

## A Theoretical Exploration of Language Teacher Well-being and Immunity in Low-Resourced Contexts: Human Ecological Language Pedagogy Perspective

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### ABSTRACT

*This paper offers a theoretically integrative framework of "Human Ecological Language Pedagogy" (HELP, henceforth) by Levine (2020) to understand the developmental trajectories of the language teacher's immunity and well-being, particularly in low-resourced contexts such as Pakistan. Previous studies on these constructs are grounded in complex dynamic system theories (CDST) (Hiver, 2017; Sulis et al., 2021); however, they explored the LTI and well-being separately. Moreover, CDST, as a meta-theory alone, does not provide an adequate account for the layered, socio-culturally charged, and ethically embedded realities of second/foreign language teachers employed in postcolonial and marginal ecologies. By bringing the commensurability of CDST (Larsen-Freeman, 1997; Larsen-Freeman & Cameron, 2008), sociocultural theory (SCT) (J. P. Lantolf, 2002; J. Lantolf & Thorne, 2006), and ecological system theory (Bronfenbrenner, 1979; Van Lier, 2004) under the framework of HELP, this theoretical paper aims to offer a holistic and context-sensitive lens to view the co-development of LTI and well-being nested in the ecological environments of material, institution, society, culture, and history. Moreover, he proposed that this framework holds significant potential for low-resourced contexts. Hence, building on this proposition, this theoretical paper endeavours to examine how HELP is a practical and timely response to the limitations of competence-based pedagogies and is suited to unveil the complex and dynamic trajectories of English language teachers' immunity and well-being in the unique ecological conditions of Pakistan and the broader Global South.*

**Keywords:** Human ecological language pedagogy framework, Complex Dynamic System Theory, Sociocultural Theory, Language teacher immunity, Well-being, ESL teachers

### INTRODUCTION

Teaching has consistently been recognised as one of the most stressful and demanding jobs, characterised by a high level of stress, tension, and burnout (Li, 2021a; Mercer, 2020). However, in the context of a second or foreign language, the level of stress and burnout increases due to additional linguistic, pedagogical, and intercultural challenges (Gkonou & Miller, 2017; Nayernia & Babayan, 2019). Specifically, the Global South and low-resourced educational settings, including those in Pakistan, are under-theorised in these terms, even though they are characterised by a particular institutional, cultural, and political landscape (Shamim, 2008). This adds to the value of teachers as the 'critical pillars' of academia (Khani & Mirzaee, 2015; Pishghadam et al., 2021); therefore, globally, the emotions, resilience, and well-being of foreign/second language teachers should be the priority of research and educational agendas (Chu & Liu, 2021; Maslach & Jackson, 1981; Mercer & Gregersen, 2020; Pishghadam et al., 2021). Following the shift in the trends towards 'the psychology of teachers', a myriad of research has

been done on the different aspects of language teaching and their learners' outcomes. However, most of the research conducted revolves around negative emotions like stress, anxiety, and burnout as the significant causes of 'non-functionality' in teachers (Benevene et al., 2020; Fleming et al., 2013; Jin et al., 2020). However, research on these stressors has highlighted that the health, job satisfaction, resilience, self-organisation, self-efficacy, motivation, and professional performance of teachers are all highly contingent on the attention educational institutions pay to their frontline staff (Derakhshan et al., 2020).

Furthermore, this paper offers a new insight into the development of language teacher well-being and immunity as the domains of HELP on how teachers struggle, survive, and even prosper under challenging conditions (Hiver, 2017). It is suggested that language teachers' well-being and immunity are not static states of the teacher but a dynamic result of the progression of ecological interaction, mediation and meaning-creation. This framework is particularly relevant to under-resourced nations (Levine, 2020), where educators usually work in the context of choppy institutional policies, poor compensation, lack of support networks, and socio-cultural trappings.

### **Research Aim and Key Objectives**

This theoretical paper aims to examine the existing theories and frameworks that explain how the well-being of language teachers and immunity co-develop in the Pakistani ESL sector. Relying on Human Ecological Language Pedagogy (HELP), a framework that combines sociocultural theory (SCT) and complex dynamic systems theory (CDST), this paper aims to shed light on the existing literature on multilayered ecological influences on well-being and the shaping of adaptive or maladaptive behavioural responses to professional demands among teachers.

