

УДК 37.02



Маргарет Энн Берг
Университет Северного Колорадо

СОЦИАЛЬНО-ЭКОЛОГИЧЕСКАЯ СИСТЕМА ОВЛАДЕНИЯ ЯЗЫКАМИ

Социально-экологическая система предлагает основу для проведения исследований процессов овладения языками в обществе. Данная статья рассматривает экологические стили в лингвистике и психологии 70-х годов XX века и предлагает их применение в качестве основы для соответствующего исследования двуязычного образования (на русском и английском языках) в XXI веке. Данная экологическая система далее обогащена посредством прикладных лингвистических методов, таких как этнография, анализ развития речи и функциональная лингвистика. Эта система вполне основательна для того, чтобы провести изучение развития билингвизма и грамотности речи среди различных групп населения. В заключение данной работы выявлены вопросы, возникающие при проведении исследований академического развития и билингвизма.

Овладение языками в обществе, прикладная лингвистика, системная функциональная лингвистика, этнография, экологические системы, социально-экологическая система, развитие билингвизма.

Linguistic landscapes are not only geographical and spatial, but also socio-cultural and psychological. The complexity of these landscapes result in what Blommaert calls “superdiversity” brought on by the end of the Cold War and the emergence of the Internet [1]. Labels that have served bilingual research easily in the past, such as “first language” (L1) and “second language” (L2), are quickly eroding as more children grow up in mixed ethnic homes, where more than one language is spoken, and students share cultural artifacts easily through online networks. A strong research base has grown to demonstrate (a) the cognitive advantages of knowing more than one language [2, 3], and (b) the stronger academic performance of students who have studied academic material in dual language content-based programs [4]. While researchers know that bilingualism and academic content in two languages are healthy for the cognitive psychology of a child, the field of biliteracy research lacks a single model, or even a limited few, for language acquisition combined with content learning. In fact, research in the human capacity to read and write in more than a single language with academic proficiency needs—as Hopewell and Escamilla assert—“systems that allow us to explore and understand the nuance and tensions of becoming biliterate in widely varying contexts and languages” [5, p. 182]. Therefore, this article presents a combination of theoretical frameworks and applied linguistic methods as one possible “system” that is robust enough to examine “nuance and tensions” in a variety of contexts.

The target languages in studies related to the formal years of education have been limited. Research on learning appearing in the English language focuses predominantly on adult learners from whom it is easier to gain informed consent for participation in a study. Permissions from students under eighteen years of age, and their par-

ents/guardians, is more difficult to gain; however, state mandated testing does allow researchers to examine general trends on language acquisition within the formal years. These examinations and the quantitative results fail to account for the process of learning through classroom interaction or students’ individual performances. These tests provide a series of single measures across time for a generalized group with little to no information about “varying contexts and language.” At each academic year, tests are given to a group, for example, 3rd graders. If a language other than the dominant social language is spoken in the home they may be identified as an L2 learner with no additional information about the extent of their exposure to the L2, or if they are bilingual [6]. The next year another group of 3rd graders are given a test, and the performance is compared with the previous year’s third graders (often with changes in a test) with no additional information about their language formation or other human developmental aspects. Thus, the state standardized tests have limited application for educational, particularly pedagogical, research.

Qualitative studies provide greater description of the language acquisition process and dual language educational contexts. Canada has contributed to a large volume of work in relation to the French/English schools particularly in Quebec. The United States has also contributed to the discipline with studies predominantly on Spanish/English [7]. Studies of schools that teach at least 50% of the curriculum in Russian and 50% in English are more difficult to find for there are only a few schools that offer such a model. Therefore, the “nuances and tensions” of learning English in the Russian context and Russian in the English context have only begun to be explored.

This lack of research into the bilingual, particularly biliterate, growth of students in Russian/English needs to

be addressed. For that reason, this article discusses the issue with the following question:

- What “system” can be used to explore and understand Russian/English academic biliteracy growth?

The system must be comprehensive enough to account for multiple sites where learning takes place within a community, and also focused enough to capture the growth of the linguistic ability of learners to document the nuance and tensions of assimilating various ideologies inherent in languages which attempt to make sense and construe the experiences lived in various environments. Therefore, a socio-ecological research stance is proposed.

