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An Ecological Perspective on the Challenges in Language Education: Focus on Agency and Affordances

Abstract: The article presents an overview of recent research trends from an ecological perspective, arguing that the ecological perspective can be most aptly used to describe current language education, characterized by dynamic and unpredictable changes. It delineates such topics as the spread of technology and out-of-school language learning, linguistically diverse classes, and teacher well-being. The notion of teacher agency is addressed, which can be critical in the perception of the challenges in education, i.e. whether they will be used as affordances to modify teaching or as a threat undermining the teacher's professional identity. In conclusion, guidelines for current teacher education are provided.

Keywords: agency, affordances, ecology, technology, language socialization, teacher well-being

1. Introduction

Unquestionably, recent years have been characterized by unprecedented changes in the socio-political and, consequently, educational reality. In Poland, the educational reform in 2017 changed the school structure and limited the teaching of foreign languages other than English. The COVID-19 pandemic forced many teachers to acquire digital skills and integrate technology into their classes. The outbreak of war in Ukraine in 2022 resulted in many Ukrainian refugee learners transforming schools from monolingual to multilingual. Lastly, the introduction of ChatGPT in 2023 raised concerns about the future of teaching and learning. These sudden and unexpected changes affected the teaching methodology and teacher identity, and threatened their emotional well-being.

The goals of this paper are twofold: it intends to outline research trends that aim to characterize the dynamics of the educational ecosystem, thus pointing to the relevancy of the ecological theory in describing the educational reality, and secondly, it aims to identify implications for teachers and teacher educators as to how to cope with the lack of stability and predictability.

2. The tenets of the ecological approach in applied linguistics

The language teaching-learning process should no longer be merely perceived as a process of information exchange between the teacher and the learner, whereby the teacher is the primary provider of linguistic input and the learner its receiver, or when the teacher provides feedback on the student's linguistic output. It takes many biological, psychological, and social factors that direct teachers' and students' engagement in the process and, consequently, impact student learning outcomes and teachers' professional identity.

It seems that, particularly in the dynamically changing times, it is necessary to consider the broadly construed social context in which schools, classrooms, teachers, and learners function as they indirectly impact the teaching-learning processes. This assumption lies in focus of many theories, such as the social learning theory of Albert Bandura or the socio-cultural theory of Lev Vygotsky, and the educational models, such as Pfeiffer's model of glottodidactics. However, the theory which seems to most accurately describe the current times at its best, as the name suggests, is the Complex Dynamic Systems Theory, which derives from Larsen-Freeman's Complexity/Chaos Theory. The tenets of the theory are that language is a complex and dynamic adaptive system, that undergoes both stability and change, and language use is the outcome of repetition and coadaptation. It uses the semiotic potential of the environment in which it takes place. This means that the language itself changes (e.g., in semantics or pragmatics), and certain new forms appear in the language and become part of the system when they reoccur. They arise in response to the novel objects and symbols in the environment that must be named.

Akin to the Complex Dynamic Systems Theory and gaining in popularity in recent years is the Ecological Theory proposed and conceptualized by Leo van Lier in his seminal book titled *The Ecology and the Semiotics of Language*. The basic tenet of the theory is that learning should be viewed in its ecology (i.e., environment) as a process deriving from the interactions between the learner and different objects in that environment, which can be physical, social, semiotic, and symbolic. The relations with these objects can constitute affordances for language learning, yet it depends on the learner if and how they will use them. As van Lier ("The Ecology of Language Learning") posits, the ecological approach is "an ap-

proach that focuses primarily on the quality of learning opportunities, of classroom interaction and educational experience in general” (5). Following that, it can be claimed that dynamic changes in the learning environment create new opportunities for language learning. The key terms that describe the learning ecosystem are *relationships* (rather than objects), *context*, *emergent patterns*, *quality*, *value*, *critical perspective*, *variability*, *diversity*, *agency* (van Lier, *The Ecology*), and *affordances* (van Lier, “The Ecology of Language Learning”). This means that any learning process should be seen in the primarily understood context, which comprises the relationships of various actors, such as teachers, learners, parents, school head teachers, etc., and which is diverse due to the idiosyncratic features of the agents. The mutual interactions among the actors provide opportunities/affordances for learning from one another and define the quality of learning, which is thus a dynamic, emergent process characterized by the fluctuation of the language competence of the actors. The ecological theory also adopts a critical stance towards reality, indicating that not all learners have the same learning opportunities and access to high-quality learning, another factor accounting for the variability of the process. For the sake of this paper, I would like to focus on two terms, i.e., agency and affordances.

