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## CONCEPTUALIZING NATURE THROUGH METAPHOR IN LIFE SCIENCE EDUCATION: A QUALITATIVE INVESTIGATION

A. DRAGOESCU-PETRICA<sup>1</sup>, Alexandra IBRIC<sup>1</sup>, Iasmina IOSIM<sup>1</sup>, Marius R. LUNGU<sup>1</sup>, Alina MARGHITAN<sup>1</sup>,  
Lavinia M. MICU<sup>1</sup>

<sup>1</sup>ULST 'King Mihai I' from Timisoara, Romania

**Abstract:** *Language plays a fundamental role in shaping how individuals conceptualize, interpret, and describe the natural environment. In educational settings, particularly in Life Sciences programs, students often rely on metaphorical language to express their relationship with nature. Drawing on Conceptual Metaphor Theory (CMT) developed by Lakoff and Johnson (2003), this study investigates how first-year university students conceptualize nature through conventional metaphors. Qualitative data were collected through semi-structured interviews with students enrolled in various Life Sciences fields, including horticulture, landscaping, genetics, biotechnology, and biology at the University of Life Sciences (ULS) in Timisoara. The findings suggest that students frequently conceptualize nature as a nurturing parental figure, a home-like habitat, or an emotional entity that evokes feelings of connection, gratitude, enchantment, or concern. These metaphors how environmental awareness and academic specialization influence linguistic representations of nature. The study contributes to research in environmental linguistics, cognitive linguistics, and English for Specific Purposes (ESP) education by highlighting the importance of metaphor awareness in Life Sciences communication and environmental discourse.*

### • Introduction

Cognitive linguistic perspectives view metaphor as a fundamental aspect of both language and human thinking, present in many forms of everyday communication. From this perspective, metaphor serves an important cognitive role by helping individuals organize and interpret their experiences. These ideas form the basis of Conceptual Metaphor Theory (CMT).

### • Material and method

The study relies on ecolinguistic theory, ecosemiotics, and edusemiotics as theoretical approaches. The paper adopts a qualitative research design to explore metaphorical expressions describing students' relationship with nature. Qualitative methods are used to analyze metaphor usage in discourse analysis, while content analysis allows researchers to identify recurring themes and patterns in language data.

### • Results and discussions

Through systematic coding, metaphorical expressions can be grouped into conceptual categories that reveal broader cognitive structures, as described by this study. Qualitative data were collected through semi-structured interviews during classroom discussions and debates following tasks from the Ecological English text book for first-year students. This method allows participants to express their perceptions freely while providing the researchers with a flexible framework for guiding the conversation. During class discussions, students were asked questions related to: their personal relationship with nature; how they perceive environmental changes; their emotional responses to environmental issues; the role of nature in their

academic field. The free discussions generated descriptive statements that often included metaphorical expressions about nature.

The study analyses expressions conventionally used when describing students' relationship to nature. Qualitative methods described in the preceding section. These methods have been applied to identify themes and decode meaning, by which the study investigated specific strategies employed by ESP for Life Science learners. The analysis involved several stages: transcription of responses; identification of metaphorical expressions; classification of metaphors according to source domains; interpretation of cognitive meanings.

### • Conclusions

The results demonstrate that students rely on deeply rooted conceptual metaphors, such as Nature as Mother and Earth as Home, to express ecological relationships. At the same time, contemporary environmental concerns influence metaphors expressing disconnection, threat, and ecological loss. These findings underscore the role of metaphor in shaping environmental perception and highlight the relevance of cognitive linguistics for environmental education and ESP research. Future studies could explore cross-cultural variations in environmental metaphors or examine how metaphor awareness influences students' ecological attitudes. The study highlights the potential value of integrating metaphor awareness into Life Sciences and ESP curricula, encouraging learners to develop more nuanced and responsible ecological perspectives.