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A conceptual framework for Emergent Language Learner Autonomy – a complexity perspective for action research

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ABSTRACT

Purpose: This paper addresses inconsistencies in how language learner autonomy has been understood. A novel conceptual framework of Emergent Language Learner Autonomy (ELLA) is proposed, reconceiving it within Complex Dynamic Systems Theory. ELLA aims at a comprehensive conceptual understanding of language learner autonomy, an explanatory foundation for enhancing empowerment of educational stakeholders.

Design/methodology/approach: The paper offers a review of the conceptual literature on language learner autonomy and explores intersections with operationalisation and measurement with Action Research.

Findings: The paper identifies areas in which reductionist theoretical models are unsuited to describing language learner autonomy. Complex Dynamic Systems Theory is found to be a better fit. The proposed conceptual framework is modelled on Hopfield networks: series of dynamic, transitional relations between temporary and final states through which multilateral changes propagate. Language learner autonomy arises under conducive conditions at inflection points as an epiphenomenon, underscoring the need for holistic epistemological reorientation in research and practice.

Originality: This paper puts forward an innovative conceptual framework for understanding language learner autonomy as an emergent phenomenon. It contributes to the wider literature by addressing the need to resolve conceptual inconsistencies that undermine much research and practice. The novel framework informs compelling arguments for Action Research by practitioners from a complexity perspective – embracing adaptive, dynamic, non-linear research designs. The framework also emphasises the need for practitioners to adopt exploratory approaches to fostering language learner autonomy in their context.

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1. Introduction

Interest in language learner autonomy has flourished for over 40 years and, ‘the goal of language learner autonomy has become an accepted part of language teaching and learning’ (Mynard and Shelton-Strong 2022, 3). Nevertheless, a recent scoping review (Chong and Reinders 2022) identified that the central concept remains inconsistently defined. This conceptual paper addresses that gap in the literature and suggests how teaching practitioners may develop a concrete understanding of what autonomy is, whether, and how to prioritise it. The paper first describes key theoretical positions from the literature: autonomy as function of capacity, interdependence, and action. Next,

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these atomising debates are critically reassessed. An alternative view within a novel conceptual framework – Emergent Language Learner Autonomy (ELLA) – is then proposed. ELLA is recast as an empowering, ongoing conversation between learners, teachers, and their environment.

This reappraisal is relevant in a world which has undergone radical shifts since the publication of the seminal *Autonomy and Foreign Language Learning* (Holec 1981). Previous analytical frameworks may not have fully explored autonomy's complex, dynamic nature (Benson 1997; Oxford 2003; Reinders 2011). This paper identifies and develops theoretical and conceptual arguments, and pragmatic implications for Action Research (AR) by practitioner-researchers are explored. Facilitating ELLA must account for its complex, dynamic nature, and be systematic, personal, reflective, ongoing, and continue beyond the classroom door. Adopting this nuanced theoretical and conceptual grounding will be the foundation of clearer, more consistent future teaching and research.

2. Theoretical and conceptual perspectives

2.1. Literature review

2.1.1. *Autonomy as a construct for language learners and teachers*

Autonomy as capacity. Twentieth century shifts towards philosophically redefined relations between the individual and society (Benson 2013; Freire 2000; Lamb 2017), new theories of general and language learning (Dewey 1938; Kolb 1984; Vygotsky 1978), and, contrastively, increased educational standardisation resulting from global economic competition (Au 2011; Clarke et al. 2000; Hardy 2020; Kim 2018; Rizvi 2009; Ruano-Borbalan 2022; Tröhler 2016) contextualise the emergence of autonomy as a construct of interest in language learning and teaching. The earliest authoritative definition of autonomy as an emancipatory tool for adult language learners in Europe is that of Holec (1981, 3) 'the ability to take charge of one's learning', meaning control of decision-making about aims, contents, means, examination and evaluation acquired through expert guidance. Later scholarship clarified and redefined understanding of the construct as trifurcated: as a capacity of independent, strategic communicators who are autonomous in their wider lives (Littlewood 1996, 1997), as a technical facility with language learning strategies and capacity for psychological and political control over the manner and contents of learning (Benson 1997, 2013), or as an innate but enhanceable quality of competent language users and learners in environments which promote learner choice (Macaro 1997). In sum, from these perspectives autonomous language learners are able to manage their learning continually and willingly; cognitively, metacognitively, and affectively (Oxford 1990; Wenden 1991, 2002).