The agency is a fundamental concept for ecological theory as it depicts “the capacity of actors to shape their responsiveness to problematic situations critically” (Emirbayer and Mische 971). Thus, it denotes how individuals approach novel situations, whether they perceive them as a threat to an existing situation or as an opportunity for learning. Teacher agency is essential to activating learner agency. Suppose the teacher approaches a novel situation, e.g., the necessity to acquire novel skills in an emergency, in a positive way and tries to find new solutions to cope with the challenge. In that case, the students will likely follow the model. Teacher agency is related to autonomy, reflectivity, and resiliency (Werbińska). Thus, only autonomous teachers who reflect on their actions can exercise agency irrespective of the unfavourable conditions they may encounter in their work. Thus, it is often considered a personal trait demonstrated only in a few teachers, precisely cut out for teaching. However, from the ecological perspective, it must be recognized that agency is not a stable feature of an individual, as cognitive theories would posit, but is changeable under the influence of external circumstances. This also means that individuals may find no space to act in certain situations or unfavourable conditions may undermine their agency.

Affordances is a term coined from the verb “to afford” by Gibson and relates to what the environment “offers the animal, what it provides or furnishes, either for good or ill” (127). Aronin and Singleton further extrapolate on this definition by saying that “different physical dispositions and characteristics afford different behaviours for different animals, including the human species, and different kinds of encounters ... a book in a foreign language presents different affordances for learners and users with differing levels of mastery of this language” (318).

Affordances can be diverse. One of them is happening affordances, which denote that an unplanned event without a particular goal can indirectly facilitate language learning and teaching. For example, living in a multilingual situation can facilitate acquiring the language present in the surroundings, even if one did not plan to learn it. Similarly, the COVID-19 pandemic forced many classrooms to go online, allowing many teachers to become acquainted with learning platforms and to modify/improve their teaching even when returning to regular classroom teaching. Thus, the pandemic can be said to have precipitated teacher development/education in learning technologies.

Van Lier's ecological theory is often cited and used in the company of Bronfenbrenner's model of human development. The latter is portrayed as a set of concentric circles, each layer depicting a different environment that envelops the learner's growth: the micro-, meso-, exo- and macrosystems. Additionally, the chronosystem marks temporal milestones in the learners' learning process. The micro-system refers to the immediate environment of the learners, such as school and classroom; the mesosystem refers to the relationships between school and home, which can additionally endorse the learner's language development; the exosystem refers to the out-of-school indirect influences, e.g., through societal beliefs, semiotic landscape; macrosystem refers to the impact of top-level decision-makers who shape and implement language education policies, such as Ministries of Education, local education authorities, head teachers, and who, by their decisions, may impact the learner's learning situation. Notably, at these intersections of each level of the ecosystem, dynamic interactions (relations) take place that can either boost or inhibit agency of the participating actors. Relations and tensions between different elements of the same ecosystem are a potential source of crisis, which can be handled in two ways: either as an affordance to improve one's teaching or as a threat to one's identity, and consequently, loss of agency.

Although the ecological approach to the study of language learning has not gained comprehensive support in Polish academic circles (cf. Sujecka-Zajac), the dynamic changes of the educational reality seem to suggest that in order to capture the transient moments and their effects on learners and teachers, an approach which emphasizes the widely understood social context, as well as its idiosyncrasy, has to be adopted. Consequently, any research inquiry must be done from the emic perspective using qualitative tools, such as diaries, observations, and interviews. Additionally, a vast amount of recent research seems to show a growing interest in ecological theory, as can be judged by the titles of many publications internationally (cf. Chong, Isaacs, and McKinley; Hammond; Kruk et al.). In line with the above-mentioned causes of crisis, a few significant trends can be distinguished and presented below with references to specimen studies. They are concerned about the use of technology in the language classroom, the teaching and integration of migrant/multilingual learners, and the emotions and well-being of teachers.

