



# Immunology of Language Learners: A Social Psychological Perspective

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## Abstract

The present study was motivated to introduce a new concept named “language learner immunity”. In doing so, we defined the concept of immunity in the language learning context by paralleling the biological tendency of humans to be immune to the immune system of language learners. The psychological aspects of this study relied heavily on the theory of psychological immunity introduced by Oláh (Anxiety, coping and flow: empirical studies in interactional perspective. Trefort Press, Budapest, 2005). Then, we proposed that the language learner immunity (LLI) was shaped by language learners to maintain their equilibrium in face of educational and social psychological forces in their language learning process. The LLI model was later represented and its working procedure was explained through three main processes, namely threat recognition, response generation, and self-regulation. We also discussed the problems that might arise due to the deficiencies in foreign/second language learners’ immune system. We furthered the study by making the differentiation between immune and non-immune language learners. In the end, the educational implications of this concept were presented.

**Keywords** Language learner immunity · Language learning · Educational context · Equilibrium · Immune · Non-immune

## Introduction

Although different subjects of study fulfill wide arrays of objectives in schooling, learning a second language (L2) is different in many ways from learning other school subjects. Second language acquisition is not limited to mastering discrete elements

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of the communication code (e.g., grammatical rules and lexical items). In a wider scheme, it is replete with a wide range of social and cultural elements which makes language learning a profoundly social event. Schools, including language schools, are one of the fundamental “societal experiences” throughout childhood and adolescence (Babad 2009). The school as an institutionalized socialization process deals with transmitting the cognitive aspects of culture (i.e., knowledge and ideas) from one generation to another and prepares students for their future roles (Thompson and Hickey 2016). If we capitalize the wealth of social nature of language learning and apply it to the social psychological nature of classrooms, desocialization and resocialization are likely to be richer in language learning classes (Thompson and Hickey 2016) since understanding a language, especially thinking in another language, requires an understanding and appreciation of the culture that produced it.

The transition from the home environment to the social framework of the school may involve desirable or undesirable change processes. The undesirable changes can be due to the negative school environment, which may exert detrimental effects on students’ behaviors and learning process. To be specific, the majority of educational environments are cross-culturally characterized by adverse psychological climate (Saha and Dworkin 2009). In this sense, learners face a social psychological dilemma in their learning experience- a conflict between personal impulses and their educational/social world (Coon and Mitterer 2013). In large, the experience of being in such an environment can cause lifelong changes in individuals’ behavior (Powell et al. 2009).

Challenges for learners to regulate their attitudes to learning can lead to defensive behaviors to protect them from harmful experiences. These physiological and social psychological mechanisms automatically allow the central nervous system to allocate minimal attention to details of day-to-day survival and instead to focus on higher order functioning (Goldstein 1995). Accordingly, protective reactions result in cognitive overload and have detrimental effects on verbal reasoning, focus of attention, and complex task performance (Davies and Underwood 2000). Resolving each dilemma in the learning environment develops a new balance between a person and his/her learning society. When success is achieved consecutively, it produces healthy development and a satisfying life, whereas, the string of “failures” may neither sustain the individuals’ balance nor their personal growth (Coon and Mitterer 2013).

The tool for fighting the psychological challenges is a psychological immune system which acts like what the biological immune system does. It helps to provide psychological health and well-being in relation to the environmental stress. In the educational setting, learners also need a form of immune system to surmount learning obstacles and make learners immune to further challenges they might face along their learning way. In other words, developing some form of immunity appears to be a necessity for language learners to survive and avoid becoming embittered or indifferent. The present study is an attempt to introduce a new concept which can loom as a possible explanation for why some learners plateau while others thrive in their language learning process. Hence, it can be said that learners develop what can be referred to as *Language Learner Immunity* to protect themselves from being influenced by educational, as well as social psychological obstacles in their language learning environment. In other words, *Language Learner Immunity* allows learners to be flexible without giving up on their language learning goals. Before outlining

what *Language Learner Immunity* is, first we should gain an initial understanding of biological and psychological immune systems in determining how learner immunity plays out, and how this immunity directly influences the learner identity by analyzing the ecology of language learners and explaining how the educational setting of language learning can shape *Language Learner Immunity*. Each of these issues directly pertains to philosophical considerations about the character of the language learner, the relationships of parts to the whole, principles of educational organization and regulations, and the ability of the model to capture complex functions of a learner.

## Biological Immunity

Immunology is the byproduct of Darwinian age, emphasizing on the fact that all species, including human beings, are not static entities, but subject to change as a result of their adaptation to the physical features of the environment. Darwinism proposes the evolutionary nature of species which means that an organism is always changing, adapting and therefore, evolving.

Indeed, Burnet introduced immunology as a science of self-discrimination (Burnet 1959), an idea which was the backbone of many experimental studies for several decades after the Second World War (Tauber 1994). From the philosophical point of view, this definition of immunology is concerned with those mechanisms defining the identity of the organism (in Stanford encyclopedia of philosophy). Thus, from the perspective of self/nonself discrimination immune theory, immunity is based on an understanding of biological identity, namely an entity, the self, which requires defense.