Theoretical Background: The Ecological Turn

In 1971, Einar Haugen published his article *The Ecology of Language* defined as “the study of interactions between any given language and its environment” [8, p. 325]. The article ends with a list of ten areas to study in linguistic landscapes. These include sociolinguistics, dialectology, philology, and institutional support. Schooling is situated within the area of institutional support. When families move to a new nation, or when children are born into a minority ethnic group, they “face a status ladder that increasingly removes them from their language of intimacy” [p. 332]. The tensions of this transitional shift from the intimacy of the home to the public discourse of schooling requires a broader lens than linguistics alone can provide, and a psychological paradigm that takes account of both the mind and environment complements Haugen’s work.

Urie Bronfenbrenner’s *Ecological Systems Theory* [9] provides a more structured paradigm for the examination of the language areas outlined in the Haugen essay. Bronfenbrenner’s theory makes the dyad, or two-person system, the basic unit of analysis [p. 5]. His 1979 theory consists of four levels/systems “conceived as a set of nested structures, each inside the next, like a set of Russian dolls” [p. 3], or *матрешка*. The individual person lies at the innermost level of all the systems. The biological human is within the microsystem of small social groups—such as family, classmates, school peers, play groups—that pattern activities and roles within an experience of interpersonal relationships [p. 22]. The dyad of parent and child, teacher and child, lies in the microsystem; however, a researcher might focus on a particular child’s interactions with another classmate in a school, or a teammate at a sports club. A narrow focus on a dyad creates opportunity for a richer, deeper, and more nuanced description of actions and utterances between two participants. The interactions between and among microsystems occur within the mesosystem.

The exosystem refers to “settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by,” what happens in the microsystem [p. 25]. For example, directives made from a regional education office impact what happens in a single classroom though the children and their families may not know any of the people making those decisions and regulations. A child may not know a school’s highest level of administration, but is still subject to their decisions. In a study that employed the ecological systems theory, an English/Russian dual language school in the U.S. denied books to the Russian program because

the school board and principal were confused about the semantics, pragmatics, and semiotics for words based in a similar root: “culture” in English, and *культура* [10]. The values historically infused in each of these words reveal attitudes of the people at the outer most level of the ecological system for human development—the macrosystem. It is the “consistencies, in the form and content of the lower-order systems (micro-, meso-, and exo-) that exist at the level of the subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies” [p. 26]. Bronfenbrenner argued that ecologically appropriate research includes the study of a developing human moving into different ecological systems; for example, Russians who immigrate to the U.S. place high importance on maintaining the language at 71% of this population [11].

Applied Linguistics Methods

Haugen provided theoretical ideas in relation to what aspects of language can be studied in an environment, and Bronfenbrenner furnishes a layered model of a context that situates a single learner (a psychological and biological human) at the center. The model echoes ideas from anthropology that have traditionally studied entire ethnic groups. The ethnographic tradition of describing culture, including language, is one method from applied linguistics that contributes to a robust system.

Ethnography. This method documents the use and significance of language in context as lived events unfold. In ethnography any interaction, observation, interview, conversation, document, or website can be data in the collection process. The main data are the field notes of a researcher who has appropriate cultural and discipline knowledge. Thus, ethnography begins before the researcher enters the social context. It continues into the field through the analysis of the micro- and macro-levels of a culture and the writing of the ethnographic reports. This approach aligns well with Haugen’s potential questions to be answered about an ecology of language, but it maintains a wider lens: Culture is communicated through more semiotic systems than language alone.

Systemic Functional Linguistics. SFL is based on the work of educational linguist M.A.K. Halliday who posits context as “a constellation of meanings deriving from the semiotic system that constitutes a culture” [12, p. 180]; therefore, language acquisition is a socialization process. For teachers to become effective instructors, they must talk about what happens in classrooms, about elements of a lesson, about conceptualizing a unit of instruction, and about the implementation and results of interactions with learners. The discipline of Education, like any other field of study, requires language to construe the experience. The earliest period of learning in the life span is characterized by the learning of the general knowledge. In secondary and tertiary education, the learner must assimilate advanced knowledge of particular disciplines. The written texts and traditions of those disciplines fall into Haugen’s category of philology.

An examination of a text in SFL prompts a researcher to determine the language functions—what is being discussed (field), who/how it is being discussed (tenor), and the medium through which it is discussed (mode)—and the associated linguistic features at the levels of lexicon, syn-

tax, and discourse [13]. For example, a science course will require different linguistic features than a history class. The question of the differences and similarities is an empirical one, and teachers can be educated in the tools of SFL to increase the quality of the output in their students' work [14].