This paper is aimed at achieving the following specific objectives:

- To examine theoretical constructs related to language teacher immunity and well-being.
- To critically evaluate the theories of Complex Dynamic System Theory, Socio-Cultural Theory, and Positive Psychology as foundations.
- To explore how the framework of Human Ecological Language Pedagogy (HELP) offers a holistic perspective for Pakistani contexts.
- To provide a conceptual ground for future empirical research and model developments.
- To outline the implications of future research, teacher education, and institutional policy change.

### **LITERATURE REVIEW**

Besides, with the advent of positive psychology (PP) as an offshoot of humanism, the researchers moved their attention from negative emotions to positive energies of teaching and laid stress on exploring the psychological and physical well-being, care, emotions, and credibility of teachers (Jin et al., 2020; Pishghadam et al., 2021). PP is an approach that explores how people are focused on following happier lives (MacIntyre et al., 2016) by cultivating courage, resilience, credibility, hope, happiness, flow, creativity, interpersonal communication skills, and leadership to achieve academic goals (Seligman, 2011). In this regard, the most observable construct in PP is the well-being of language teachers, which is described as extending beyond mere happiness to encompass the judgement and satisfaction of an individual on physical, psychological, and social levels (Huppert, 2009).

Additionally, the emotions and psychological characteristics of language teachers play a crucial role in effective and creative teaching (Roffey, 2012). Similar to other aspects, teachers seek to perform better in

the context that fulfils their professional and social needs. Moreover, research also shows that the well-being and academic performance of language learners are primarily dependent on the well-being of the language teachers (Bentea, 2015a; Briner & Dewberry, 2007). Therefore, educational institutions must prioritise the well-being of teachers to ensure high-quality teaching and enhanced learning.

Apart from the well-being of language teachers, another complex and dynamic construct that reflects the complications of L2 education is language teacher immunity, proposed by Hiver & Dörnyei (2015). In the context of language education, teachers face various challenges in the classroom, in addition to pedagogical issues.

The subsequent sections will discuss each construct in detail:

### **Conceptual background: Language Teacher Immunity and Well-being**

This section sheds light on the two primary constructs of the model, namely language teacher immunity and well-being. Based on the notions of positive psychology, the well-being of teachers is presented as a dynamic and multidimensional concept, encompassing emotional, cognitive, and social aspects. It extends beyond the absence of burnout or stress, highlighting the capacity of teachers to thrive and achieve professional satisfaction. The term 'language teacher immunity' is an extension of the theory that teachers should be on guard against professional challenges, as proposed by Hiver (2015, 2017). It is formed through self-organisation mechanisms described in CDST, and it appears in two different forms: productive or maladaptive responses to long-term challenges.

#### **Well-being**

The conceptualisation of positive well-being (PWB henceforth) is a process that supports many interrelated constructs and dimensions (Weiss et al., 2016). It has been established from PP that concerns include an individual's happiness, personal growth, and positive functioning, among others (Zaki, 2018). Ryan and Deci (2001) offered two approaches to well-being: the "hedonic" and the "eudemonic" approaches. They proposed that the hedonic approaches are primarily focus on life satisfaction and happiness, defining well-being as a means to achieve happiness and alleviate pain. The primary concern of hedonic well-being appears to centre on subjective well-being.

On the other hand, the eudaimonic approach to well-being highlights meaning and self-organisation. It also involves living a human life in the realisation of one's full potential. This approach lays the groundwork for PWB and capitalises on the ability of an individual to utilise personal resources and grow with meaning in life (Mercer, 2020). It is noteworthy that PWB does not adhere to a single approach. Instead, it should be interpreted as a good mix of both techniques, considering the individual's positive affect and emotions (Jayawickreme et al., 2012).

However, there are potential threats to the well-being of teachers due to the complexities of teaching English as a second language (L2 education). The well-being of ESL teachers (physical, social, and psychological) in Pakistan is primarily influenced by several factors, and their consideration may provide optimal conditions for learning and thriving, leading to a better academic experience. Additionally, it is essential to note that the well-being of L2 teachers is a complex and multifaceted construct that is likely to be influenced by multiple other personal and educational contextual factors, and with the advent of PP, researchers and practitioners shifted their focus towards positive and affective emotions in academia, aiming to promote the positive functioning of teachers and students (Zaki, 2018). The above discussion

entailed PWB as a multidimensional construct in PP, and PWB is based on six dimensions, such as self-acceptance, positive relations with others, autonomy, personal growth, and purpose in life.