In the 1980s, the paradigm of self/non-self-discrimination in immunology came under criticism and new frameworks for immunology studies were introduced. For instance, Matzinger (2002) introduced “Danger Model,” which could protect the individual from damage by recognizing and responding to molecules released during stress or tissue damage that serve as danger (alarm) signals. Nevertheless, this model was also criticized on the grounds that innate immune receptor agonists can induce the receptors to promote tolerance and inhibit inflammatory responses in certain circumstances (reviewed in Kubinak and Round 2012). From Tauber’s point of view, the most germane to immunology studies, however, was Jerne’s idiotypic network theory, which, he argued, “moved past the identity issue altogether” to propose that “the immune system was fundamentally organized unto itself” (Tauber 2000, p. 246).

In short, the philosophy of immunology has moved from a simple matching system of selected antibodies to noxious antigens, to a collective response of a variety of elements (Daëron 2014). This means that the immune system generates a response based on the whole context of the potential danger not the recognition of toxicity per se. However, each response is uniquely modified to fight against the counterbalance effects of the fluctuations in the biochemical and microbial microenvironment (Garrett et al. 2010; Barbosa and Rescigno 2010). Therefore, the immune system is constantly active to analyze the context of danger and produce a unique response (Eberl 2010; Leng and Bentwich 2002; Swiatczak et al. 2011).

## Psychological Immunity

The concept of the Psychological Immune System was developed based on the resources of coping effectiveness and resilience, with the aim to integrate these isolated, but empirically correlated character strengths and resources of the personality into one comprehensive system (Oláh 1995). The theory utilized the positive psychological view, which aimed to emphasize human strengths and potentials instead of weaknesses and flaws of the personality (Oláh and Kapitány-Fövény 2012).

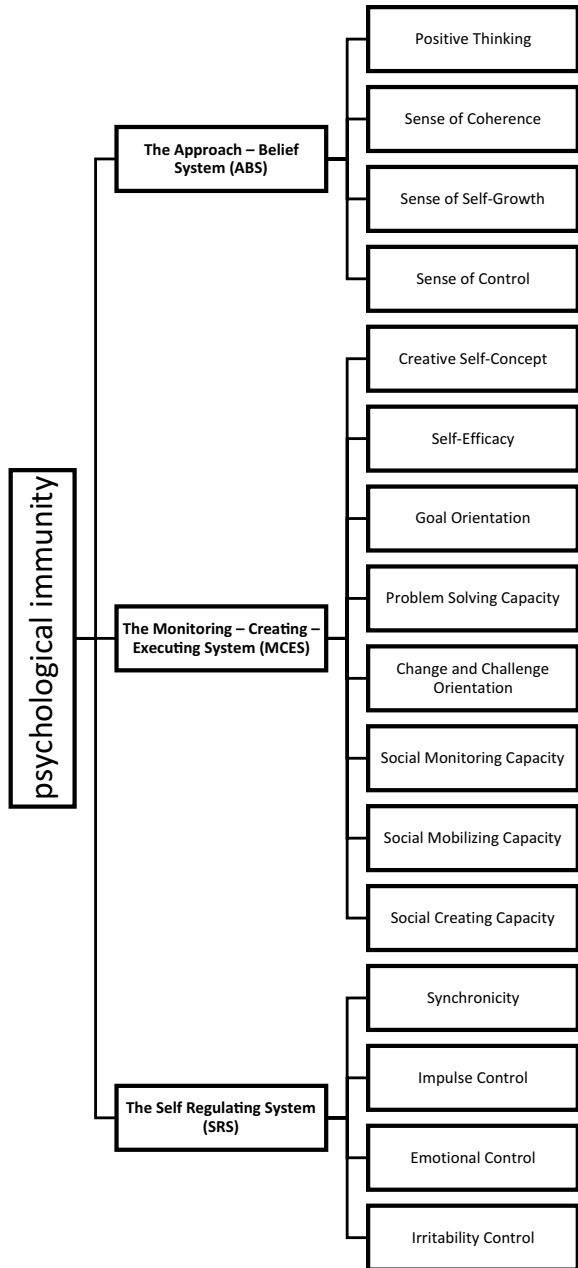
The psychological immune competence system (PICS; Oláh 2005) is an integrated system of 16 personal competencies which includes cognitive, behavioral and trait-like dimensions to provide immunity against stress and promote healthy development. PICS is made up of three subsystems (Fig. 1), namely the Approach-Belief Subsystem, the Monitoring–Creating–Executing Subsystem and the Self-Regulation Subsystem which interact dynamically with each other in order to facilitate the flexible adaptation and self-development of the individual.

The Approach-Belief Subsystem turns an individual's attention to the environment. It helps individuals in evaluating the environment and directing their attention towards anticipating positive outcomes. This subsystem incorporates Positive Thinking, Sense of Coherence, Sense of Control, Sense of Self-Growth, Change and Challenge Orientation, Social Monitoring, and Goal Orientation. The Monitoring–Creating–Executing Subsystem steers up the exploration of physical, social, and intrapsychic environments in order to put into action the resources necessary to influence and create possibilities within the environment. It represents the people's ability to modify either their internal or external environment in order to pursue their valued goals. Creative Self-Concept, Problem Solving, Self-Efficacy, Social Mobilizing Capacity, and Social Creating Capacity belong to this subsystem. The third subsystem, the Self-Regulating fosters the proper functioning of the other two subsystems by keeping the emotional life of the person stable (Gombor 2009), and includes Synchronicity, Impulse Control, Irritability Control, and Emotional Control.

