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METAPHTONYMY AS A LINGUOCOGNITIVE TOOL OF TEACHING PHD STUDENTS ACADEMIC ENGLISH

The article focuses on holistically analyzing metaphonymy as an innovative linguocognitive foundation for teaching Academic English to PhD students. Drawing upon the theories of conceptual metaphor and metonymy, the study reconceptualizes metaphonymy not merely as the interaction of these two cognitive mechanisms but as a universal linguocognitive entity underlying knowledge construction and meaning-making in academic discourse. The paper advances an original metaphonymy-oriented Academic English instruction model, where metaphonymy functions as the object of linguistic analysis, the mechanism of cognitive information processing, and an effective tool for developing doctoral students' Academic English competence.

The methodology was empirically tested through a two-semester experiment conducted during the 2025–2026 academic year, involving twenty-six PhD students majoring in Economics and Business. The instruction was based on the systematic analysis of authentic English-language research article abstracts and other genres of academic discourse, enabling participants to identify, interpret and generate metaphonymic structures of contemporary Academic English. The model integrates cognitive-discursive analysis of metaphonymy, genre-oriented academic writing, the development of metalinguistic reflection, and conceptual competence into a unified linguocognitive didactic framework. The findings prove that explicit instruction in metaphonymic conceptualization does contribute essentially to the development of academic vocabulary, the logical organization of academic discourse argumentation, and overall Academic English proficiency. Furthermore, the study provides empirical support for the claim that metaphonymy represents a productive linguocognitive mechanism governing the organization of academic discourse rather than an occasional stylistic phenomenon. Synthesizing cognitive-linguistic theory with linguodidactics, the author's approach offers a novel framework for preparing PhD researchers for effective participation in global academic and communication.

Key words: conceptual metaphor, conceptual metonymy, English for Academic Purposes, linguodidactics, metaphonymy, PhD students.

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МЕТАФТОНІМІЯ ЯК ЛІНГВОКОГНІТИВНИЙ ІНСТРУМЕНТ ВИКЛАДАННЯ АКАДЕМІЧНОЇ АНГЛІЙСЬКОЇ ЗДОБУВАЧАМ СТУПЕНЯ ДОКТОРА ФІЛОСОФІЇ

Стаття присвячена холистичному дослідженню метафтонімії як інноваційної лінгвокогнітивної основи навчання академічної англійської мови здобувачів ступеня доктора філософії. У скопусі теорії концептуальної метафори та концептуальної метонімії обґрунтовується статус метафтонімії не лише як комплексної взаємодії метафори й метонімії, а як універсального лінгвокогнітивного механізму дискурсивного формування смислів. Запропоновано інноваційну емпірично перевірену авторську методику навчання аспірантів академічної англійської мови на основі метафтонімії, де метафтонімія виступає водночас об'єктом лінгвістичного аналізу, механізмом когнітивної обробки інформації та ефективним дидактичним інструментом розвитку академічної іншомовної компетентності.

Експеримент тривав два семестри (2025–2026 навчальний рік) та охопив 26 аспірантів економічних і бізнес-спеціальностей. Його основою був аналіз автентичних англомовних анотацій наукових статей та інших жанрів академічного дискурсу, що дало змогу навчити здобувачів виявляти, інтерпретувати й самостійно генерувати метафтонімічні конструкції, характерні для сучасної академічної англійської. Розроблена методика є синергією

когнітивно-дискурсивного аналізу метафтонімії, жанрово орієнтованого академічного письма та мовлення, розвитку метамовної рефлексії та концептуальної компетентності. Результати розвідки довели, що цілеспрямоване навчання метафтонімічній концептуалізації сприяє вдосконаленню академічного вокабуляру, логіки наукової аргументації та архітекτονіки академічного дискурсу, жанрової компетентності та загального рівня володіння академічною англійською. Водночас експериментально підтверджено, що метафтонімія є потужним лінгвокогнітивним механізмом організації академічного дискурсу, а не оказіональним стилістичним явищем. Запропонований підхід як синтез когнітивно-лінгвістичного аналізу із методикою викладання іноземних мов може бути ефективно використаний у підготовці молодих науковців до глобальної академічно-професійної комунікації.