3. Technology in the language classroom

The ecological perspective enables researchers to investigate learner-oriented teaching and the learners' interaction with the environment, whose nature can be psychological, cognitive, experiential, socio-cultural and ideological (Tudor). Further, Berglund postulates that the ecological approach to language learning in virtual environments should consider how learners employ various out-of-school learning spaces and how learners differently use their propensities in utilizing these resources. Thus, he recognizes that language learning does not only take place in the classroom and that, for this reason, the teacher must consider knowledge, (digital) skills, and interests the students bring into class. He investigated multimodal online student interactions utilizing videoconferencing tools and observed that learner participation depended not only on the contextual factors, such as technological tools and communication tasks used, but also on the individual differences between learners, including their educational experiences and communication styles. This finding indicates that while studying ICT use, the whole ecology of the digital environment should be considered, including the learning context in interaction with the individual propensities of the learners. Following this argument, Lafford acknowledges that the ecological perspective in the analysis of CALL is an affordance by itself because it assumes an emic perspective, i.e., is conducted from within the community, analyses language behaviour specific for a given context, and perceives language learning as a process which is nonlinear, dynamic and whose efficiency depends on contextual factors.

Likewise, any new technological device serves as an affordance to language learning and teaching, thus changing the educational process. In a specimen study from the ecological perspective, Huang, Jiang, and Yang indicate the affordances of an educational platform for formative learner assessment, such as:

- the pedagogical affordances, which enable current insight into the learners' progress and give them immediate feedback;
- management affordances, which include maintaining discipline, group distribution, checking attendance, etc.;
- assessment affordances, which allow the calculation of the summative grade from component grades automatically;
- social affordances, which offer more personal interactions between the teacher and learners, which is impossible in other situations;
- developmental affordances, which indicate the changing role of the teacher, who not only supplies knowledge but delivers materials and organizes the learning activity.

Technology, and the Internet in particular, also serves as an affordance to the learners, who, thanks to it, have immediate access to information (e.g., through online encyclopaedias, dictionaries, and databases), can communicate with others in

long-distance settings, including native speakers, and can constitute a resource of target language input (via the Internet). These features make FL learning more accessible, less elitist, and more democratic. From an ecological point of view, technology can be seen as supportive of the idea of equity, as all learners have similar access to language learning resources, which fulfils yet another principle of ecological theory. Additionally, it has to be recognized that much learning, particularly of *lingua franca* English, occurs outside the classroom, whereby learners can improve their language skills by utilizing educational platforms, learning apps, social media, and chatrooms (Krajka, “Teacher”).

Finally, technology appeals to the learners’ intrinsic motivation, who are often referred to as digital natives, and for whom technology is part and parcel of everyday lives. Using it, particularly for entertainment purposes, such as gaming, is profoundly engaging and allows learners to experience flow, in Csikszentmihalyi’s terms. Gaming, although implicitly, also leads to the development of listening, reading, and conversation skills.

Technology also changes the role of the teacher from the all-knowing authority to the one who is a mentor and organizer of the teaching-learning process. They must accept that knowledge cannot and must not only come from them. For this reason, they must recognize that knowledge can be generated and negotiated in mutual interactions with the learners, or even can originate from the learners themselves. Hence, the role of the teacher is to focus more on preparing problem-solving tasks rather than on transferring facts, rules, etc. Therefore, the suggested didactic solutions consist of such novel techniques and approaches as the web quest, task-based learning, inquiry-based learning, videoconferencing, telecollaboration, etc. ChatGPT could additionally modify the process by replacing the teacher in e.g., giving explanations on grammar use and thus preparing learners for a flipped classroom, in preparing a model text for writing practice or even in preparing a mock/sample test or even in error correction (Zadorozhnyy and Lai). These examples of ICT showcase that numerous innovative pedagogical tools and solutions are available, yet require a shift in the teacher’s role. The application of technological tools develops teacher competencies and creates affordances for arousing learner agency. It depends on the teachers whether they will treat technology as a threat to their authority or as an *affordance* to modify their teaching practice and adjust to learners’ changing interests and motivations. However, as Hammond argues, in line with the ecological perspective, teachers can effectively implement ICT if they obtain support from all system levels within Bronfenbrenner’s model.