As stated above, Haugen asserted that children face a ladder from intimacy; yet, SFL research into academic genres focuses on how to assist in students' ascent. SFL researchers have found that through the explicit instruction of the valued genres of schooling, as documented through the requirements for reading and writing in institutions, the children of immigrant and aboriginal families could quickly catch up to the students from the dominant English-only families [15]. They posit a typology for English-speaking academic genres that has three main branches: engaging, evaluating, and informing. The first branch—engaging—dominates the language arts classroom with texts such as narratives, newspaper stories, anecdotes, and exemplum. The second branch—evaluating—can be found in both language arts and history classrooms with essays that discuss an issue, propose a solution to an issue, or provide a review for a piece of art including writing. The informing branch, however, dominates the sciences and mathematics with reports, explanations, procedures, and recounts of processes. This separation is artificial and overlap does exist, but it provides a systemic approach for a close examination of various texts including those valued in schools.

Discourse Analysis. The languages people speak impact the way they think; languages are not neutral but loaded with ideological and cultural-historical meanings. Discourse Analysis, DA, is rooted in the philosophy of language but provides a methodological approach to study it in use; for example, in a classroom discussion as teachers and students build background knowledge about a topic prior to writing about it. DA pays particular attention to language to uncover ideologies that maintain power structures. While the methodological frame for Critical Discourse Analysis focuses on the problems, power relations, and how to move past them, Positive Discourse Analysis (PDA) evaluates texts—spoken, written, and a mix of modes—within a broader description of the conventions and groups involved. PDA develops within the context to identify greater potential for positive applications and outcomes [16]. PDA complements Bronfenbrenner's ecological systems which situate a learner centrally in a particular context. As the pupil, student, teacher, or researcher engage with others in a learning context, they are open to psychological vulnerabilities as they develop their abilities to process and produce more complex language of various disciplines and languages. PDA holds that a positive outcome in human relations is best; therefore, the tenor of interactions must be respectful even as learners struggle to understand the ways of respect in different cultures.

Discussion and Conclusion

The quickly changing linguistic landscape in urban areas in the 21st century force language and education scholars to reexamine simplistic dichotomies such as L1 and L2 that dominated. Hornberger proposed a *Continuum of Biliteracy* but its application is limited to the schooling context [17]. An ethnographic and ecological approach is

more robust because it includes observations and data beyond the walls of a school. Therefore, this article proposes a transdisciplinary approach and system that draws on the traditions of psychology, anthropology, linguistics, language philosophy, and education. The development of language to the highest levels of academic literacy is a complex process that includes multiple interactions with various people in different linguistic registers throughout the ecological system.

Russian in combination with English is underrepresented in the bilingual research journals. Although there is over a million Russians living in the U.S., and an increase of English language programs in Russia, the scholarship on Russian/English biliteracy is sparse. An adult language learner will have already formed concepts about, and conceptions of, the world in one language before learning another linguistic code for those ideas; however, children, who simultaneously learn the world in two languages, will experience nuances and tensions that are unique to the young learner. Though any model will have limitations, the system presented in this document takes advantage of a wide lens to observe and analyze the language acquisition process in a way that is ecologically valid. With this system, a researcher can study the reading and writing ability of students studying two languages and deepen the inquiry through a variety of follow-up questions: What do mentors in the meso-system do to support the language of academics? How does a learner draw on human resources available to assist in the development of language? What languages does a learner use in different contexts and with whom? How does a home environment support or thwart learning of various school content? How do communities support the choices of families who seek to maintain minority languages? What approaches in teaching are most effective for advancing disciplinary literacy of students? What methods of teaching can be borrowed from one discipline area to innovate in another discipline area?

These questions can be pursued through further investigation, and expanded upon. As the process of globalization continues, education scholars must be at the forefront of advocacy for youth and the people who care for them. While the 20th century brought the rise of psychoanalysis and psychology, it also brought the rise of sea levels with the melting of the ice sheets: While awareness of consciousness has increased, so has the threat to existence. Future thinkers/workers will need to cross the boundaries of their respective fields to develop innovative solutions to the socio-ecological problems confronting humanity. A greater diversity of ideologies are available through various languages, and the creativity that comes from multilingualism. An active and contributing participant on the path to solutions can be fostered in a culture that improves the ecological system of the learners.