The three subsystems work together in a dynamic interaction, constantly regulating each other's operation in the process of coping, guiding the individual to use flexible and self-developing strategies (Oláh 2005; Oláh et al. 2012). In other words, the Psychological Immune System creates a balance between the person and their environment to be able to reach higher levels of adaptive strength (Gombor 2009).

In this study, the biological tendency of humans to be immune is paralleled to the immune system of language learners and the psychological aspects of this study rely heavily on the psychological immunity of Oláh (2005). The immune system in L2 learners enables them to respond flexibly to the diverse range of different occurrences and thus be in equilibrium in their language learning environment. This flexibility is thought to contribute to variations associated with the quality of their social psychological immunity.

**Fig. 1** Psychological immune system introduced by Oláh (2005)



## Educational Immunity

The immunity in education is nascent. Hiver and Dörnyei (2017) first used the term in the context of language education and derived the concept of teacher immunity

as a powerful factor in determining how teachers behave and respond (Hiver 2015) in the face of various sources of stress they encounter in their profession (Skinner and Beers 2016; Carton and Fruchart 2014). They made use of the principles of complex dynamic systems theory (CDST) (Larsen-Freeman 2012; Larsen-Freeman and Cameron 2008) to achieve their purpose. However, the definition of teacher immunity was to some extent vacuous and their approach to teacher immunity did not deem fit.

Immunity is not limited to teachers. Since language learners are constantly involved in the socialization and resocialization over their learning process, what transpires inside the mind of a learner to protect them from language learning challenges are fundamentally educational, social, and psychological. In other words, Immunity waves itself seamlessly into the lives of language learners as well as their teachers. Therefore, the section below is a brief review of teacher immunity and its criticism, then we move forward by taking a different approach from that of teacher immunity to define the concept of LLI.

### English Language Teacher Immunity

Hiver and Dörnyei (2017) put forward the idea of teacher immunity and explained how immunity is different from other similar psychological concepts such as hardiness, coping, and resilience. In EFL/ESL terms, immunity refers to the protective mechanisms developed by language teachers to buffer the inevitable stressful conditions (Hiver and Dörnyei 2017), such as the adverse effects of institutional constraints (Gu and Benson 2014; Park 2012), pressures from managers and parents, as well as professional development often without particular support mechanisms. Teacher immunity is the result of going through the four developmental stages of *triggering*, *coupling*, *realignment*, and *stabilization* of self-organization, a key concept in complexity theory (CT) or dynamic systems theory (DST) (Larsen-Freeman 2012; Larsen-Freeman and Cameron 2008). Self-organization is defined as “the spontaneous process by which higher-level order emerges from the local interaction of disordered components” (Hiver and Dörnyei 2017, p. 412).

Hiver (2016) conducted a four-phase study to explore psychological qualities which distinguished motivated, committed, innovative, and productive teachers from those who were demotivated and struggling to survive. In the first phase of the study, he interviewed four EFL teachers in South Korea. The analysis of the data suggested that these teachers developed a defense mechanism against such classroom disturbances as emotional demands placed on them. This emergent defense mechanism was termed language teacher immunity. The second phase of the study aimed at identifying the prototypes of language teacher immunity and the characteristics of each category using focus-group interviews with 44 L2 teachers. The qualitative comparative analysis of the data identified the nine main prototypes of the spark plug, and the visionary (productively immune), the sell-out, and the fossilized (maladaptively immune), the over-compensator, and the bleeding heart (partially immune), and finally the defeated teacher, the poseur, and the striver (immunocompromised). It was also found that the seven components of teaching self-efficacy,

attitudes to teaching, coping, classroom affectivity, burnout, resilience, and openness to change were essential to the make-up of language teacher immunity. For the third quantitative phase, a questionnaire was designed including items on the seven components found in the second phase of the study. The questionnaire was, then, administered to a sample of 293 Korean EFL teachers. Cluster analysis of the data confirmed six archetypes, including defeated, sell-out, over-compensator, fossilized, spark plug, and visionary, with varying degrees of particular combinations of the seven components in each archetype. For the final phase of the study, three teachers from each of the six archetypes were interviewed to investigate the manner in which these outcomes influenced their professional identity and motivated behavior. The results revealed that these teachers went through the stages of triggering, coupling, realignment, and stabilization mirroring the emergent nature of language teacher immunity. The study suggested that “language teachers’ emotions, teaching motivation, and instructional effectiveness may hinge on the outcome of language teacher immunity that is developed” (Hiver 2016, p. 1).

### Criticisms of Language Teacher Immunity

Hiver and Dörnyei (2017) published *Language teacher immunity: A double-edged sword* as a pioneering work which addressed the concept of immunity in the field of language education. After the introduction section, the biological definition of immunity was put forward and then psychological parallels to immunity were introduced and then the concept of teacher immunity was suggested.

The first problem is that the concept of immunity is not introduced in the context of language education. Although the term is borrowed from biology, it needs to be redefined in the realm of language education. A biological concept is well understood in its ecological context. Now the question is: What is the ecological context of immunity in the field of language education? Unbeknownst to the definition of a core concept of immunity, how can we broaden our understanding of one of its sub-categories namely teacher immunity? Therefore, the concept of teacher immunity lacks ontological background.