The social turn. Importantly, a fourth dimension of the construct, a view of autonomy as a collaborative, social phenomenon mediated through conducive learning environments – including teacher support – developed (Little 1991, 1995; Little, Dam, and Legenhausen 2017). While disagreement remains on the exact status of autonomy as an innate or acquired quality (Lamb 2017), formal education can scaffold the development of these qualities (Benson 2003; Nunan 2003). Indeed, while also being an end in itself, teacher autonomy has also been linked to language learner autonomy. Teachers' own learning – critical or exploratory inquiry towards their own classroom or professional development practices, identity development, or towards the wider educational settings in which they operate – may set the stage for autonomy among language learners (Benson 2013; Kohonen 1992; Little 1995; Mercer and Pawlak 2024; Raya 2020; Smith and Erdoğan 2008; Vieira 2020). That is, autonomy can be 'a teacher choice to empower learners' (Vieira 2020, 227). This perspective is a major departure from earlier conceptions of the ultimate goal of autonomy as learning independent of teachers and formal language learning settings (Dickinson 1987, 1994). Similarly, Oxford (2003, 85) also highlighted the 'socially mediated' interactional dimensions of autonomous language learning through self-regulation (agency), intrinsic and extrinsic learner motivation, emotion, and significance-making, stemming from the notion of communities of practice in Lave and Wenger (1991). Furthermore, Murase (2015), stressing not only the four-part multidimensionality of the

autonomy construct (political-philosophical, psychological, socio-cultural and technical) but also the interrelatedness of those domains, posits an additional eight sub-dimensions. For instance, the technical domain is split into behavioural (strategy deployment) and situational (independent study in non-formal contexts) sub-domains, and the socio-cultural domain into interactive (teacher-learner interdependence) and cultural ones.

Broader research interest in the construct also advanced the social turn. First, work outside of Europe accentuated the need for localised understandings which are culturally appropriate for those contexts (Foster and Reinders 2023; Holliday 2003; Littlewood 1999; Palfreyman 2003; Smith 2003). This can be an example of the interrelatedness of the domains of autonomy – political (autonomy of learners as persons) and sociocultural. Second, it also underscores how attention has been paid to the impact of dynamic local ecologies on autonomy, ‘material, social, or discursive features of the environment which are accessed and used to further learning’ (Palfreyman 2014, 190). The dialogic relationships between language learners, teachers, learning, and diverse physical, virtual, and sociocultural formal and non-formal spaces and times are a subject of much conceptual scholarship on autonomy (Benson 2011; Lamb 2017; Lamb and Murray 2017; Lamb and Vodicka 2017; Mercer and Pawlak 2024; Murray 2014a, 2014b, 2018; Paiva 2011; Paiva and Braga 2008; Sade 2014). From the above views, language learner autonomy can be seen as inalienable from interdependence and context.

Reflection and action. Other views focused on reflection. For instance, Little (1991, 4) stated, ‘autonomy is a capacity – for detachment, critical reflection, decision-making, and independent action.’ Reflection on experience came to be seen as crucial for enhancing autonomous, communicative language learning as it highlights language features, usage, and mismatches between learner attitudes or approaches to learning and outcomes, thus promoting corrective action (Candy 1991; Dam 1995; Kohonen 1992). Detailed autoethnographic accounts from advanced learners provide description of their quest for autonomy: significance-making, deployment and management of strategies, and purposeful (re)negotiation of personally defined learning goals and contexts (Benson, Chik, and Lim 2003). However, they also add additional weight to the role of reflection in bridging the gap between merely possessing capacities and dispositions and actually taking effective action towards autonomous learning. Writing of previous conceptualisations of autonomy, Reinders (2011, 45) states, ‘To have an ability to do something but not do it would hardly be useful ... What seems to be missing in these definitions is an emphasis on the role of consciousness in the learning process.’ Reinders uses the term consciousness for the directed attention or awareness brought about through reflection, and it is afforded a central role in his model of autonomous learning, ‘Autonomous language learning is an act of learning whereby motivated learners consciously make informed decisions about that learning.’ (Reinders 2011, 48).