### **Immunity of Teachers**

The construct of language teacher immunity has been proposed by Hiver (2015) and Hiver and Dörnyei (2017) in their groundbreaking work on existing gaps between motivation and language teacher identity. In comparison to its parallel construct, biological immunity serves as a protective shield against external germs and pathogens, referring to a line of defence mechanisms that teachers use to protect themselves from complex professional challenges, setbacks, and stressors, particularly in language teaching contexts (Hiver, 2017). Moreover, in academics, it provides a framework to understand the processes through which teachers use a defence system to curb or alleviate the impact on their professional identity (Hiver and Dörnyei, 2015).

Similar to medicine that cures and protects an organ but sometimes triggers allergies in other organs, teacher immunity can also have negative impacts. More specifically, it can be further defined into two distinct types: productive and maladaptive immunity. Teachers equipped with productive immunity are less vulnerable to stress and failures, as they can better navigate conflicts and challenges. As a result, they can elevate their self-esteem, job satisfaction, and self-confidence, ultimately leading to their promotion as teachers. On the other hand, teachers with maladaptive immunity have low levels of self-esteem, motivation, self-efficacy, and confidence. Consequently, they are very resistant to any change in their approach and methods of teaching a second language (Hiver and Dörnyei, 2015).

### **The Theoretical Development behind Teacher Immunity**

The core principles of the theory behind language teacher immunity are related to the complex dynamic system theory (CDST) and the self-organisation process. CDST is regarded as the theory of evolution, change, and adaptation, which studies survival by a combination of cooperation and competition (Mason, 2008). Following this theory, there is always a dynamic and cyclic relationship between an organism and its context, and they often change each other (Battram, 2001).

Furthermore, the self-organisation process is a process of adaptation wherein the survival of the organism depends on the various changes that occur within the internal system in response to the external system. This process comprises four developmental stages: triggering, linking, realignment, and stabilisation (Hiver, 2017). In the triggering stage, an unexpected occurrence takes place in the system, causing it to lose its integrity or balance and become more susceptible than normal (Hiver and Dörnyei, 2015). In the linking stage, organisms begin interacting with each other through a positive or negative feedback loop, and the system starts developing coping mechanisms to combat the unprecedented challenges (Rahmati et al., 2019). In the 3<sup>rd</sup> stage of realignment, the system begins to restructure its organisms to regain stability (Thelen & Bates, 2003). More specifically, the system regains its productivity, and new behavioural patterns emerge within the system. Lastly, in the stabilisation stage, stability is recaptured by developing immunity against future conflicts. The emerging behavioural patterns are expected to be part of the larger system's behaviour and eventually stabilize within it (Rahmati et al., 2019). The final stage is the stage at which teachers are meant to develop either productive or maladaptive immunity.

### **Theoretical Framework: Human ecological Language pedagogy Framework (HELP)**

#### **The Theory of Complex Dynamic Systems (CDST) and Its Application to Language Teaching**

Complex Dynamic Systems Theory (CDST) arose in the biological and physical sciences, particularly in the field of ecology (Gibson, 1986; Gleick, 1987; E. N. Lorenz, 1963), and is spreading across the social sciences (Bateson, 1996; Bronfenbrenner, 1979; Marion, 1999; Spivey & Spivey, 2008), applied linguistics, and language education, among them. CDST has been and is used as a conceptual system in language teaching but has found application in few studies as a quantitative model of the development of the second language (L2) (Caspi & Lowie, 2009; Elman, 1995; Lowie et al., 2011; Niyogi & Berwick, 1995; Verspoor et al., 2017). Noteworthy, as De Bot, Lowie, and Verspoor (2007) highlighted, no mathematical modeling is necessary to exemplify the nature of CDST; one simply needs to grasp its main principles. CDST can offer a perspective to examine change and improvement over time, a vital issue in language teacher learning and adjustment.

### **Leading Features of CDST in Language Pedagogy**

**Multiplicity and Interaction:** This is not a simple dynamic system, as it comprises many interdependent elements that continually interact (the Five Graces Group et al., 2009). Language teaching involves several variables, including the institution's culture, teaching processes, learner characteristics, teacher emotions, and external pressures, which interact and influence one another.

**Nonlinear Interrelatedness:** The key point is that every element of the system is interrelated; this means that the change in one variable inevitably influences other variables (de Bot et al., 2007). To illustrate, a teacher's change may affect the interaction in the classroom, influencing motivation, and this change may, in turn, impact students' participation and learning outcomes. An analogy used to illustrate the example provided by Larsen-Freeman and Cameron (2008) of a person walking through a field, whereby both the participant and the field undergo a similar type of interaction.

