

CONCEPTUAL METAPHOR AS A MODEL OF KNOWLEDGE AND UNDERSTANDING: THE CONCEPTUALIZATION OF ORGANIZATION IN ESP

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Abstract: The paper examines conceptual metaphor as a cognitive model for understanding abstract concepts in higher education, with particular focus on its role in English for Specific Purposes (ESP). Drawing on the conceptual metaphor theory, metaphor is treated as a mechanism of thought that structures how complex domains are conceptualized and understood. The study outlines key principles of conceptual metaphors and explains its relevance for ESP, where the comprehension of specialized disciplinary concepts is essential. Within the wider perspective of science and research as drivers of educational transformation, the paper focuses on the role of conceptual metaphor in supporting disciplinary understanding and knowledge construction in engineering education. Conceptual metaphors enable students to link linguistic expression with conceptual structures, facilitating the interpretation of organizational concepts characteristic of engineering. The central part of the paper analyses selected metaphorical models of organization, showing how organizational metaphors function as a framework for understanding organizational systems and processes. The analysis demonstrates that metaphorical models support both linguistic comprehension and disciplinary understanding by enabling students to approach complex phenomena through familiar conceptual patterns. The paper concludes that conceptual metaphor provides an effective framework connecting cognition, language, and disciplinary knowledge, contributing to conceptual development and the transformation of learning in ESP within contemporary engineering higher education.

Key Words: conceptual metaphor, conceptualization of organization, disciplinary understanding, ESP, higher education

1. INTRODUCTION

Learning in technical and engineering fields requires not only acquiring specialized knowledge, but also making sense of complex information, recognizing how elements within systems are connected, and developing a deeper understanding that goes beyond superficial understanding. In such learning environments, approaches that help clarify concepts and support meaningful interpretation of specialized knowledge gain particular importance, especially in disciplines shaped by conceptual and organizational complexity.

In technology-driven higher education that is constantly evolving, emphasis is placed on the development of conceptual understanding, as well as on the acquisition of specialized terminology. In engineering and related disciplines, students are expected not only to learn the language of the field but also to understand complex systems, structures, and abstract relationships. Such knowledge extends beyond memorizing professional terminology. Within this context, language has a central role, functioning as a cognitive tool through which disciplinary knowledge is organized and understood. This role of language is particularly evident in English for Specific Purposes (ESP), where it serves as a primary means for expressing specialized knowledge.

The present study examines the role of conceptual metaphor in facilitating the understanding of complex concepts in ESP within engineering higher education. Rather than approaching metaphor as a stylistic device, the paper adopts a cognitive perspective [4]. Conceptual metaphor enables the mapping of familiar structures onto more complex domains, facilitating the interpretation of phenomena that are otherwise difficult to grasp [4]. In ESP contexts, this is especially important because students must establish meaningful connections between linguistic expressions and disciplinary phenomena. A central part of the paper is the analysis of metaphorical models of organization. These models are examined as cognitive and analytical frameworks that help explain organizational systems. From this perspective, metaphor functions as a bridge linking language with disciplinary knowledge and supports both linguistic comprehension and the development of professional understanding.

The aim of the paper is to demonstrate that conceptual metaphor provides an effective framework for understanding organizational concepts in ESP and for achieving deeper engagement with disciplinary knowledge in engineering education. By examining how metaphor supports conceptualization and understanding, this study contributes to a view of learning as an interaction between language, cognition, and professional knowledge. From this perspective, conceptual metaphor can be seen as a significant resource for supporting knowledge organization and enhancing understanding in engineering higher education.

From a research perspective, attention to conceptual metaphors is important because scientific knowledge is often communicated through conceptual models. Metaphorical frameworks help researchers formulate problems,

structure complex phenomena, and make relationships within systems visible. Awareness of such models improves the precision of academic expression. In this sense, understanding metaphor is not only a linguistic skill but also a component of methodological and analytical competence. Therefore, developing sensitivity to conceptual metaphors enhances the ability to successfully participate in knowledge exchange within the scientific community.

2. THEORETICAL FRAMEWORK

Cognitive linguistics observes language as a part of human cognition rather than an independent system. According to it, language reflects general principles of the human mind and serves as a means through which knowledge is structured and organized. Linguistic expressions are considered as symbolic units, consisting of form and meaning. Meaning corresponds to mental representations shaped by human perception [6]. Concepts emerge from interaction with the external world, and linguistic meaning represents reality which is interpreted through cognitive processes.

Two central orientations in cognitive linguistics are the search for generalizable principles of language and the cognitive perspective, which connects linguistic phenomena with broader knowledge about the human mind [4]. Categories formed through generalization have internal gradience and prototypical and peripheral members. From a cognitive standpoint, language reflects mechanisms of conceptual organization, which can also be noticed in other domains of human cognition. Conceptual metaphor theory introduces metaphor as a principal mechanism of thought, and not merely a stylistic characteristic [4]. Conceptual metaphors operate through mappings between domains and promote understanding of abstract concepts in terms of more concrete experiential concepts. In this sense, metaphor is as a cognitive instrument that enables the interpretation of complex domains. Conceptual metaphors exist at the level of thought and are manifested in a language through metaphorical expressions.