Regarding the context of immunity, the traditional approaches in immunity studies were all criticized since they considered immunity as a science of self/non-self discrimination and did not pay attention to the dynamicity of the context of the immunity (refer to “**Biological Immunity**” section). However, it seems Hiver and Dörnyei (2017) followed a similar approach and mostly focused on the challenges in the teaching profession and how teachers can save themselves from the threats. In fact, immune reactivity is not the matter of identifying the “other”, but involves going through multiple stages of sensing, adjusting, and configuring immune reactions in the process of rejection and acceptance (Grossman 1993). The method they employed to analyze the process of immunization in L2 teachers is based on a chaos complexity method proposed by Larsen-Freeman (2012); however, the nature of what they are analyzing is mostly related to the threat recognition and survival which is similar to what previous scholars did in self/non-self discrimination

studies. In other words, “perception” is an integral part of immunity which provokes a spectrum of responses unlike what Hiver and Dörnyei (2017, p. 411) mentioned:

language teacher immunity is a protective mechanism that develops in response to exposure to adverse experiences, but this characterization only partially explains what the construct of immunity constitutes—in reality, what develops is much less attribute-like than it is a part of individual identity construction.

In their article, language teacher immunity is repeatedly introduced as a defensive mechanism, whereas, based on the recent studies in immunology, the defense-derived definition of immunity is claimed to be too restrictive and superficial to its deeper meaning. Immunity is, in fact, the equilibrium which needs to keep both resistance and tolerance on balance (Ayres and Schneider 2011; Vale et al. 2014). In other words, immunity is not merely standing against threats; it even includes establishing tolerance to threats. This means that immunity involves the account of integrative and tolerant interactions which moves beyond its defensive function.

## Immunology of Language Education

Immunity originates from the Latin *immunis* in the late fourteenth century and refers to exemption from service or obligation. From 1879, it enters medicine and means protection from disease. The entry of immunity in Longman’s dictionary is defined as “the fact of not being affected by a disease or harmed by something unpleasant” (Mayor 2009, p. 711) which is followed by “from” or “to” as a preposition. Therefore, immunity serves as a noun which is directed at its object of a preposition. From this very basic analysis, immunity is under the direct influence of its object. That is why defining the context of immunity is the first step in its conceptual definition.

## Social Psychological Nature of Language Classrooms

From a social psychological standpoint, classrooms are symbols of society. Babad (2009, p. 4) described classrooms as mini-societies which “have defined structure and formal goals, they have a ‘ruler’ of legitimate authority and ‘citizens’ who enact their roles and interact with each other and who must ‘work’ toward attaining given goals”. Based on this description, the classroom society is complex since there is a great variation in students’ family dynamic, power relations, prestige, social status, and individual differences.

To maintain social order in classrooms, learners need to follow class norms. From a social psychologist’s point of view, norms are equivalent to conformity. Conformity can be defined as “a change in a person’s behavior or opinions as a result of real or imagined pressure from a person or group of people” (Aronson 2008, p. 19). Learners’ behaviors are thus changed due to the pressure received from institutional authorities and from peers in groups. Teachers and school are recognized authoritatively legitimate to issue rules and norms for students (Babad 2009). Learners’



conformity to teachers' rules can flourish positive relationships between teachers and learners which enhance students' motivation, as well as their academic performances (e.g., Koul and Fisher 2005; Peng and Woodrow 2010; Wubbels and Levy 1993). On the contrary, the severe, hostile or conflicting relationships between the teacher and a learner can decrease the learners' motivation and performances (Wubbels et al. 2006).

Interactions in the class are not limited to teacher-student relationships. Learners need to follow the group norms to be accepted by their peers and to be a member of their desired groups. It is increasingly apparent that the existence and quality of such relationships and the provided support have a profound impact on individuals' psychological well-being (Glenn and Weaver 1981). When the need to belong is unmet over a prolonged period of time, it would definitely lead to negative consequences (Gilovich et al. 2016). Bullying behavior, for instance, can cause physical health problems (Williams et al. 1996; Salmon et al. 1998; Forero et al. 1999), as well as psychological, emotional, and behavioral disorders (Rigby 1998).

Besides interpersonal relationships, individuals' characteristics lend themselves very well to conformity. Aronson (2008) believes that students with low self-esteem are far more likely to yield to group pressure than those with high self-esteem. Furthermore, he considers task-specific self-esteem as an important factor in the process. "If individuals are led to believe that they have little or no aptitude for the task at hand, their tendency to conform increases. Similarly, individuals who are given the opportunity to have prior success with a task like judging the lengths of lines are far less likely to conform than those who walk into the situation cold" (p. 25).

The complex nature of classrooms can be best observed in the language classroom where the medium of instruction is mainly the subject of study. Citizens of language society need to acquire a good knowledge of language to be able to follow the norms of society, attain their goal, and more importantly interact in this society. Additionally, language development is closely related to particular structures and sequences of interaction between and among learners and teachers (Swain and Lapkin 1998). Therefore, knowledge of the language, as well as the social nature of the language add more complexity to this society. When language learners start studying a new language, they are in a state of tension between values associated with their own individuality and values associated with classroom conformity. To be a successful language learner, learners need to tolerate and interact with this tension which sketches out the concept of immunity.