The COVID-19 pandemic has enforced the necessity to transfer to emergency online synchronous teaching, thus precipitating the technological turn and opening many teachers’ minds to the latest technological advances. This critical and challenging moment was approached in different ways: some teachers transferred the same techniques they used in the regular classroom uncritically to the virtual

environment (Turula), while others willingly participated in online training sessions and used the emergency online teaching as an opportunity to try out new tools and new teaching solutions (Krajka, “Teaching”). Moreover, they continued to use the ICT tools even when they returned to the regular classroom. However, it must be pointed out that the transfer to online teaching was done without prior preparation or support from the state. Any supportive workshops appeared progressively as the pandemic continued and were mainly provided by enthusiastic educators. Thus, it depended solely on the teachers’ agency whether they sought information on coping with this new challenge, or tried to implement the solutions known from the actual classroom.

4. Teaching and integration of migrant/multilingual learners

An ecological approach holds that the school environment cannot be perceived as monolithic and homogenous. However, its diversity, particularly in the era of enhanced migration, should be identified as a new reality. This viewpoint underlines that school classrooms comprise learners of diverse cultural and linguistic backgrounds, and that their needs and rights should be recognized. Acknowledging this fact presupposes the presence of diverse languages in the foreign language classroom and utilizing them as an affordance for learners’ multilingual growth. This may often be realized in the pedagogy of translanguaging (Cenoz and Gorter), where switching between various languages is allowed as a learning (e.g., for note-taking) and communication strategy between all members of the school ecosystem, which signifies moving away from monolingual ideologies (Alisaari et al.; Otwinowska). Learner multilingualism is seen as an asset, thanks to which learners can discover similarities and differences between languages (e.g., through cognates, international words, or structural similarities), gain confidence in using them, and develop plurilingual and pluricultural competencies.

Since Polish schools are accepting more and more migrant learners, e.g., refugee Ukrainian children, Polish return migrants, children born to mixed couples, etc., it is essential that teachers recognize that their classrooms are no longer monolingual and that they are prepared to meet the challenge of working with multilingual learners. In our study of EFL teachers (Rokita-Jaśkow et al.), we observed that in the absence of an overt multilingual policy, the teacher’s agency in integrating learners into the new school and classroom environment comes to the fore. Teachers have faced the necessity to cope with the situation when neither they nor the incoming students shared a common language, that is, Polish or English. While some of the teachers, even without prior training, showed inventiveness and creativity in planning such tasks that would involve the migrant learners in their English lessons

by, e.g., using elements of translanguaging or translation technological tools, the majority of them felt at a loss, without adequate financial and didactic support, or continued teaching as they used to do with their monolingual Polish students, disregarding the fact that the students may not understand explanations in Polish, nor have sufficient knowledge of English. We also observed that teachers experienced emotional tensions resulting from dilemmas between what they felt they should do, e.g., introduce a more individual approach to teaching and assessment of migrant learners, and what they were required to do by the accountability demands to school authorities, such as school results at high stakes exams. Therefore, the investigated teachers perceived the macrosystem as limiting their autonomy and agency.

Teacher agency in working with multilingual learners is recognized as essential in realizing top-down multilingual policies and integrating new students into schools at the bottom level. It is recognized to be dependent on personal experiences of working with such learners and received training on multilingualism and multilingual pedagogy as well as teachers' plurilingualism (Rokita-Jaśkow et al.; Mieszowska and Otwinowska). It manifests in their attitudes to foreign migrant learners and adopted practices: whether they treat student multilingualism as a threat or problem to the so-far monolingual classroom or as a challenge, mobilizing their linguistic resources (e.g., in communicating with the newcomer by employing known languages, nonverbal language, scaffolding, visuals, etc.). Additionally, the presence of multilingual learners in the EFL classroom can provide affordances for the development of language and intercultural awareness of Polish learners because they can become communicative partners of EFL learners where the authentic information gap can stimulate their communicative development.