Conceptual metaphors map a structure from a concrete source domain onto a more abstract target domain [6]. During this process, certain aspects of the target domain are highlighted while others remain in the background. This mechanism can be illustrated by using the following metaphor: ARGUMENT IS WAR [4]. In this case, ARGUMENT represents the target domain, while WAR represents the source domain. Elements from the source domain—such as attack, defense, strategy, winning and losing—are mapped onto the target domain and they shape how argumentation is conceptualized and expressed (e.g., attack an argument, lose an argument, etc.). It is important to underline that metaphorical mapping transfers not only specific features but also a structure and internal logic [2].

Understanding metaphor as a cognitive mechanism offers a foundation for analyzing how complex domains are structured through metaphorical models. This perspective extends beyond everyday language and becomes particularly relevant in fields characterized by systemic complexity, including engineering and organizational studies. An application of this perspective can be found in organizational theory, where organizations are interpreted by using metaphorical models. Morgan states that metaphor provides a useful tool for understanding different dimensions of organizations, showing that organizations can be conceptualized using various metaphors [3]. Within these metaphors, metaphor is a framework that helps students to understand different theoretical views of organizations, as well as their particular features. This illustrates how conceptual metaphor is not only a cognitive mechanism, but also an analytical model for understanding complex systems.

Metaphors are important in ESP instruction for several reasons. Metaphoric competence is a part of communicative language ability and plays a key role in students' textual, illocutionary, sociolinguistic, and grammatical competence [5, p. 9]. Metaphors are present in everyday language and professional texts, and not merely in literary texts, which is why dealing with them is essential for developing effective communication skills. Second, metaphors underpin many common expressions and idioms and can aid students in understanding vocabulary better [5, p. 6]. According to previous research findings, teaching source domains of metaphors can deepen students' understanding of word meanings [1]. Third, metaphors are closely tied to understanding cultural references. Understanding them can help students become aware of cultural shades of meaning and extended meanings in the language they are learning [5, p. 9]. Next, metaphoric competence contributes to increased communicative effectiveness because it enables students to express complex ideas. It also helps them understand figurative language used by native speakers [5, p. 14].

Furthermore, metaphoric competence plays a role in compensation strategies, that is, techniques students use to overcome gaps in foreign language knowledge while communicating [5, p. 19]. Metaphors also encourage creative thinking, making students' communication more engaging. Moreover, metaphors facilitate learning grammar by relating them to familiar, concrete experiences. Additionally, metaphors are important for text organization, since they help structure arguments, point out transitions and summarize main ideas [5, p. 15]. By integrating metaphors into ESP instruction, teachers can improve students' ability to understand and use figurative language, which enhances their general communicative ability.

3. METAPHORS FOR ORGANIZATION

In *Images of Organization*, Morgan explains how metaphors influence the way people understand, analyze, and manage organizations [3]. There are different views on organizations, depending on the metaphor chosen to describe them. While there is not one metaphor that can fully explain organizations, each of the mentioned metaphors

emphasizes certain characteristics and leaves the other ones in the background. By learning to see organizations through these images, students and managers can enrich their understanding of organizations. This does not only affect understanding, but also the way people manage organizations, make decisions, and solve problems.

Morgan describes several main metaphors of organization. Each one gives a different perspective on organization and its characteristics [3]. While there are sub-models that can be created from these main metaphors, Morgan's framework is based on these central metaphors. Following conceptual metaphor theory, Morgan's metaphorical images are reformulated in Lakoffian terms as: ORGANIZATION IS A MACHINE, ORGANIZATION IS AN ORGANISM, ORGANIZATION IS A BRAIN, ORGANIZATION IS A CULTURE, ORGANIZATION IS A POLITICAL SYSTEM, ORGANIZATION IS A PSYCHIC PRISON, ORGANIZATION IS FLUX AND TRANSFORMATION, and ORGANIZATION IS AN INSTRUMENT OF DOMINATION (Table 1).

Table 1 – Metaphorical models of organization (based on Morgan, 2006)

Metaphor	How the organization is understood	Key features	Highlighted aspects
ORGANIZATION IS A MACHINE	A mechanistic system designed for order and efficiency	Standardization, hierarchy, control, predictability, formalization	Efficiency, coordination, stability
ORGANIZATION IS AN ORGANISM	A living, adaptive system interacting with its environment	Adaptation, survival, environmental fit	Change, flexibility, environment
ORGANIZATION IS A BRAIN	A learning and information-processing system	Feedback, learning, knowledge processing	Learning, intelligence, innovation
ORGANIZATION IS A CULTURE	A system of shared meanings and values	Symbols, beliefs, shared understanding	Identity, meaning, shared values
ORGANIZATION IS A POLITICAL SYSTEM	A system of competing interests and power relations	Conflict, negotiation, coalitions	Decision-making, power, interests
ORGANIZATION IS A PSYCHIC PRISON	A system shaped by unconscious processes and patterns	Unconscious control, routines, cognitive limits	Hidden constraints, psychological influence
ORGANIZATION IS FLUX AND TRANSFORMATION	A dynamic, evolving entity	Change, self-renewal, transformation	Dynamics, evolution
ORGANIZATION IS AN INSTRUMENT OF DOMINATION	A structure of control, inequality, and exploitation	Domination, asymmetry, control, exploitation	Inequality, control, domination