## **Redefining the Concept of Immunity**

Immunity in the context of education is a situation-based dynamic trait of an individual which is mainly formed by his/her interpersonal relationships in his/her language teaching/learning environment. Although immunity is activated in a wide variety of ways among individuals, it functions as a network of relationships with the active tolerance or resistance of new challenges which cannot be divorced from its context. It is worth mentioning that cognition plays an important role in immunity since its network of relationships rests heavily on

perceiving the context and its related challenges as well as acting in that context. Accordingly, immunity serves the need of learners'/teachers' agency. From what is mentioned, dynamicity, agency, context-dependency, and equilibrium are the foundations of immunity. And we propose the following core assumptions of educational immunity:

1. *Immunity is a dynamic trait*

The term trait (not state) in the definition refers to “stable and constant properties” (Dörnyei 2005) which are affected to some degree by maturation and environment (Roberts and Mroczek 2008). Traits as habitual patterns of behavior, thought, and emotion (Kassin 2003) are relatively stable over time but differ across individuals which are in contrast to states as transitory dispositions. This means that the main function of immunity (i.e. maintaining equilibrium) should become increasingly stable and resistant to a change as a function of mutual adaptation in interaction patterns. This enduring property of an individual has had its own roots in his/her previous experiences since childhood and is being developed, shaped, and reshaped in the course of time by his/her dialectical, continuous, and multidirectional interactions in his/her language learning/teaching environment.

2. *Language learners/teachers are active agents in their immunity*

To understand how immunity is formed, viewing learners/teachers as active participants in their own experience is essential. Agency is an individual's will and capacity to act (Gao 2010). According to the realist perspective, humans as agents not only react to their contexts but also influence them (Sealey and Carter 2004) by being in a relationship of ongoing reciprocal causality in which the emphasis is on the complex dynamic interaction between the two elements (Mercer 2011). Considering this, L2 learners/teachers as active agents are involved in reacting in the language learning/teaching environment as well as influencing that environment. As a result, they are active participants in shaping their immunity through their interaction in the educational setting of language learning.

3. *Immunity is context bound*

Immunity aims to protect individuals' identity based on the context of the encounter in which the challenge is recognized. So, the context defines the degree of immunity in the subjects. When immunity is understood in its context, the interpersonal relationships are considered. Accordingly, the immune system, through the active tolerance of new diversity of challenges, maintains its role as a control, but in service to improving the language learning process and reinforces the individual's status quo.

4. *Immunity aims to maintain equilibrium*

When immunity is studied in its context, more specifically educational setting in this study, balanced relationships are of utmost importance. The idea of differentiation of L2 learning/teaching threats is displaced with learners'/teachers' tolerance. When an educational threat is perceived, the danger is eliminated directly by resistance or the caused tension is reduced by tolerance. Therefore, immunity aims to maintain the equilibrium that requires balancing both resistance and tolerance.

## Differentiating Immunity from Ego-defensive Mechanisms

To understand how immunity is different from ego-defensive behavior, we need to consider three major points. First, ego-defensive mechanisms were coined by Freud (1923/1961) and later addressed by Freud (1936) as psychological construct mechanisms for coping with intrapsychic conflicts. In other words, ego-defensive behaviors focus on sexual and aggressive drives of an individual but not social aspect of a person. Immunity, on the other hand, is a social psychological concept. Therefore, the main focus of immunity is studying how learners' psychology (thoughts, feelings, and behaviors) can be influenced by their socially constructed relationships in their language learning environment.

Second, immunity depends on an identification system which requires cognition as its integral characteristic. On the contrary, ego-defensive mechanisms are models of the unconscious fight and defense. Therefore, individuals are unaware of these processes as they operate. In other words, immunity is a cognitive system which language teachers/learners can use as an effective tool for the fight, defense and effective/adaptive functioning in the process of adaptation to educational and social psychological language setting. In fact, immunity as a cognitive apparatus functions based on perceiving and responding. Therefore, educational immunity incorporates cognitive capacities that serve the needs of an agent individual who face environmental challenges.

Third, ego-defensive mechanisms operate unconsciously to protect a person from anxiety arising from unacceptable thoughts or feelings. Immunity, on the other hand, does not merely work as a defensive mechanism. Its main function is to maintain equilibrium in language learning environment which needs resistance as well as tolerance. By considering tolerance, we need to focus our attention on the ecology of language learning and various cooperative relationships in that environment. From this expanded theoretical framework, immunity moves beyond the idea of unconscious defense mechanisms; the learner is considered as an agent individual who is involved in an on-going process of establishing and maintaining his/her identity, which requires a deep understanding of the educational interpersonal network of relationships with immunity functions.

## Language Learner Immunity

Language learner immunity (LLI) is one of the manifestations of immunity in language education. LLI is a unified system of educational (language learning), social, and psychological dimensions that immunizes learners against challenges in their learning environment.

The presence of the system is indicative of a certain degree of unification, which together with the distinctive features of each language learner can constitute his/her immunity. Like any other system which is a coordinated body of procedure or an assemblage, LLI acts within three main procedures: (1) threat recognition (2) response generation (3) self-regulation. *The threat recognition procedure* is determined by the evaluative judgment of the occurrence, as well as by individual

differences. This means that learners differ in their tendencies to see events as opportunities or threats, in their threshold for threat, in their capacity to formulate or reformulate their behavior in the face of their panic zone. In other words, challenges in a language learning setting are individually perceived: One can view an occurrence as being important and positive, while another learner may consider it negative. Therefore, the learners' subjective judgment of a situation gives meaning to that occurrence.