Author's note: Thank you to Vologda State University for hosting me this academic year. Funding for this year was made possible through the Fulbright Scholar Program, the University of Northern Colorado Sabbatical Program, and Vologda State University. I can be reached at Margaret.berg@unco.edu if a reader wants to discuss this article and/or potential research on Russian/English learning.

References

1. Blommaert, J. *Ethnography, Superdiversity and Linguist Landscapes* / J. Blommaert. – Tonawanda (NY): Multilingual Matters, 2013.
2. Kharkhurin, A.V. *Multilingualism and Creativity* / A.V. Kharkhurin. – Tonawanda (NY): Multilingual Matters, 2012.
3. Pavelenko, A.(Ed.) *Thinking and Speaking in Two Languages* / A.(Ed.). Pavelenko. – Tonawanda (NY): Multilingual Matters, 2011.
4. Lindholm-Leary, K.L. *Dual Language Education* / K.L. Lindholm-Leary. – Tonawanda (NY): Multilingual Matters, 2001.
5. Hopewell, S. *Biliteracy Development in Immersion Contexts* / S. Hopewell, K. Escamilla // *Journal of Immersion and Content-based Language Education*. – 2015. – № 2 (2). – P. 181–195.
6. Schneider, M. *Common Core Dilemma: Who Owns Our Schools?* / M. Schneider. – New York (NY): Teachers College Press, 2015.
7. Collier, V.P. *Educating English Learners for a Transformed World* / V.P. Collier, W.P. Thomas. – Santa Fe (NM): Dual Language Education of New Mexico, 2009.
8. Haugen, E. *The Ecology of Language* / E. Haugen. – Stanford (CA): Stanford University Press, 1971.
9. Bronfenbrenner, U. *The Ecology of Human Development: Experiments by Nature and Design* / U. Bronfenbrenner. – Cambridge (MA): Harvard University Press, 1979.
10. Berg, M.A. *Russian-speaking Children and Material Needs in the Reformist Context: An Ecological Study of Curriculum Development* / M.A. Berg // *Journal of World Languages*. – 2016. – № 2 (2–3). – P. 126–143.
11. Isurin, L. *Russian Diaspora: Culture, Identity, and Language Change* / L. Isurin. – New York (NY): de Gruyter, Inc., 2011.
12. Halliday, M.A.K. *Language as a Social Semiotic: Towards a General Sociolinguistics Theory* / M.A.K. Halliday // *Language and Society* / edited by J.J. Webster. – New York (NY): Continuum, 2007.
13. Halliday, M.A.K. *An Introduction to Functional Grammar* / M.A.K. Halliday. – London (UK): Edward Arnold, 1985.
14. Huang, J. *Impact of Functional Linguistics Approach to Teacher Development on Content Area Student Writing* [Электронный ресурс] / J. Huang, M.A. Berg, M. Siegrist, C. Damsri // *International Journal of Applied Linguistics*, 2016. – Режим доступа: DOI: 10.1111/ijal.12133
15. Rose, D. *Learning to Write, Reading to Learn: Genre, Knowledge, Pedagogy in the Sydney School* / D. Rose, J.R. Martin. – Bristol (CT): Equinox Publishing, 2012.
16. Coffin, C., *Applied Linguistics Methods: A Reader* / C. Coffin, T. Lillis, K.(Eds.). O'Halloran. – New York (NY): Routledge, 2010.
17. Hornberger, N.W. *The Continua of Biliteracy and Bilingual Educator: Education Linguistics in Practice* / N.W. Hornberger // *International Journal of Bilingual Education and Bilingualism*. – 2004. – № 7 (2&3). – P. 155–171.

Margaret A. Berg

A SOCIO-ECOLOGICAL FRAMEWORK FOR LANGUAGE ACQUISITION

A socio-ecological system offers a framework in which to situate research on language learning in a community. This article discusses the ecological turn of linguistics and psychology of the 1970s and argues for these as a basis for environmentally appropriate research on Russian/English biliteracy in the 21st century. This ecological foundation is enhanced through applied linguistics methods including ethnography, positive discourse analysis, and systemic function linguistics. This framework is robust enough to explore bilingual and biliterate development in learners in various contexts. The paper concludes with possible questions for investigation of bilingual and academic development.

Language learning in a community, applied linguistics, systemic function linguistics, ethnography, ecological foundation, socio-ecological framework, bilingual development.