The metaphor ORGANIZATION IS A MACHINE presents the organization as a structured, rational system designed to achieve efficiency, order, and control. Within this perspective, organizations are understood as being composed of clearly defined parts. Each part has a function within a whole. Emphasis is placed on hierarchy, standardization, formal rules, and operational efficiency. Such a view reflects management theories, where planning and control ensure efficiency. This metaphor highlights the importance of coordination and system control, but at the same time tends to place flexibility and creativity in the background.

The metaphor ORGANIZATION IS AN ORGANISM shifts the focus to adaptation. The organization is viewed as a living system that interacts with its environment and fights to survive. The main idea is that organizations must adapt to changing conditions in order to stay competitive. Concepts such as growth, development, environmental fit, and contingency are central. Unlike the mechanistic view, this perspective emphasizes flexibility and responsiveness. It shows how organizations evolve in response to external pressures.

The metaphor ORGANIZATION IS A BRAIN conceptualizes the organization as a system that processes information and learns. Within this framework, organizations are seen as capable of learning and adapting through feedback. Ideas from cybernetics and systems theory play an important role. Emphasis is placed on knowledge processing, communication, and learning. This metaphor highlights the role of intelligence and learning in managing organizations.

The metaphor ORGANIZATION IS A CULTURE focuses on shared meanings and values that shape organizations. Organizations are understood as socially constructed systems where beliefs and narratives influence behavior. This perspective highlights identity and the role of meaning in shaping organizational practices. It gives less attention to technical aspects of organization.

The metaphor ORGANIZATION IS A POLITICAL SYSTEM presents organizations as places of power and competing interests. Decisions are viewed as outcomes of negotiation, coalitions, and conflicts among separate groups. Power, influence, and strategic behavior are central concepts. This perspective emphasizes the distribution of power within organizations, while underestimating cooperation and shared goals.

The metaphor ORGANIZATION IS A PSYCHIC PRISON emphasizes the role of unconscious processes in shaping organizational behavior. Organizations may become trapped in routines and ways of thinking that limit change. This perspective highlights hidden constraints and psychological influences. It may be less directly applicable to structural aspects of organization.

The metaphor ORGANIZATION IS FLUX AND TRANSFORMATION views organizations as dynamic and continuously evolving processes. Change, self-renewal, and transformation are central concepts. Organizations are understood as complex systems shaped by ongoing interactions and transformation. This metaphor highlights movement and process and offers a view of organization as an evolving phenomenon. It provides less emphasis on stability and control.

Finally, the metaphor ORGANIZATION IS AN INSTRUMENT OF DOMINATION focuses on power, inequality, and control. Organizations are seen as systems that may strengthen asymmetry, exploitation, and domination. This perspective draws attention to issues of control and hierarchy. It gives less attention to cooperative and constructive aspects of organization.

Taken together, these metaphors demonstrate that organizational reality can be interpreted through multiple conceptual perspectives, each revealing certain aspects while obscuring others. By applying different metaphorical models, it becomes possible to develop a more comprehensive understanding of organizations. The variety of perspectives illustrates how metaphor functions not only as a linguistic phenomenon, but also as a cognitive and analytical framework for interpreting complex systems.

4. CONCLUSION

The present study has examined conceptual metaphors as a cognitive framework for understanding complex concepts in ESP within engineering higher education, with particular focus on the conceptualization of organization. The analysis has shown that metaphor is not merely a linguistic device, but a mechanism of thought that links language, cognition, and disciplinary knowledge. Through mappings between familiar and abstract domains, conceptual metaphor supports the interpretation of complex organizational phenomena and facilitates deeper conceptual understanding.

The discussion of metaphorical models of organization has demonstrated that different metaphors highlight different dimensions of organizational reality, which together provide a more comprehensive perspective. From an educational point of view, integrating conceptual metaphor into ESP instruction supports both communicative and disciplinary competence by facilitating interpretation, structuring knowledge, and enhancing analytical understanding. Conceptual metaphor can therefore be viewed as a valuable resource for supporting understanding and communication in contemporary engineering higher education.

ACKNOWLEDGEMENTS

This research has been supported by the Ministry of Science, Technological Development and Innovation (Contract No. 451-03-34/2026-03/200156) and the Faculty of Technical Sciences, University of Novi Sad through project "Scientific and Artistic Research Work of Researchers in Teaching and Associate Positions at the Faculty of Technical Sciences, University of Novi Sad 2026" (No. 01-3609/1).

The authors would like to express their gratitude for the support received within the project of the Department of Fundamental Disciplines in Engineering at the Faculty of Technical Sciences, University of Novi Sad, entitled "Artificial Intelligence and Its Application Possibilities in Improving the Teaching Process in Fundamental Disciplines."

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