*The response generation procedure* puts learners' attitude in action. LLI can never be directly observed but must be inferred from observable responses. In other words, language learners never talk explicitly about their immune system but their performance reveals the existence of such a system which structures learners' social psychological responses. Immunity responses are produced when an occurrence makes a learner move from his/her comfort zone to his/her panic zone—state of equilibrium to disequilibrium—then the learner tries to balance his/her relationships with that particular occurrence in his/her language learning environment to protect his/her identity. Responses are organized with respect to the learner's social psychological LLI which has adaptive functions of protection and the set goal of equilibrium. The type of immune response (i.e. directly or indirectly) depends on both individual differences and the degree to which the immune system is activated. For instance, when a language learner's comfort zone is shattered, the learner can be expected to signal his/her disequilibrium directly (e.g., crying, blushing, increasing one's tone of voice, numbness) or indirectly (suppressing one's feeling of anger).

And finally, *the self-regulation procedure* provides an equilibrium to language learners by their adaptation to the new challenges in their language learning process. Balance is the governing principle of immunity. Although LLI's main function is to balance the opposing forces, this equilibrium functions both defensively and cooperatively in service of identity. Once s/he gained the equilibrium in the absence of further social psychological forces, the learner can be expected to reformulate or modify the rules of his/her LLI and adapt to his/her new system of immunity. The reformulation of LLI is achieved not only by coping with and standing against the challenges, but also by tolerating them. Luckner and Nadler (1997, p. 24) mentioned that people learn and change when they are in a state of dynamic tension which is a good illustration of comfort zone model.

There are conditions or states that people can be placed in, in order to accentuate disequilibrium, dissonance, disorder, frustration, or anxiety. Enhancing these feelings increases the need to order, restructure, or alter one's cognitive map of the world and oneself in an effort to restore equilibrium.... Understanding these conditions and finding ways to create them can increase your ability to promote change.

Immunity is practiced as far as learners are kept in their comfort zone. In this scenario, distinct borders confer individual differences, and immunity is the response to the violation of those boundaries. It is of utmost importance to emphasize the flexibility of borders and the dynamicity of changes in the immune repertoire as a result of their social and psychological immunity encounters. Accordingly, the learners' immune system does not respond to some particular antigens in learners' comfort

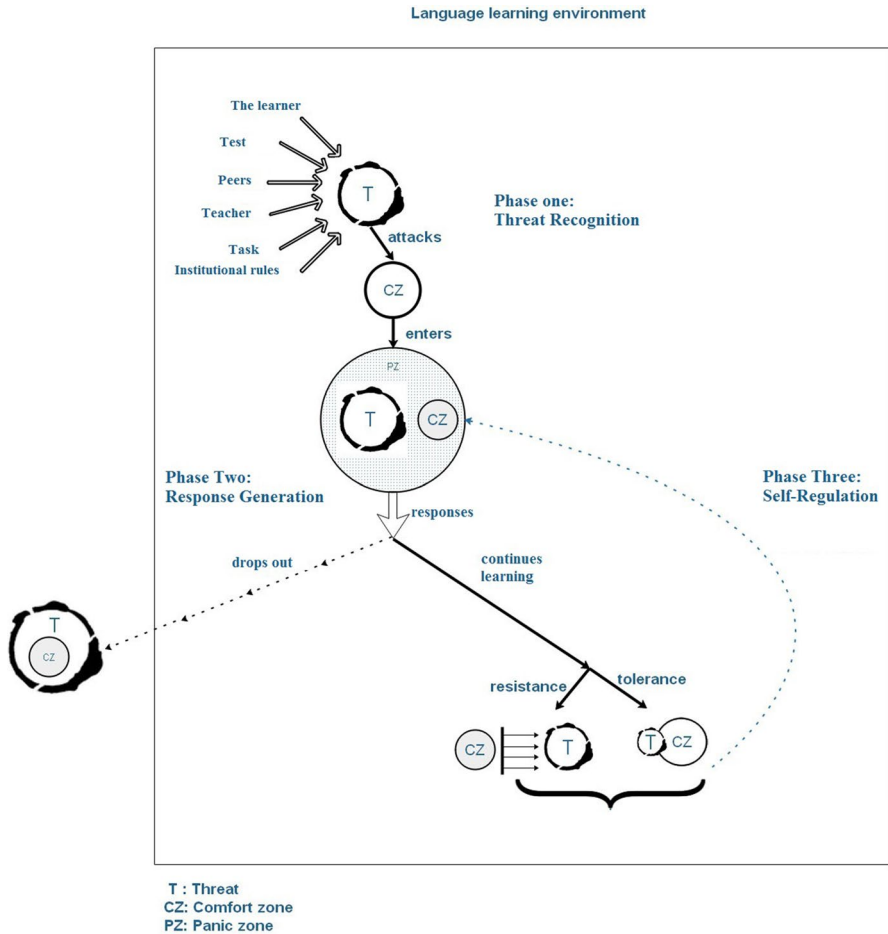
zone. Like the biological immune system which is generally tolerant of self-antigens, the same is true for language learners. To exemplify, the quality of social support provided by the people in L2 learners' network of relationships can change a non-self into a self like what happens in the body by transplantation (the evolution of holobiont). Social supports can buffer the negative effects of minor stressors (Thomas et al. 1985) not only in the learning environment but also in learners' daily lives. Therefore, close social ties and the positive feedback can keep the learner in his/her comfort zone which is innately immune.