**Adaptation over Time:** CDST emphasises that systems are adaptive and change in response to both past and current experiences (Five Graces Group, 2009). In the case of teachers, their behaviour in the classroom, as it relates to their professional identity, is influenced by their previous teaching experiences and the current evaluation system in their respective teaching location.

**The sensitivity to initial conditions:** The minor variations at a specific moment, either at the beginning or in a new teaching situation, can lead to a significantly different developmental path (De Bot & Larsen-Freeman, 2010; E. Lorenz, 1972). It is similar to the butterfly effect, where a relatively small influence at the beginning of a system can lead to a significant impact later on.

**Consistent yet varied changes:** Although a teacher's development is continuous, it cannot always be identified and may occur at a different pace. Teacher growth, just like the growth of grass, is almost unnoticeable, and there are times when there is the ah-ha! Moment (Larsen-Freeman & Cameron, 2008).

**Attractor and repeller states:** The CDST recognises that behavioural states of attractor are stable and preferred states of psychology, and also those repellers that one should avoid (de Bot & Larsen-Freeman, 2010). An attractor state for language teachers would be that they feel confident or unsurprised by whatever comes along in the classroom; a repeller would be emotional burnout or job isolation. The system locates itself in states similar to a ball falling into deep holes (attractors), and as long as it may take, it stays there until some force can break the pattern.

**Emergence and Self-Organisation:** The most significant concept of CDST in teacher development is probably the emergence, or the reported emergence, of new behaviours or cognitions as a result of



interaction with the environment (Larsen-Freeman, 2017). It implies that the bottom-up interaction of emotional, contextual, and institutional factors causes teacher identity, strategies, and immunity to evolve.

### **Socio-Cultural Theory (SCT) within an Ecological Context**

The socio-cultural theory (SCT), with its foundation in the works of Vygotsky (1978), offers an interesting approach to examining teacher development, teacher identity, and teacher well-being as socially mediated and contingent constructs. The essential aspect of SCT is that psychological development is initially social, which is then internalised, implying the dialectics between a person and their surroundings. Such a conception of language teaching career life has transformed the image of professional development for language teachers, as cognition and emotional resilience are influenced by various tools, cultural objects, and interpersonal relationships (Lantolf & Thorne, 2006; Johnson, 2009).

Moreover, SCT can be critical about power, ideology, and ownership of the means of mediation. In disadvantaged ESL classrooms, educators may lack access to resources that support growth and development, emotional well-being, and authority, which can quickly and negatively impact their mental resilience and overall well-being (Johnson & Golombek, 2020). Through the lens of SCT, researchers and educators are motivated to consider, above all, the relational, historical, and cultural dimensions of teaching as key determinants of teacher well-being and resilience. The above-mentioned concept supplements the nested ecologies focus of the HELP framework, allowing for a more situated, moral, and development-oriented perspective on language teacher development in multifaceted real-life scenarios.

### **Foundation of HELP**

The Human Ecological Language Pedagogy (HELP) framework, introduced by Glenn Levine (2020), is an excellent development of theory in applied linguistics. It provides an interdisciplinary perspective on teaching a language, as it incorporates both Socio-Cultural Theory (SCT) and Complex Dynamic Systems Theory (CDST). Within the humanistic and ecological paradigm, HELP reconceives language teaching as a shifting and site-based practice that is also ethically informed and that teachers are ecological subjects, the processes of whose development and well-being cannot be divorced from their sociopolitical and institutional contexts. SCT, as a science based on Vygotskian psychology, would be helpful to HELP because it addresses crucially the significance of social interaction, cultural-historical context, and mediated learning in the development of both teachers and learners. Such a historically and contextually complex and multifaceted environment of education makes HELP systems nested in the adapted Bronfenbrenner ecological model (1979) rather evident to give a blueprint and shift the paradigm to recapture and reconceptualize teacher experience not as an instruction agent but as a human being integrated into a complex and interconnected system of social, institutional, and policy ecology (Levine, 2020).

### **HELP across the Ecological System**

Levine (2020) has structurally embedded HELP in the ecological systems theory by Bronfenbrenner (1979), stating a layered system of influence:

**The microsystem** comprises closer interaction in the classroom and with other peers.

**The mesosystem**, the middle level, mirrors inter-institutional relations, such as departmental cultures.

The **exosystem** consists of administrative policies, job conditions, and access to resources, among other factors.