To conclude, scholarly understanding of the construct of autonomy as applied to language learning has again been augmented. It includes not only diverse, dynamic socioculturally-situated psychological and technical capacities, but also a focus on action mediated by reflection. Given the complexity of the conceptual evolution described above, and language learner autonomy’s status as a ‘construct of constructs’ (Tassinari 2015, 66), it should perhaps be unsurprising that, in their scoping review, Chong and Reinders (2022) concluded that autonomy was frequently under-conceptualised and, as such, under-operationalised in both research and practice. However, for ease of reference, the above views are compared in Table 1.

2.1.2. Reductionism in theoretical models

Educational systems have long been recognised as situated (Lave and Wenger 1991). Wedell and Malderez (2013) identified micro and macro levels of time and place within which language classrooms exist, and in their work on multilingual urban spaces, Lamb and Vodicka (2017) highlighted how language users are embedded in diverse networks. Additionally, these visible and invisible layers span multiple concurrent timelines; personal, institutional, and (inter)national. Language learner autonomy has been similarly recognised as multidimensional (Benson 2013). Diagramming

Table 1. Views of language learner autonomy.

View	Authors	Conceptualisation	Unique Aspect
Capacity (3 part)	Holec (1981) Littlewood (1996) Benson (1997) Macaro (1997)	Technical Psychological Political	Emphasis on capacity or control of language, learning, and life
Social (4 part)	Little (1991) Oxford (2003) Murase (2015)	Technical Psychological Political Sociocultural	Additional focus on the interdependence of learner and context
Action (4 part)	Little (1991) Kohonen (1992) Reinders (2011)	Technical Psychological Political Sociocultural	Reflection mediates experience and action

the analytic layers of this traditional perspective might resemble an onion (Benson 1997; Oxford 2003; Reinders 2011). That is, separate, interrelated, invisible inner layers encapsulated in layered, visible outer shells. For instance, even the dynamic autonomy proposed by Tassinari (2015) suggests discrete layering of interrelated dynamic elements comprising a (meta)cognitive core, within outer psychological, technical, and social components. However, it may not be helpful to view autonomy as onion layers to be analytically peeled away. Indeed, moving beyond ideas of distinct, static, layered strata might reveal more. Too often, component parts of phenomena of interest to language teachers and researchers are studied in Newtonian, or deterministic, terms (Larsen-Freeman 2014). That is, each is analysed individually. Interactions between elements have been understood in deterministic ways, leaving the conceptual core of each element unperturbed. For example, Ushioda (2014) states that much language research treats learners and environments as distinct classes of phenomena for unidirectional analysis. However, reductionist thinking of linear interactions between isolated elements is being abandoned. Practitioner-researchers are encouraged to reconsider the point of view of the complex system (Dörnyei 2014; Hiver 2022; Mercer 2011; Stelma and Kostoulas 2021).

2.1.3. Complex dynamic systems theory (CDST)

Complex systems are *relational*. Much like a biological ecosystem or a language classroom, they are made of interdependent connection webs. There are superficial, readily perceptible interpersonal relations: student to student, or student-teacher. However, these agents also stand in networked *multiplex* relations – perhaps one student and the teacher’s daughter are also friends (Mercer 2014). Equally, there are spatial relations. On one day, the classroom conditions are just right, the next, jarring sounds of construction work nearby disrupt the class. Accordingly, a learner who feels supported by peers in a conducive environment may be more inclined to seek out extracurricular language practice opportunities, demonstrating the link between autonomy and relational interdependence. Furthermore, there are invisible, intricate webs of intra-personal relations. Ushioda (2014, 50) describes intentionality, reflexivity, and agency as ‘interconnecting complex sub-systems’. Traditionally, these domains – the internal, external, and contextual – may have been seen as nested, but separate (Tassinari 2015). CDST asks us to instead see the complex system as the basic unit. Mercer (2011) states that the complexity perspective subsumes previous affective, cognitive, and socio-cultural views of learner identity. Next, complex systems are arranged on *non-linear* principles. As Hiver (2022, 26–27) puts it, ‘the majority of phenomena of interest in language teacher’s lives are multi-determined.’ This includes promoting learner autonomy, even if its historical and future development cannot easily be regressed to simple correlations between isolated factors. Accordingly, a seemingly minor event, perhaps some positive feedback on an assignment, may significantly increase learner confidence and result in them taking more charge of their learning. Imperceptible multivalent background changes across complex systems engender outsized