However, in the socialization of multilingual migrant learners, it is not only the agency of teachers that matters but also that of peers, migrant learners themselves, and their parents, who, by reciprocal action and relations, will increase the opportunities for the newcomers to learn the language of the host society, which is also the new language of schooling. This is a challenging task, which can only succeed if all actors of the exosystem work towards this goal, i.e., the migrant learner has a positive attitude and makes a conscious effort to learn the language of the host society; secondly, classroom peers willingly play/interact with the new learner and include him/her in their games, thus generating more language input for the learner; thirdly, the learner's parent helps him/her in overcoming learning difficulties and cooperates with the school (Schwartz and Deeb). However, as studies in other multilingual school settings show, contrary to policy goals, peers are not always willing to socialize with newcomers (e.g., Cekaite and Evaldsson), who additionally lack language communication skills, which is another factor precluding migrant learners from successful language and school socialization.

Considering all these factors, it can be clearly seen that the sudden forced migration from Ukraine in 2022 posed another challenge for Polish teachers, who were suddenly faced with the need to adjust their teaching with respect to students'

other first languages than Polish. Additionally, they had to cope with the problem of class disintegration as Polish learners were not always willing to socialize with their migrant peers, and having foreign learners in class was also a novel situation (Rokita-Jaśkow et al.). Consequently, the migrant learners often dropped out of school, except when they were enrolled in preparatory classes and could count on the help and mediation of cultural assistants (Tędziągolska, Walczak, and Wielecki). Language barrier turned out to be a critical factor that impeded successful socialization. While some teachers attempted to cope with this novel situation, thus showing their agency in this respect, they did not obtain any support from educational authorities. Some training programmes and projects, such as Mamlise project (<https://mamlise.amu.edu.pl>), are only germinating. For one more time, the agency was activated by single teachers. Other ecosystem members, such as educational authorities, including top-level decision-makers and head teachers, did not seem to show it sufficiently.

5. Emotions and well-being of teachers

Another aspect that has recently been studied from an ecological perspective is teacher emotions and teacher well-being. This may have been caused by the fact that the teaching profession consists of numerous interactions with other members of the educational ecosystem, which can create tensions and result in various types of emotional critical incidents, both positive and negative (Rokita-Jaśkow, “Emotions”). Secondly, the aforementioned dramatic changes in the educational ecosystem, which posed new challenges and enforced readjustment of teachers’ teaching methodology, may have undermined their stamina and motivation, consequently threatening their professional identity.

Notably, it is observed that teachers’ emotional well-being at the workplace boosts teacher agency and empowers them to act. By contrast, notoriously experiencing obstacles and negative emotions requires excessive emotional labour (Benesch) to regulate one’s emotions, and may lead to emotional exhaustion and burn-out (Zembylas). Thus, emotional experiences can boost and inhibit teacher agency, either empowering them or preventing them from engaging in their professional work. This is how teachers’ professional identity can be affected by their well-being. Additionally, teacher agency is influenced by autonomy, reflectivity, and resilience to unfavourable conditions (Werbińska). Mercer and Gregersen indicate a few factors that influence teacher well-being, such as positive and negative emotions experienced at the workplace, engagement in professional life and fulfilled roles, relations with other people, both in- and out-of-the workplace, meaningfulness of their work and their professional achievements and language achievements. While for some of them, the teachers can take care by themselves, e.g., finding meaning in their work, other elements arise in reference to other actors of the educational

ecosystem, such as learners, parents, teachers, head teachers, and educational authorities in line with Bronfenbrenner's model, who provide both affordances and constraints for acting.

Observing a teacher's functioning in a workplace can provide us with information not only on their functioning but also on the condition of the whole educational exosystem, as tensions and emotional challenges appear at all levels of the ecology (Rokita-Jaśkow and Werbińska). Gadella Kamstra in her study of demotivating factors, points to the following ones:

- at the micro-level, these are high expectations of one's performance, task repetitiveness;
- at the meso-level, these are the learner variables and their attitudes to learning, relations with colleagues and other workers at school;
- at the exo-level, this is work overload, limited resources (e.g., low pay, lack of in-service training), physical conditions of the school;
- at the macro-level: educational system, lack of prestige, lack of opportunities for self-development, limitations connected with curriculum implementation.