The **macrosystem** is the one that symbolises language ideologies, socio-cultural norms, and even the national curriculum.

The **chronosystem** reflects longitudinal change, historical reform, and the professional trajectory of individuals.

### **HELP and the development of ELTI and well-being in Pakistan**

The introduction of such an ecologically based pedagogical model of language instruction, the Human Ecological Language Pedagogy (HELP) in Pakistan, as a framework of English language teaching (ELT), has come at the right time to transform the landscape of the system in innovative ways and offer a systemic solution to some common challenges that have been the bane of the landscape

Moreover, Pakistani ESL classrooms are also characterised by large classes, rote-learning methods, limited student-to-teacher interaction, and, in most cases, outdated educational materials at the **microsystem level** (Kuchah & Shamim, 2018; Rahman, 2008). HELP urges teachers to take such limits as flexible affordances, environments that, through considerate manipulation and place-based solutions, can be turned into environments that enable more significant, socially mediated learning.

**Mesosystemic and exosystemic** levels result in a tendency towards policy inconsistency, scarcity of professional development, and top-down language planning, without which institutional expectations and realities in the classroom would be connected in a fragmented way (Coleman, 2010; Mahboob, 2009). HELP can be said to belong to several researchers who speak the lingo of relationships and the maze-like complexity of context, and argue the coherence of cross-layer. This kind of coherence involves justifying the support system of the institution to the realities experienced by teachers and learners. In this regard, professional immunity does not evolve as the result of personal determination but rather within the framework of systemic encouragement, collegial support, and agency (Hiver, 2017).

In addition to this, the **macrosystemic** features, including hegemonic beliefs about languages, an accountability focus on assessment, and the social stratification system, significantly influence the professional gradation and psychological safety of teachers (Rahman, 2005). HELP makes it possible to analyze critically the ideologies that define teacher identity and efficacy. It also offers a platform to combat deficit discourses about teachers and replaces them with asset-based, humanizing frames, with compassion, justice, and imagination in the forefront (Levine, 2020).

Notably, the **chronosystem** enables us to trace the patterns of interaction among policy changes, technological changes, and sociopolitical processes, which also include the effects of COVID-19 on the teaching profession in Pakistan in the past. To illustrate, the sudden transition to online instruction that occurred during the pandemic revealed the apparent digital divide, marginalization of teachers, and lack of adequate institutional support (Arshad et al., 2020). The time-sensitive focus of the HELP framework offers an instrument to dissect such a set of patterns over time and develop teacher immunity as a non-reactive, progressive path (Hiver & Dornyei, 2017).

Therefore, HELP not only provides a theoretical lens for addressing the problem of language teacher education in Pakistan but also a philosophical framework and a practical guiding plan of action to revolutionize the issue. Considering local limitations while embracing the dynamic complexity of

teaching ecologies, HELP enables stakeholders to design more equitable, humane, and responsive educational environments.

## IMPLICATIONS

The theoretical discussion, within the context of the Human Ecological Language Pedagogy (HELP) framework, has several implications for the roles that may be of interest to language teacher education in policy design and research on language education in under-resourced settings, such as Pakistan, in the future. The presence of language teacher well-being and immunity co-development as its focus, presented within the dynamic and nested ecological development framework (Levine, 2020; Bronfenbrenner, 1979), provides the paper with an opportunity to offer a context-sensitive basis upon which systems of supporting language teachers can be redesigned.

## CONCLUSION

The proposed theoretical review focuses on critiquing how language teacher well-being and professional immunity can be conceptualised within an integrated framework, Human Ecological Language Pedagogy (HELP), which synthesises knowledge regarding Socio-Cultural Theory (SCT) and Complex Dynamic Systems Theory (CDST) (Levine, 2020). Placed by concern for positive psychology in flourishing, the present paper has shown that the process of developing teachers does not run along a continuum or an individualistic process but within the operation of nested systems of ecology that work along the dimensions of the classroom settings, institutional, policy, and sociocultural contexts (Bronfenbrenner, 1979; Larsen-Freeman & Cameron, 2008).

In places such as Pakistan, where ESL teachers face structural under-resourcing, a strict curriculum, and sociopolitical limitations, HELP offers a context-specific approach that emphasises teachers being adaptive, emotionally responsive, and ecologically embedded (Amin & Shah, 2022; Shamim & Kuchah, 2016). Its multilevel model helps describe how macro-level forces, such as language policy, relate to meso- and micro-level experiences in defining resilience, burnout, or growth (Levine, 2020). It provides possible points for implementation in the education of language teachers, especially in Global South countries where the issue of the teacher's well-being is critical and little theorised.