differences in effects (Stelma and Kostoulas 2021), and this disproportionate response illustrates the non-linear nature of autonomy.

Complex systems are also *autocatalytic* (Morrison 2008), that is, spontaneously adaptive and self-organising. First, they are spatiotemporally located – meaning that system interactions occur inside *dynamic* environments. Multiple concurrent timescales operate on systems of interest to language practitioners such as learner autonomy and Sade (2014) demonstrated how communities of language practice self-organised and developed autonomy via reflective diary analysis. Complex systems are also highly *context dependent*. Their initial states are unique and adapt to and cause environmental adaptations. From a complexity perspective, autonomy may thus be a function of initial environmental conditions, such as early learning experiences. It makes no sense to analyse any individual aspect of learning without sufficient accounting for context. Dörnyei (2014) describes how initial condition sensitivity negates meaningful interpretation of aggregated motivation scores from single samples.

Most language classes begin the semester unsteadily. Students adapt to their surroundings before (hopefully) settling into cohesive steady-state conditions. These *attractor states* (Hiver 2014), organisational patterns, are temporary equilibria within complex systems. Classes undergo successive such states, suggesting the next feature of autocatalytic complex systems – they are ongoing developmental processes. As such, the principle of *openness* suggests complex systems are endlessly iterative, and minute changes propagate system-wide ripple effects leading to multi-lateral spatiotemporal developments. Verspoor (2014) describes a new second language learner of Hungarian whose initial condition is subject to variability. Her early enthusiasm constitutes a weak attractor state, motivating her learning. However, life events shift her motivational equilibria – subjecting her to multiple open-ended concurrent intra- and interactive pressures. This *feedback sensitivity* is another property of complex systems. Individual changes amplify or dampen the magnitude of other concurrent changes. For the hypothetical learner in Verspoor (2014), accumulated stressors from a new job act upon that initial weak attractor state of enthusiasm by attenuating its effects.

Sensitivity to cascading change causes the final property of autocatalysis – *emergence*. Emergences are epiphenomena: new and unexpected behaviours comprising more than the sum of their perceptible parts (Kalantari, Nazemi, and Masoumi 2020). A spontaneous community of practice might be an emergent phenomenon – it is more than the set of individuals who compose it. Given time and favourable conditions, within such communities incremental adaptations may also spontaneously lead to the emergence of highly autonomous learners. Larsen-Freeman (2014, 17) refers to this as ‘non-Gaussian’, meaning that phenomena which were unpredictable in linear conceptual paradigms may be more frequently observed in complex systems. In a study of 20 language learners, Paiva (2011, 71) described how learning manifested in ‘cycles of emergence’, supporting the case for a re-evaluation of autonomy itself as emergent.

Reconceiving autonomy within this theoretical framework to develop new conceptual perspectives and lines of inquiry could be instructive. While CDST has been operationalised in general education (Kariippanon et al. 2020; Kemmis, McTaggart, and Nixon 2014), the unique challenges of language learning underscore the need for a complexity-informed conceptualisation of emergent autonomy for language learners and its operationalisation through action research which has not yet been investigated. This paper aims to address that gap.