Almost half of an individual's important social ties can be characterized as *ambivalent* (Uchino et al. 2001), which means they are perceived to be high in both positive and negative aspects. Ambivalent relationships can be just as toxic as negative ones since people tend to avoid contact with individuals they consider negative but have greater contact with ambivalent ties (Graham et al. 2007). In this situation, although the ambivalent relationships of language learners with their teachers, classmates, or even institutional authorities are toxic, they are tolerated as far as they are maintained in learners' comfort zone.

The integration of these three procedures forms a unitary whole named *Language Learner Immunity* to maintain learner's equilibrium in the face of classroom threats. This is roughly analogous to Gestalt; there is unity in the structure of LLI, where the evaluative judgment of educational as well as social psychological nature of learning environment is derived from the whole concept of learners' immunity.

The rules of this system have already been formulated based on false memories of learner's previous learning experiences as well as his/her interpersonal relations. Learners who enter L2 classrooms are not *tabula rasa* and they undergo resocialization as well as desocialization to ensure conformity and fulfill their roles as learners. As soon as a learner starts his/her language learning process, LLI is being constantly formed and reformulated based on the existing educational, social, and psychological forces in the defined circumstance of language learning environment. This hidden network is a form of social psychological gatekeeper to keep the learners in their comfort zone by the constant evaluation of conformity, obedience to authority, social psychological forces in the classroom, and legitimation of the existing social norms of language classrooms. In other words, LLI represents a stabilized adaptation to a variety of complex relationships in the L2 classrooms, including learners' relationships with their teachers; with their peers, with their tasks and materials, with their assessment criteria, with the institutional rules; and even with their own selves. *Language Learner Immunity is a dynamic system that is shaped by L2 learners to maintain their equilibrium in the face of the educational, and social psychological forces in their language learning process. At the educational level, language learner immunity is the representation of learners' constant adaptation to a variety of complex relationships in their educational setting in sync with their language learning purposes.*

It needs to be mentioned that the LLI is never really off. It is constantly at work. Similar to the psychological immunity, the LLI is the ability to be "on task", sync, or flow with the environment, rather than feeling "off task". However, the process of formulating immunity based on immune responses and back (synchronicity and adaptation) will continue until the learner perceives the source of panic zone



**Fig. 2** Representation of the language learner immune system

non-tolerable; therefore, s/he will not be able to reformulate his/her LLI accordingly. In this situation, s/he deviates from the panic zone and the non-immune learner drops out. Indeed, giving up is another way of returning to the comfort zone but it is an unresponsive immune response. Figure 2 is the representation of LLI, which is under the direct influence of its educational environment. Changes in this environment may have direct influences on how the system works and how the procedure functions.

### Language Learner Immunity Disorders

LLI disorders can be temporary or permanent. As mentioned earlier, learners enter their L2 learning classes with their own preliminary beliefs of their learning experiences, where they have the tendency to seek confirmation of their initial impressions or previous beliefs. In this situation, when their belief or self-concept is threatened in language classrooms, cognitive dissonance occurs. Festinger (1957) introduced

cognitive dissonance as a state of tension that occurs whenever an individual simultaneously holds two cognitions (ideas, attitudes, beliefs, opinions) that are psychologically inconsistent. Since this cognitive dissonance cannot be easily tolerated, learners seek to reduce the tension; maintain their equilibrium and a positive image of themselves.

Nevertheless, cognitive dissonance causes conflicts in LLI. When learners find it difficult to regulate their LLI, they try to suppress their language learning-related thoughts and feelings and distance themselves mentally from sources of dissonance (cognitive discomfort) in their learning environment. As a result, they may be unwilling to be involved in language learning experiences and their demotivation, stress, anxiety, and burn out can be expected.

The nature of learners' response to LLI deficiencies may depend on whether they believe they could regain a satisfactory way of reformulating their LLI and increase their sense of control over their language learning process. Therefore, LLI deficiencies may be temporary or permanent. The temporary deficiencies refer to the time when learners' immunity is weakened. The learner in such a situation is more likely to be capable of acknowledging the threats to his/her immunity in a way that reassures himself/herself of continuing the procedure. Such an understanding can, in turn, allow the learner to restore his/her LLI, although s/he may stop attending their language classroom for a period of time. On the other hand, permanent immune deficiency is characterized by the severe avoidance of learners to pursue their language learning goals. In fact, learners in this category try to trivialize their commitment to language learning and minimize the unpleasantness of the situation by convincing themselves that their previous attitudes about language learning were incorrect. Learners with permanent immune deficiency have prolonged difficulty in reformulating their LLI and its normal functioning. These learners find themselves overly preoccupied with negative attitudes toward their language learning context and unable to return to normal functioning in such an environment. As a result, learners' failure in developing their immune system and immune responses may lead to their drop-out.