## REFERENCES

- Arshad, A., Afzal, M., & Hussain, M. S. (2020). Sudden Switch to Post-COVID-19 Online Classes and Cognitive Transformation of ESL Learners: Critical Analysis of Discourse of Fear. *Research Journal of Social Sciences and Economics Review (RJSSER)*, 1(3), 188–199. <https://doi.org/10.36902/rjsser-vol1-iss3-2020>
- Bateson, P. (1996). Design for a life. In D. Magnusson (Ed.), *The lifespan development of individuals: Behavioural, neurobiological and psychosocial perspectives* (pp. 1–20). Cambridge University Press.
- Batram, A. (2001). *Navigating complexity: The essential guide to complexity theory in business and management* (Reprinted). Industrial Society.
- Benevene, P., De Stasio, S., & Fiorilli, C. (2020). Editorial: Well-Being of School Teachers in Their Work Environment. *Frontiers in Psychology*, 11, 1239. <https://doi.org/10.3389/fpsyg.2020.01239>
- Bentea, C.-C. (2015). Relationships between Personality Characteristics and Attitude Towards Work in School Teachers. *Procedia - Social and Behavioral Sciences*, 180, 1562–1568. <https://doi.org/10.1016/j.sbspro.2015.02.307>
- Bronfenbrenner, U. (with Cole, M.). (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press. <https://doi.org/10.4159/9780674028845>



- De Bot, K., & Larsen-Freeman, D. (2010). *Theory construction in applied linguistics from a Dynamic Systems Theory perspective* (K. de Bot, Ed.).
- De Bot, K., Lowie, W. M., & Verspoor, M. H. (2007). A dynamic systems theory approach to second language acquisition. *Bilingualism: Language and Cognition*, 10(1), Article 1. <https://doi.org/10.1017/S1366728906002732>
- Derakhshan, A., Coombe, C., Zhaleh, K., & Tabatabaiean, M. (2020). Examining the Roles of Continuing Professional Development Needs and Views of Research in English Language Teachers' Success. *The Electronic Journal for English as a Second Language*, 24(3), 1–27.
- Elman, J. (1995). Language as a Dynamical System. In T. van Gelder (Ed.), *Mind in motion: Explorations of the dynamics of cognition* (pp. 195–225). The MIT Press.
- Fleming, J. L., Mackrain, M., & LeBuffe, P. A. (2013). Caring for the Caregiver: Promoting the Resilience of Teachers. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of Resilience in Children* (pp. 387–397). Springer US. [https://doi.org/10.1007/978-1-4614-3661-4\\_22](https://doi.org/10.1007/978-1-4614-3661-4_22)
- Gibson, J. J. (1986). *The ecological approach to visual perception*. L. Erlbaum.
- Gkonou, C., & Miller, E. R. (2017). Caring and emotional labour: Language teachers' engagement with anxious learners in private language school classrooms. *Language Teaching Research*, 23(3), 372–387. <https://doi.org/10.1177/1362168817728739>
- Gleick, J. (1987). *Chaos: Making a New Science*. Viking Penguin.
- Hiver, P. (2015). Once burned, twice shy: The dynamic development of system immunity in language teachers. In Z. Dörnyei, P. D. MacIntyre, & A. Henry (Eds.), *Motivational Dynamics in Language Learning* (pp. 214–237). Multilingual Matters.
- Hiver, P. (2017). Tracing the signature dynamics of language teacher immunity: A retrodictive qualitative modeling study. *The Modern Language Journal*, 101(4), Article 4.
- Hiver, P. (2018). Teach Strong: The Power of Teacher Resilience for L2 Practitioners. In S. Mercer & A. Kostoulas (Eds.), *Language Teacher Psychology* (pp. 231–246). Multilingual Matters.
- Hiver, P., & Dörnyei, Z. (2015). Language Teacher Immunity: A Double-Edged Sword. *Applied Linguistics*, amv034. <https://doi.org/10.1093/applin/amv034>
- Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. In *Appl. Psychol. Health Well-Being* (1st ed., pp. 137–164). doi: 10.2307/ 255998
- Jayawickreme, E., Forgeard, M. J. C., & Seligman, M. E. P. (2012). The Engine of Well-Being. *Review of General Psychology*, 16(4), 327–342. <https://doi.org/10.1037/a0027990>
- Jin, Y., Zhang, L. J., & MacIntyre, P. D. (2020). Contracting Students for the Reduction of Foreign Language Classroom Anxiety: An Approach Nurturing Positive Mindsets and Behaviors. *Frontiers in Psychology*, 11, 1471. <https://doi.org/10.3389/fpsyg.2020.01471>
- Khani, R., & Mirzaee, A. (2015). How do self-efficacy, contextual variables and stressors affect teacher burnout in an EFL context? *Educational Psychology*, 35(1), 93–109. <https://doi.org/10.1080/01443410.2014.981510>
- Kuchah, K., & Shamim, F. (Eds.). (2018). *International Perspectives on Teaching English in Difficult Circumstances: Contexts, Challenges and Possibilities*. Palgrave Macmillan UK. <https://doi.org/10.1057/978-1-137-53104-9>
- Lantolf, J. P. (2002). Sociocultural theory and second language acquisition. In R. Kaplan (Ed.), *The Oxford handbook of applied linguistics* (pp. 104–114). Oxford University Press.
- Lantolf, J., & Thorne, S. (2006). *Sociocultural theory and the genesis of second language development*. Oxford University Press.
- Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18(2), Article 2.
- Larsen-Freeman, D. (2017). Complexity Theory: The lessons continue. In L. Ortega & Z. Han (Eds.), *Complexity Theory and Language Development: Vol. Complexity Theory and Language*