2.2. Emergent language learner autonomy: a new conceptual perspective

Previous complexity perspectives on both general (Kariippanon et al. 2020) and language education (Tassinari 2015) draw on nested micro-(classroom), meso-(institutional), exo-(societal) and macrosystem (global) spheres, or discrete conceptual layers. However, this new conception of emergent autonomy is better seen as similar to Hopfield networks, a 2D way of visualising fragments of dynamic computer or neural networks in which transitional relations between temporary and final states are represented by spokes and hubs (Hopfield 2007). Considering the iterative, open-ended

nature of complex educational systems, a static diagram could only ever represent a fragmentary snapshot – a transitory patterning within the flow of dynamic networks. However, [Figure 1](#) represents how language learner autonomy might arise as an emergent nodal hub from constituent network properties.

A multiplexed array of connections between hubs forms the transitional shifts which lead to the current attractor states. The un-networked spokes represent currently unformed but potential transitions to new attractor states, awaiting critical tipping points (Morrison 2008) to be reached for new connections to be made. For instance, in the case of autonomy in multilingual urban spaces (Lamb and Vodicka 2017), cascading changes following the arrival of new language users within an already complex ecology might precipitate new dialect formation – an attractor state, before merely existing *in potentia* – permitting ELLA among those with the facility to operate and identify with the new vernacular. The central nodal hub represents language learner autonomy as an emergent property (coloured). It arose under conducive conditions across the rest of the network (black). The technical, psychological, and behavioural aspects of autonomy identified in reductionist frameworks surround it. Outer layers follow – physical learning location, socio-economic or political status, attitudinal or belief networks, and so on. Concurrent, multilateral changes propagate and give autocatalytic rise to an epiphenomenon, ELLA, as a spatiotemporally dynamic network condition. That is, autonomy cannot persist in a steady state but may be enhanced or decline. ELLA cannot be understood from unitary domain analysis, be it motivation, strategy knowledge, or use, as it can only be understood holistically, ‘the whole is more than its composing parts’ (Luttenberg, Meijer, and Oolbekkink-Marchand 2017, 93). These features of ELLA can be seen in summary in [Table 2](#).

2.2.1. Relations between ELLA and previous perspectives

Previous capacity, social, action, or dynamic views of language learner autonomy summarised in [Table 1](#) and elsewhere each offer a partial view of the complex construct, focusing on different, non-overlapping feature sets. However, the ELLA framework proposed in [Table 2](#) synthesises these perspectives, providing a more complete understanding. For instance, the tripartite capacity view fails to account for learner relationality. The four-part social view accounts for relationality and iteration, ‘it is

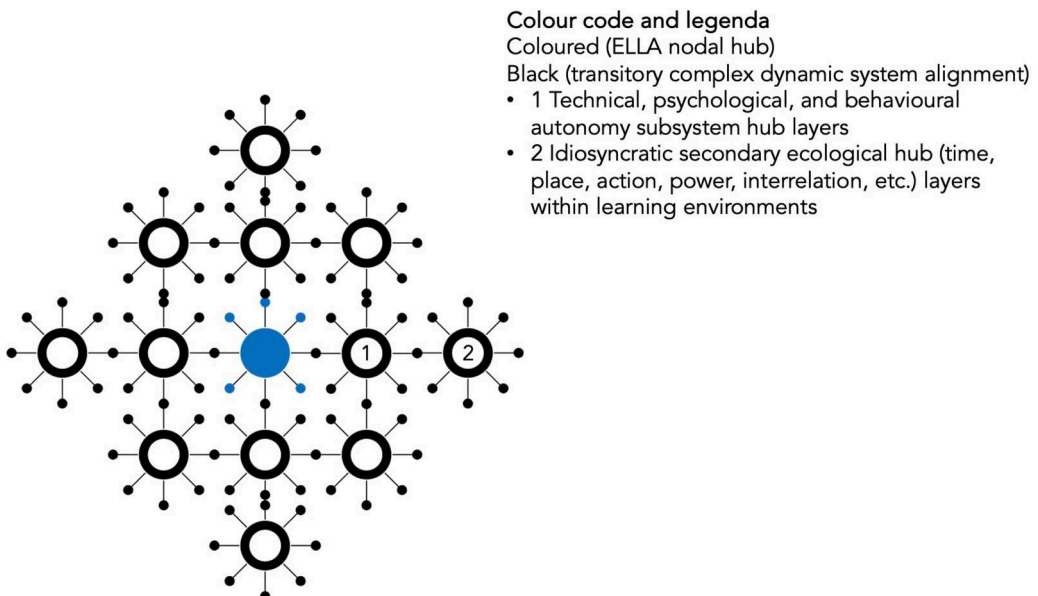


Figure 1. Conceptual diagram representing ELLA (coloured) within an educational Hopfield network (black).