Babic et al. add an authoritarian management style to this list, while Nazari, Karimpour, and Ranjbar include a burden connected with learner expectations regarding assessment. While the list of stressors is probably not exhaustive, it can be agreed that they are integral elements of every teacher's life. Since they must cope with most of them independently, any additional challenge to their established routines causes an additional emotional burden. For this reason, in most studies on teacher well-being from an ecological perspective, it is emphasized that it should first be the macrosystem's elements that should support teachers and head teachers, as representatives of the meso-system, in meeting the challenges by appropriate financial provision and in-service training. This expectation, while being socially just, may be too idealistic to materialize. For this reason, Gkonou, Dewaele, and King posit that acknowledging the dynamics of emotions, it does not matter what emotions the teachers feel but what the teachers do about them. In other words, it is the teachers' job to cater for their emotional well-being, e.g., learning to control/keep away the stressors, prioritizing duties, keeping work/life balance, etc. Teachers must also realize that they are part of their microsystem, and thus are responsible for shaping it. This is where they can enact their agency by catering for the relations with their students and their workplace colleagues. This way, by contributing with time and effort, they help to create positive work environments.

Positive institutions have recently been the focus of research (Budzińska; Michońska-Stadnik) as they can be presented as models of good practice for creating stable and friendly work environments in unstable times. Michońska-Stadnik enumerates features that help head teachers develop such institutions which include showing the purposefulness of one's own and others' activities; transparent rewarding; work culture that promotes cooperation instead of competition; accessibility of

educational resources; positive relations with school administrators, parents, and colleagues which support school climate, and self-identification with school values.

Positive institutions prioritize teacher well-being because only teachers who feel well at their workplace can cater to the student's well-being, as emotions help foster relations and are reciprocal. The agentic teachers are autonomous, motivated, and resilient (Werbińska), and those who have space to enact their agency in their institutions.

To summarize, the ecological theory in respect of teachers' emotions and well-being implies that they are also dynamic and changeable. This means that education cannot provide only positive emotions but that adverse incidents are part and parcel of everyday teaching. Teachers need to recognize that they are both members of and are responsible for the micro-system in which they function, and that this is the space where they can and should enact their agency.

6. Conclusions

The goals of this paper were twofold. Firstly, it aimed to demonstrate that the ecological approach can justly aid the description and learning of the current dynamic learning environments and, as such, is omnipresent in the current research. The dominant trends concern the study of out-of-school and mainly digital environments, the increasing linguistic and cultural diversity in language classrooms, and teacher well-being and emotions in response to the challenges of the postmodern world. Secondly, it aimed to postulate that lack of stability and dynamic changes signify postmodern times. One must accept this fact, learn how to cope with it, and exercise one's agency within the available means.

It is argued that it is up to the teacher whether they will treat novel situations as an affordance or a threat to their identity. While it must be acknowledged that the meso- and macrosystems can limit teacher agency, it is essential for the teacher to realize that they still can exercise agency in their microsystem (i.e., classroom, school), e.g., by creating positive relationships with students, colleagues, and parents, and that their agency is a model to the students as well. It must be realized that one's immediate ecology will not be impacted by some top-managing authorities but that each member of the given ecosystem is its object and an actor; thus, educational change is possible through his/her engagement with the environment.

These observations bear important implications for teacher education and development. Future and practising teachers should have much more hands-on experience and observation of positive institutions and agentic teachers. Focusing on critical incidents from an emic perspective should enhance their reflectivity, self-awareness of experienced emotions, and problem-based learning to teach. This can take place through teacher development workshops, initiating discussion groups, and reading professional literature. Secondly, teacher trainees should know that

there are no magic teaching solutions that work always and in all situations. Instead, they should be encouraged to boost their agency in meeting the challenges by finding and implementing innovative teaching solutions and avoiding routine and boredom. Finally, teachers are recommended to abandon the view of language learning and teaching in which there is a linear relationship between teacher input and learner output. Instead, they should recognize that to a large extent language learning occurs outside the classroom, from a diversity of semiotic resources and through relations with others. Thus, they should learn to perceive the teacher's role not only as a provider of knowledge but also as a caterer of classroom climate by developing relationships with students and among students, which can be achieved by a more individualized and personalized approach to language teaching.

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