- Development: In Celebration of Diane Larsen-Freeman* (Editors, pp. 11–50). John Benjamins. <https://www.jbe-platform.com/content/books/9789027264961-lllt.48.02lar>
- Larsen-Freeman, D., & Cameron, L. (2008). *Complex systems and Applied Linguistics*. Oxford University Press.
- Levine, G. (2020). A human ecological language pedagogy. *Modern Language Journal*, 104((S)), Article (S).
- Li, S. (2021). Psychological Wellbeing, Mindfulness, and Immunity of Teachers in Second or Foreign Language Education: A Theoretical Review. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.720340>
- Lorenz, E. (1972). Predictability: Does the flap of a butterfly's wing in Brazil set off a tornado in Texas? *Paper Presented at the Annual Meeting of the American Association for the Advancement of Science*.
- Lorenz, E. N. (1963). Deterministic Nonperiodic Flow. *Journal of the Atmospheric Sciences*, 20(2), 130–141. [https://doi.org/10.1175/1520-0469\(1963\)020<0130:dnf>2.0.co;2](https://doi.org/10.1175/1520-0469(1963)020<0130:dnf>2.0.co;2)
- Lowie, W. (2020). Foreword: A Human Ecological Language Pedagogy. *Modern Language Journal*, 104(S1), Article S1. <https://doi.org/10.1111/modl.12607>
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2016). Positive psychology in SLA TT -. In *Second language acquisition ; 97; Second language acquisition ; 97. TA -. Multilingual Matters*.
- Macintyre, P. D., Gregersen, T., & Mercer, S. (2019). Setting an Agenda for Positive Psychology in SLA: Theory, Practice, and Research. *The Modern Language Journal*, 103(1), 262–274. <https://doi.org/10.1111/modl.12544>
- Mahboob, A. (2009). English as an Islamic language: A case study of Pakistani English. *World Englishes*, 28(2), 175–189. <https://doi.org/10.1111/j.1467-971X.2009.01583.x>
- Marion, R. (Ed.). (1999). *The edge of organisation: Chaos and complexity theories of formal social systems*. Sage Publications.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organisational Behaviour*, 2(2), 99–113. <https://doi.org/10.1002/job.4030020205>
- Mason, M. (2008). Complexity Theory and the Philosophy of Education. In M. Mason (Ed.), *Complexity Theory and the Philosophy of Education* (1st ed., pp. 1–15). Wiley. <https://doi.org/10.1002/9781444307351.ch1>
- Mercer, S. (2020). The wellbeing of language teachers in the private sector: An ecological perspective. *Language Teaching Research*, 27(5), 1054–1077. <https://doi.org/10.1177/1362168820973510>
- Mercer, S., & Gregersen, T. (2020). *Teacher wellbeing*. Oxford University Press.
- Nayernia, A., & Babayan, Z. (2019). EFL teacher burnout and self-assessed language proficiency: Exploring possible relationships. *Language Testing in Asia*, 9(1), 3. <https://doi.org/10.1186/s40468-019-0079-6>
- Niyogi, P., & Berwick, R. C. (1995). A dynamical systems model for language change. *A.I Memo*, 1515, Article 1515.
- Pishghadam, R., Derakhshan, A., Zhaleh, K., & Al-Obaydi, L. H. (2021). Students' willingness to attend EFL classes with respect to teachers' credibility, stroke, and success: A cross-cultural study of Iranian and Iraqi students' perceptions. *Current Psychology*, 42(5), 4065–4079. <https://doi.org/10.1007/s12144-021-01738-z>
- Rahman, T. (2008). *Language, ideology and power: Language-learning among the Muslims of Pakistan and north India* (Rev. ed.). Orient Longman.
- Rahmati, T., Sadeghi, K., & Ghaderi, F. (2019). English as a Foreign Language Teacher Immunity: An Integrated Reflective Practice. *Iranian Journal of Language Teaching Research*, 7(Issue 3 (Special Issue)). <https://doi.org/10.30466/ijltr.2019.120738>
- Roffey, S. (2012). *Pupil wellbeing—Teacher wellbeing: Two sides of the same coin?* 29, 8–17.