Table 2. Emergent Language Learner Autonomy features.

System Property	ELLA Feature
Relationality	Exists within multiplexed, interdependent, stakeholder-centred learning environments
Non-linearity	Emerges intermittently over concurrent timelines across lengthy learning journeys
Autocatalysis	Reached spontaneously under tipping point learning conditions which align autonomic subsystem hubs
Adaptation	Exponentially and reflexively enhances itself through post-emergence internal feedback processes
Initial condition	Environmentally localised idiosyncratic patterning is stored – final states – and recalled throughout learning journeys
Iteration	Attractor states are predicated on transitory system-wide condition alignment: stable-state autonomy is not possible
Feedback sensitivity	Exhibits timely adaptivity to diverse inputs to enhance transitory stability of autonomous language learning
Epiphenomenal	Not reducible to any autonomic learner subsystem hub or subsystem hub set

sometimes mistakenly believed that autonomy is a steady state achieved by certain learners.’ (Little 1991, 4), but does not account for autonomy’s autocatalytic development. The action view gives an account of reflexive adaptation but leave out non-linearity, that is, the unpredictability of autonomy. Dynamic views (Paiva and Braga 2008; Tassinari 2015) more fully account for features like relationality, adaptivity, and feedback sensitivity, but do not centre autonomy’s epiphenomenal quality – the key contention of ELLA. Emergence is the foundational explanatory condition through which to understand the connection between complex interactions in the learning environment and holistic, adaptive, intermittent and unpredictable development of autonomy.

The central question thus becomes: can the ELLA model enhance understanding of autonomy by suggesting concrete practitioner research agendas? Cutting-edge CDST scholarship has investigated autonomy and self-access (Murray 2020), writing (Tung and Huang 2022) and teacher motivation (Kimura 2022). Thus, it is worth examining the implications of reconceiving autonomy as emergent, requiring more holistic perspectives on how changes endlessly cascade across systems (Davis and Sumara 2008). If language learner autonomy is indeed an emergent property that, ‘transforms itself as it experiences its world’ (Davis and Sumara 2005, 312), this also implies the need for transformational reconceiving of the learning environment and stakeholders’ roles therein.

3. Action research and practice implications for ELLA

3.1. Epistemological reorientation

Stakeholders must leverage complexity perspectives to promote ELLA – not merely learners, but also researchers, educators, and others implicated within the dynamic system. If ELLA arises within multiple intersecting arenas with non-static interrelations, stakeholders must be adaptive, as emergence conditions are sensitive to broad competing feedback (Paiva and Braga 2008). ELLA thus poses epistemological questions about knowledge generation within complex systems. The answers, in terms of reorientation, must be grounded in the complexity paradigm. As with constructivist models, knowledge generation will favour context-dependence over *generalisability*. Understanding multi-determined contexts means synthesising bodies of knowledge through transdisciplinary co-operation (Davis and Sumara 2008). It implies a rejection of both naïve positivist and relativist orientations and embraces nuanced dialectical perspectives on object-subject relations, between analytic and synthetic understandings (Byrne 2003). As stakeholders within education systems co-construct ELLA, then adaptive quantitative and qualitative methods will measure that change, as statistical tools alone are inadequate (Davis and Sumara 2005).