## Immune Versus Non-immune Language Learners

Individual differences can be divided into *immune* and *non-immune* with regard to social psychological immunity. The terms *immune* and *non-immune* do not describe simply the manifest behaviors of the learners in their language learning environment. Rather, the terms describe learners' attitudes and perception of an occurrence. First, the immune system perceives the threat and then decides whether to react. Accordingly, perception is the key feature of the learners' immune system.

The dichotomy of immune vs. non-immune does not mean that there is never a threat to an immune learner's comfort zone. Fear, anxiety, and stress are normal in the language learning process, and all learners have definitely felt a degree of unsettlement in this environment. As noted, LLI is developed not from a single interaction, but from the accumulated adaptation of the learner to the disturbances which that system encounters. Due to its dynamicity, this system is not fixed or permanent to change, but it is constantly tuned in response to the psychological and social crisis

in the learning environment. The immune learner's identity is fluid which emphasizes how learning experience alters the immune response to environmental challenges and opportunities. In this regard, immune responses are adaptive since they are acquired based on learners' experiences and aim at reformulating the LLI to protect the learner and overcoming the source of the threat. Therefore, immunity in immune learners signals that the learner is able to reformulate the discomfort in his panic zone and provide himself/herself comfort in his/her comfort zone. Parallel to the biological immune system, language learner immunity is the key to the survival of learners as the biological immune system is to a living organism. This means that if a language learner falls prey to the social psychological forces in the classroom, s/he may face emotional exhaustion and burn out. High levels of immunity in learners can expand their mastery of social psychological experiences in their learning environment because their learning practice teaches them how to stay in their comfort zone and move toward their learning goals. Therefore, they are confident in their interactions, stress management skills, and goal setting.

In contrast to immune learners, their non-immune counterparts are not able to adapt themselves to their dynamic learning environment. The term "non-immune" is used metaphorically here. Non does not refer to the lack of immunity, it refers to the time when an immune response (tolerance or resistance) cannot be activated, or is not turned off once the danger passes, or even when an immune response is activated without a real threat. Each of these situations reflects that learners cannot reformulate their rules of the LLI and therefore, generate ineffective or unresponsive immune responses to the source of threat in their panic zone. In the course of time, when traumatic experiences in the learning environment occur repeatedly, negative attitudes are primed, and learners evaluate their L2 learning experience negatively. The more negative the attitudes, the more vulnerable the comfort one. This negativity establishes a low threshold for threat and provokes high levels of anxiety for learners. Accordingly, when there is a perceived threat from the environment and anxiety is high, some learners may not be able to respond properly to the source of threat or they cannot keep themselves in their comfort zone. Since non-immune learners do not learn/know how to handle their environment and face high levels of anxiety, they lose their confidence in language learning and may drop out.

## Conclusion and Implication

Schools have fulfilled functions with two major dimensions: teaching and transmission of knowledge as well as socializing learners (Bibby 2011). School is a society in which learners learn how to behave in that society and their social self is shaped by these socializing experiences (Babad 2009). Although "learner-centered" theories push for a more egalitarian society, students in class still need to follow the classroom norms and accept their teacher as the arbitrary leader. Language learning mostly occurs in such a complex society. It is complex since learners need to learn how to manage different sets of friendships, their relationships with teachers, relationships among subgroups, continuous competitions, tasks difficulty, institutional constraints, and persistent concerns over accountability for achieving their learning



goals. This intense socializing process may lead to burn out, demotivation, and fossilization of language learners which adversely affect their learning process. On the other hand, there are learners who can survive and flourish in their language learning journey. What is it that causes learners to fossilize or thrive? The language learner immune system, whose primary function is to keep learners in their comfort zone, could provide the answer to this concern.

As discussed, LLI is a system which works based on the network of relationships formed by agent language learners to maintain their equilibrium while they are facing challenges in their language learning environment. The equilibrium is achieved as far as learners are in their comfort zone whether by the tolerance of the threat or by the defensive behaviors against it. In this situation, immune learners can overcome social psychological pressures in the classroom by reformulating their immune system and adapting themselves to their learning situations. On the contrary, if cognitive dissonance is heightened and disequilibrium happens, non-immune learners cannot move beyond their panic zone and the social psychological pressures of the classroom may dig terrible wounds in learners' psyche and mentally withdraw learners from learning a foreign language.

Looking through the lens of LLI, it is suggested that learners need to be more vigilant when facing different challenges in their learning environment, and learn how to reformulate their LLI. Moreover, the new concept of immunity can answer the question of why most learners start out with a vivid vision of being educated individuals, but emerge gradually as a defense mechanism against the unusually high level of stress inherent to their learning process. This study may shed light on the pervasiveness of learners' demotivation and unprecedented rates of learner attrition. A proper understanding of LLI can also launch new plans for avoiding a demotivating learning environment. Teachers can also gain a deeper understanding of the emotional impact of their behavior and the psychological work their learners face. They would also be aware of the emotional consequences of their learners' demotivation. Above and beyond the importance of emotions for learners' own lives, learners' emotion thus has considerable implications for student learning, the school climate, and the overall quality of education.

Our goal in this study was to introduce the new concept of LLI as a useful metaphor for a better understanding of the realm of learner education. Although we tried to answer a plethora of questions, new questions and new hypotheses are being spawned by each answer and undoubtedly immunology of language learners will be fine-tuned by further research.

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