- Ryan, R. M., & Deci, E. L. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. *Annual Review of Psychology*, 52(1), 141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>
- Seligman, M. E. P. (2006). Afterword: Breaking the 65 Percent Barrier. In M. Csikszentmihalyi & I. S. Csikszentmihalyi (Eds.) (Eds.), *A life worth living: Contributions to positive psychology* (pp. 230–236). Oxford University Press.
- Seligman, M. E. P. (2011). *Flourish*. Random House Australia.
- Shamim, F. (2008). Trends, Issues and Challenges in English Language Education in Pakistan. *Asia Pacific Journal of Education*, 28(3), 235–249. <https://doi.org/10.1080/02188790802267324>
- Shamim, F. (2011). English as the language of development in Pakistan: Issues, challenges and possible solutions. In H. Coleman (Ed.), *Dreams and realities: Developing countries and the English language*. British Council.
- Spivey, J. M., & Spivey, M. (2008). *The continuity of mind* (1), issued as a paperback. Oxford Univ. Press.
- Sulis, G., Mercer, S., Mairitsch, A., Babic, S., & Shin, S. (2021). Pre-service language teacher wellbeing as a complex dynamic system. *System*, 103, 102642. <https://doi.org/10.1016/j.system.2021.102642>
- Tang, J. J., Leka, S., & MacLennan, S. (2013). The psychosocial work environment and mental health of teachers: A comparative study between the United Kingdom and Hong Kong. *International Archives of Occupational and Environmental Health*, 86(6), 657–666. <https://doi.org/10.1007/s00420-012-0799-8>
- The “Five Graces Group,” Beckner, C., Blythe, R., Bybee, J., Christiansen, M. H., Croft, W., Ellis, N. C., Holland, J., Ke, J., Larsen-Freeman, D., & Schoenemann, T. (2009). Language Is a Complex Adaptive System: Position Paper. *Language Learning*, 59(s1), 1–26. <https://doi.org/10.1111/j.1467-9922.2009.00533.x>
- Thelen, E., & Bates, E. (2003). Connectionism and dynamic systems: Are they really different? *Developmental Science*, 6(4), 378–391. <https://doi.org/10.1111/1467-7687.00294>
- Van Lier, L. (Ed.). (2004). *The Ecology and Semiotics of Language Learning: A Sociocultural Perspective* (Vol. 3). Springer Netherlands. <https://doi.org/10.1007/1-4020-7912-5>
- Verspoor, M., Lowie, W., Chan, H. P., & Vahtrick, L. (2017). Linguistic complexity in second language development: Variability and variation at advanced stages. *Recherches En Didactique Des Langues et Des Cultures: Les Cahiers de l’Acedle*, 14(1), Article 1. <https://doi.org/10.4000/rdlc.1450>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, Ed.). Harvard University Press.
- Weiss, L. A., Westerhof, G. J., & Bohlmeijer, E. T. (2016). Can We Increase Psychological Well-Being? The Effects of Interventions on Psychological Well-Being: A Meta-Analysis of Randomised Controlled Trials. *PLOS ONE*, 11(6), e0158092. <https://doi.org/10.1371/journal.pone.0158092>
- Zaki, S. (2018). *Enhancing Teacher Effectiveness Through Psychological Well-Being: A Key to Improve Quality of Teachers*. 8(7), 286–295.