3.2. Action research into ELLA

Action Research (AR), a form of practitioner research, may be suitable for studying ELLA as it can be participatory (Kemmis, McTaggart, and Nixon 2014), understanding-oriented (Hanks 2017),

exploratory (Smith and Rebolledo 2022), collegial (Allwright 2003) and emancipatory (Burns 2005). As such, there are numerous overlaps between practitioner research and complexity, including adaptive research design, ‘agent interaction ... feedforward and feedback ... reflective processes ... interest in exceptions’ (Phelps and Graham 2010, 187). The iterative nature of AR lends itself to investigations that embrace uncertainty (Byrne 2003). Methods of understanding linear causality and producing generalisable results through research designs imported from the natural sciences are incompatible with both AR and CDST (Ahmadian and Tavakoli 2011). However, reconciling the longer-term observations implicit in ELLA with the typically shorter observations of AR means that educational systems with *institutional memory* will best capitalise on generated knowledge. While system level change may be beyond the purview of even motivated individuals, facilitating emergence is not a lost cause. Ostensibly lone practitioner-researchers can leverage ELLA, and complexity implies that their exploratory enquiries may foster their own autonomy as language teachers alongside that of their learners.

3.2.1. Initial considerations for ‘lone practitioner’ AR into ELLA

The first suggestion is to lean into the unpredictability of complexity. Relinquishing reductionist causal success narratives, practitioners should divest themselves of preconceived ideas about what might or should be found, or notions of inquiry as equating only to statistical or dispassionate science (Borg 2009). Just as a learner’s autonomy is unique, so too are the bespoke investigatory tools. Complex systems are uniquely sensitive to initial conditions, and even the initiation of an investigation has altered the situation. It is unlikely that there will be an *off-the-shelf* methodologically superior answer. Practitioner-researchers are therefore advised to take a tentative, exploratory approach, gently feeling out the learning situation, reflecting on prior knowledge, and generating preliminary exploratory *puzzles* (Hanks 2017) or questions. Of course, AR must remain systematic, but those decisions will leave practitioners straddling the boundary between organisation and disorder – something worth getting comfortable with. Other considerations are spatiotemporal. ELLA appears in non-linear paths across diverse contexts in the broad sweep of learners’ formal and informal learning. Practitioners need to develop and refine iterative rounds of exploratory questioning and reflection. Caution is advised before proceeding (if at all) to action (Smith and Rebolledo 2022). Change would not be uniform, so practitioners should exercise patience and cast wide nets. They must know as much as is feasible about their learners, discovering their backgrounds, goals, interests and personalities through close observation, conversation, or assignments that elicit this information. AR is about, ‘facilitating informed emergence’ (Phelps and Graham 2010, 189), so this information will feed into ongoing analysis of what emergent autonomy looks like for them.

Practitioners must synthesise different forms of knowledge and evidence. While quantitative analyses of language change or autonomy may have their place, contextualised interpretation requires qualitative evidence. Next, the surrounding learning landscape must be carefully considered. What latitude is available with assessment methods, materials, course goals, available contact hours, and syllabus design? How old are the learners? What degree of parental involvement is required? If working in teams, informal conversations or co-operating may help define those contours. Furthermore, ELLA necessitates stakeholder involvement in consequential decisions. Appropriate levels of equal voice will be flavoured by perspectives gained from the conversations practitioners have. Similarly, as practitioners themselves benefit from ingraining the habit of consistent reflection, similar cultures must be built among other interested stakeholders. Finally, practical guidelines for studying ELLA through AR can be introduced.

3.2.2. Guidelines for studying ELLA

Language learning and teaching for autonomy must account for immense variability in spatiotemporal, intra- and interpersonal, political, affective, motivational, behavioural, and (meta)cognitive dimensions. Within that context, this paper has offered a conceptual, rather than empirical, case

Table 3. Guidelines for studying ELLA.

