lost confidence in himself as a good language learner because he did not have adequate learning resources when learning English in his hometown. He regained confidence in learning languages through learning Spanish at the same university, and later unexpectedly through using English as a lingua franca while studying abroad in Spain. As an integral part of this journey, language learning changed his life beyond college. Xiao Qiang's narrative demonstrates that multilingual use and development spans "multiple scales from macro-societal and ideological ones to micro-interactional ones, and across different temporal and spatial scales" (Duff & Byrnes, 2019, p. 3). His story draws attention to the essentiality of locating language learning and use in multilingual individuals' lifeworlds (Pekarek Doehler & Eskildsen, 2022). For this reason, we use the heuristic of the four pillars—praxeology, humanism, equity, and MM—that we have presented here, alongside the Douglas Fir Group's (2016) framework, to analyze the narrative and generate synergetic insights for SLA/T.

In our four pillars, we share the view that the core of SLA/T lies in interactional practices. In their praxeological perspective, Pekarek Doehler and Eskildsen conceptualize an adaptive, emerging competence for interaction, arising from the sense-making practices that the learner enacts for performing joint social actions with others. At the micro-interactional scale, a blended perspective of CA and UB linguistics allows for a refined understanding of how linguistic resources are mobilized not merely as particular linguistic forms extracted from input frequencies but also constitutive of the learner or user's semiotic repertoires to accomplish and coordinate social actions. Thus, L2 grammar consists of "sedimented ways of accomplishing specific social actions in talk-in-interaction" (Couper-Kuhlen, 2014, p. 624). This view aligns with Gao and Zheng's CDST perspective that language learning takes place in adaptive interactions during which learners "softly assemble" (Kelso, 2014, p. 492) all available contextual affordances to respond to real-time communicative pressure. As evident in Xiao Qiang's story, the development of his English and Spanish interactional competences did not solely occur in the classroom setting, but it was achieved by his "hanging out" with his friends from different language backgrounds during and after his study abroad. It is through the moment-to-moment sense-making social actions that he managed to transform the multilingual resources in his lifeworld into long-term multilingual use, which had life-changing effects.

We also understand that the complex processes of SLA/T are profoundly interrelated with various social and contextual forces in a multidimensional learning ecology. Xiao Qiang's language learning trajectory reminds us that a student's multilingual development is both constrained and facilitated by the meso level of sociocultural institutions and communities and by the macro level of sociohistorical values and ideological structures (Douglas Fir Group, 2016). At the meso level, while we know little about how Xiao Qiang's family may have influenced his learning of English or choosing to major in English in college, we know his university's offerings of Spanish, an institutional initiative that responds to the recent policy shift in China to advocate diversifying foreign language education (Gao & Zheng, 2019),[3] made the self-discovery of a good language learner identity possible for him. Also located at the meso level, developing his English competence for interaction at the very beginning was constrained by the sociohistorical rural–urban disparities that have long plagued English language education in China (Gao & Zheng, 2019; Hu, 2021). Although these disparities are state-internal rather than colonial ones, they nonetheless have historical roots and reflect the structural inequities in the form of an economic injustice that impacts language learning. Xiao Qiang began to learn English in an underresourced context in Southwest China, in comparison with his classmates, who learned English in well-resourced schools in large Chinese cities. At the macro level of value systems, the ideological structure of native-speakerism (Holliday, 2006), manifested in the perceived "strangeness" of his accent, was an additional obstacle to the development of his interactional competence in English. Nevertheless, his success as a beginner Spanish learner, facilitated by the curricular innovation linked to the new national policy mandate, enabled him to redefine himself as a late-starting L3 learner who did not have to suffer the negative impact of inequitable starting points in his language educational experience.

We all agree that the equity lens highlights the power dynamics of different languages in a learner's lifeworld. As Ortega argued, a decolonial lens amplifies the analysis of inequities in ways that are relevant for understanding language learning. When studying abroad, Xiao Qiang realized that "not everyone spoke perfect English." Such an awareness was emancipatory and set him free from the colonizing aspirations of competence and mastery in a standard language (Flores & Rosa, 2023), instead allowing him to see the value of communicative flexibility and a plurilingual ethos (de Souza, 2023). The decolonial lens also makes visible the erasure of the local Yunnan dialect spoken in China's southwest region; we did not mention this in the story because we know that Xiao Qiang was opposed to speaking or being perceived as speaking the Yunnan dialect. Only Putonghua or standard Chinese (i.e., Mandarin) has a space in the school system and in people's communicative repertoire when under public hegemonic scrutiny (de Souza, 2023), although Xiao Qiang might have playfully used the Yunnan dialect in digital communication, as many Chinese youths do (Zhang & Ren, 2024). Moreover, the languages Xiao Qiang learns and invests in, English and Spanish, are colonial languages and, like Mandarin, they rank as languages with the largest number of speakers in the world. No doubt, in a world driven by neoliberal arguments of instrumentality, Mandarin, English, and Spanish are of high value, and Yunnan and other spoken dialects [方言 or *fangyan*] would be considered nonlanguages. Ultimately, in Xiao Qiang's transnational learning trajectory, through the twists and turns, from southwest China to Shanghai, Madrid, and finally Latin America, and from high school to college to the workforce, our pillars reveal a multilingual learner and user who has successfully navigated through the lifeworlds across diverse spatiotemporal scales and equity-related constraints and affordances.