Stage	AR guidelines and ELLA features
Conceptual	Build consensus among stakeholders. Multiple, overlapping variables affect autonomy as an emergent property of non-linear systems. Clarify understanding that observable interactions may not follow a simple causal narrative, and that the research will be continuous.
Variables	Involve stakeholders in participatory discussion, highlighting multiple variables that may impact emergence: learner history, future orientation, choice, beliefs, emotion, motivation, teacher practices, learning materials and methods, classroom or interpersonal environments or learning strategies. Collaboratively select key variables for each new project iteration – acknowledging relationality and initial-condition sensitivity.
Objectives	Engage stakeholders in ongoing negotiation around flexible research goals – adaptation and interdependence are key conceptual elements. Prioritise understanding over promoting change by capturing unexpected patterns and trends in emergent autonomy. Negotiate rolling requirements for ethical research conduct.
Methodology and Methods	Collaborate to select specific, authentic learning environments – formal, semi-formal, non-formal, physical and/or virtual. Obtain the longest time available to operate. Consider combining a range of qualitative (e.g. diaries, interviews, focus groups) and quantitative methods (e.g. scales, tests), and anticipate the need to pivot during the research period.
Data Collection	Deploy observational methods at appropriate short, medium, and long-term intervals to capture feedback effects at different levels of the complex, dynamic ecology of learner experiences, processes, and environments.
Analysis	Involve stakeholders in analysis. Searching for self-organising patterns or trends feeds forward into ongoing alterations to analysis and design. Triangulate different sources of data and analyse them iteratively, deepening holistic understanding of what constitutes emergent autonomy in this context and emergence thresholds (e.g. classroom layout or feedback changes).
Reflection	Document stakeholder reflections in diaries, audio or video logs – including those of the practitioner researcher whose own observations are deeply implicated in the emergence of autonomy within the complex dynamic system of the learning environment.
Distribution	Recognise the emancipatory potential of the findings for stakeholders. Differentiate formats and means to give them appropriate ownership of the narrative – system, school, (non)classroom, or learner. Emphasise and acknowledge the non-linear nature of language learning, highlight epiphenomenal emergences of autonomy, and negotiate evaluations with stakeholders about implications for policy and practice, or implementing open-ended project iterations.

for reconceiving and studying autonomy as an emergent phenomenon among language learners. While the framework provides a comprehensive conceptual understanding, ELLA also implies that no two emergences or investigations will be alike. If autonomy manifests in unpredictable and idiosyncratic ways, the above initial considerations for action research by practitioners can only serve as perspectival aids. However, considering that, ‘autonomy as a construct is meaningless unless it can be related to practice’ (Lamb 2017, 181) and that practitioners are ultimately concerned with applicability, this paper now offers some pragmatic guidelines in Table 3 as a suggestion for studying ELLA with AR.

4. Conclusion

Chong and Reinders (2022) suggested that language learner autonomy was poorly conceptualised and operationalised. However, the current exploration has instead suggested a position of ELLA within the theoretical framework of CDST. The acceptance of change and inconsistency obviates the need for unifying definitions. A clear conceptual case was presented for action research, being both achievable and uniquely suited to complexity perspectives. Future empirical investigations into ELLA can fully leverage this nuanced understanding. More than implying learner-centeredness, it emphasises orientational *stakeholder-centeredness*. Those actively enmeshed within complex systems will collaboratively interpret what ELLA means. This participatory commitment also suggests emancipatory ones; to facilitate engagement of implicated educational stakeholders in consequential decisions about learners’ futures. This means rejecting dogmatic approaches to research and practice and committing to long-term systemic reflection and local evidence-based change. That is, evidence founded in recent research conducted in local contexts. This may be

challenging within centralised curricular systems (Wood and Butt 2014), which engage in educational paternalism and marketable skills production (Benson 2013). Pragmatic compromises must be negotiated. Research and practice will require openness to change. Autonomy will look different across time for the evolving needs and goals of each user. However, truly emergent autonomous experiences cannot be understood by imposing pre-set research plans, pedagogies or curriculum designs which prioritise production of marketable human capital above empowerment of interdependent individuals.

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Note on contributor

Thomas Stringer has been involved with English language teaching in Japan for over 15 years. He is a doctoral student in TESOL at the University of St Andrews, UK. He is a Fellow of the UK Higher Education Academy and a full-time Instructor of English as a Foreign Language at the Language Center of Kwansei Gakuin University, Japan. He is currently Administrative Intern at Professional Development in Education journal. His research interests are broadly on language learner and teacher development, with a particular focus on autonomy.

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