The critical and sociocultural perspectives at the macro and meso levels and the interactional and UB perspectives at the micro level converge into the materially embodied and ecologically embedded language-learning experiences of individual learners in their social contexts. This brings forth the whole-person view of language learning—that is, the humanism pillar—that we have advanced in this article, a view where language learner agency is foregrounded as the desired outcome of L2 education. Agentive learners demonstrate a variety of characteristics that have been explored as ID variables such as self-efficacy beliefs, affects, and motivation. When these ID variables are linked with the institutional, structural, and ideological factors at other levels, it is the learners who use all kinds of semiotic resources to navigate in the transnational, transcultural, and translingual spaces. For instance, Aro (2012) showed that the English-learning beliefs of young Finnish learners predominantly reflected "voices of society," which were "slogans, or cultural truths (…) that are frequently repeated and privileged in Finnish society," such as "everyone in Finland knows English" (p. 335). In other words, what we traditionally understand as "individual" characteristics are inevitably linked to the power dynamics in the social structure. Therefore, the equity pillar is needed to address equity and justice in lifelong language learning. Praxeology is also necessary for agency, since agency is exercised by learners to mobilize linguistic–semiotic resources, which then get sedimented experientially into their emergent language system. Agentive learners have a growth mindset and pursue lifelong learning to expand their lifeworlds (Larsen-Freeman et al., 2021). They learn and use multiple languages in the pursuit of self-cultivation and self-perfection, echoing the "whole-person" view in our humanism pillar. MM, moreover, is well poised to capture these nested complexities.

Thus, undergirding our synergetic thinking is the pillar of MM and the ecological perspectives on generalizability advocated by Sasaki, as methodological decisions are often associated with epistemological and theoretical orientations of the research activities. Although postpositivist SLA/T studies striving for generalizability based on randomization are significant in discerning general trends and informing policy formulation, they may no longer be suitable to explore research questions stemming from the praxeology, humanism, and equity pillars that we envision for the advancement of L2 education. On the one hand, the interactional methods espoused by Pekarek Doehler and Eskildsen and the MM approaches highlighted by Sasaki are synergetic with the decolonial perspective proposed by Ortega because they are also particularly helpful in circumventing deficit perspectives on develop-

ment and overcoming overly simplistic cause–effect explanations of SLA/T phenomena. Longitudinal MM studies, in particular, are well positioned to yield findings that resist simplification, as they may show that learners lose the language ability they once acquired, especially in an exposure-restricted EFL context, as Sasaki et al. (2024b) found. On the other hand, learning losses over time should not be viewed as "failed" with reference to any ideal native speaker image, given that the benefits of language learning are not confined to linguistic ones. For example, they can extend to the entire cognitive system, much as the reflection quoted earlier by EFL learner Tomo demonstrates in Sasaki et al. (2024b). Thus, the kind of four-pillar research into SLA/T that we envision would need to examine longitudinally the ebbs and flows of linguistic as well as nonlinguistic benefits of learning language. Echoing Gao and Zheng's humanism pillar, language learners' development of interactional competence and their development as whole persons matter equally. Finally, for research methods that do justice to the study of L2 education, we must await a future where we SLA/T researchers present the findings of our investigations to public, non-academic audiences. These audiences also include teachers and students. How do SLA/T researchers foster a change in mindset regarding the presentation of their findings, making them relevant and actionable to practitioners in the field? Without deeply thinking about our audiences, the practical merits of much SLA/T research may remain unrecognized by those operating in real-world contexts.

CONCLUSION

The advancement of SLA/T research into L2 education we have presented calls for the shift of focus from learning linguistic knowledge and skills alone to also including the kind of people our learners may aspire to become and the inequities that stand in the way of humanistic projects of language learning to be fulfilled. Our synergetic perspective foregrounds the need to investigate SLA/T through collaborative efforts allowing for the combination of various research methods, at different levels of granularity (micro–meso–macro). This shift highlights the significance for whole-person multilinguals of praxeological, adaptive, emergent, and dynamic development of interactional competence in response to inequity-ridden real challenges in their lifeworlds and in ways that are ultimately communicable and persuasive to nonacademic audiences. We call for an emphasis on the goal of fostering agentive language learners who are critically aware of their own conditions in their social worlds, and who can regulate and manage their own learning process. This transformed vision of L2 education, from the teaching of languages to the cultivation of language learners as whole persons with a growing repertoire of interactional competence and practices, we believe, has the potential to disrupt racialized and colonized structures. We are hopeful that learners can ultimately challenge uniform dominant knowledge systems and power inequities that wash over social, cultural, and linguistic differences that often work as powerful machinery that configure those (stereotyped) values regarding language use and learning and perpetuate themselves in the continuous colonizing of both institutions and people. We are also hopeful that many in the SLA/T community will invest in building a transformative knowledge base of L2 education firmly standing on the synergies of the four pillars we have offered here.

AUTHOR CONTRIBUTIONS
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ENDNOTES

[1] Transcription conventions: THU: = speaker identification; .hh = in-breath; (4.5) = measured pause in seconds; (.) = non-measured pause, ca. 0.3s; (word) = uncertain transcription; word. = falling intonation; word, = continuing intonation

[2] Xiao Qiang's story was drawn from the BA degree thesis submitted by Ms. Qiaochu Zhou in 2018 and supervised by Yongyan Zheng.

[3] The driving force behind China's multilingual education reform is the "Belt and Road" initiative launched by the Chinese government in 2015 that emphasizes socioeconomic and cultural exchanges with countries along the Silk Road Economics Belt and the 21st century Maritime Silk Road (Zheng, 2023). As an anonymous reviewer noted, it is possible to see the initiative as a manifestation of neocolonialism of the kind Mignolo (2023) described. We think such is the paradoxical and irreducibly complex scalar nature of decoloniality, whereby a neocolonial force at the macro level can also accomplish decolonizing goals at the micro level.

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