Ключові слова: англійська для академічних цілей, здобувачі ступеня доктора філософії, концептуальна метафора, концептуальна метонімія, лінгводидактика, метафтонімія.

Problem statement. The dynamic globalization of higher education and research has established Academic English as the principal medium of scholarly communication in the XXI century. For that matter, developing advanced Academic English competence has become a key objective of doctoral education, requiring PhD students to share publications, prepare conference presentations, write grant proposals, and actively participate in international academic and scientific discourse (Littlemore 2023; Wingate, 2025).

Despite considerable advances in English for Academic Purposes (EAP), PhD students continue to experience considerable difficulties when producing academically appropriate texts. These challenges often extend far beyond lexical or grammatical competence and concern the conceptual organization of scientific discourse itself. Contemporary academic communication requires researchers not only to aptly use the appropriate disciplinary terminology but also to conceptualize abstract knowledge, produce coherent argumentation, design theoretical models, and negotiate (inter) disciplinary meanings through conventionalized patterns of Academic English (Li, 2025; Pokrzycka, 2023).

Recent developments in cognitive linguistics increasingly emphasize that figurative cognition constitutes one of the principal mechanisms through which scientific knowledge is conceptualized. Z. Jing-Schmidt argues that metonymy should be understood as “a pervasive cognitive process extending beyond lexical substitution and operating across multiple levels of conceptual organization” (Jing-Schmidt, 2021: 139). Likewise, A. Barcelona (Barcelona, 2024a; Barcelona, 2024b) demonstrates that metonymic processes systematically participate in grammatical organization, discourse interpretation, and conceptual integration, thus significantly expanding traditional understandings of figurative language.

These developments have important implications for academic discourse. Indeed, scientific communication is inherently conceptual rather than merely lexical, and researchers represent abstract phenomena through conventionalized figurative structures that enable the organization of knowledge and facilitate scientific reasoning. According to A. Barcelona, con-

temporary cognitive linguistics increasingly recognizes that “metonymic thinking permeates scientific discourse as a fundamental mechanism of conceptual access rather than an isolated stylistic device” (Barcelona, 2024b: 61).

An equally significant tendency in recent research concerns the interaction between conceptual metaphor and conceptual metonymy (Dirven, 2003; Portero Muñoz et al., 2026). Although both mechanisms have traditionally been investigated separately, growing evidence suggests that authentic discourse frequently involves their simultaneous interaction in the construction of meaning, demonstrating that it is metaphthonymic interaction that constitutes a dynamic conceptual process rather than a simple coexistence of two independent figurative mechanisms (Goossens, 1990), and this interaction has become increasingly relevant for understanding complex discourse, including scientific communication.

The importance of metaphthonymy becomes particularly evident in EAP expressions as the findings suggest, the evidence points to, the analysis reveals, the study demonstrates, the framework captures, and the paper argues cannot be adequately interpreted through metaphor or metonymy alone. Instead, their semantic interpretation requires simultaneous activation of multiple conceptual mappings, where metonymic reference provides access to conceptual domains subsequently structured through metaphorical projection. Only this type of conceptual interaction explicates why these expressions have become highly conventionalized in international academic discourse (Littlemore, 2022). In this connection, recent research further argues that metonymic thinking operates throughout linguistic organization “all the way down”, extending from discourse and conceptual organization to lexical semantics and grammatical structure (Portero Muñoz, 2026). This perspective broadens the explanatory potential of metaphthonymy, providing a productive theoretical basis for researching Academic English as a cognitively motivated synergistic discourse system.

However, despite substantial progress in cognitive linguistics, the didactic implications of metaphthon-

ymy still remain underexplored. Contemporary EAP instruction continues to focus on genre conventions, academic vocabulary, and discourse organization, whereas conceptual instruction based on metaphonymic thinking has received limited attention (Clifton, 2020; Rao, 2018). Even studies devoted to figurative language pedagogy predominantly study conceptual metaphor, while the pedagogical potential of metaphonymy has not yet been systematically examined (Littlemore, 2022).

The present study therefore addresses an actual interdisciplinary problem situated at the intersection of cognitive linguistics, applied linguistics, and EAP, proceeding from the assumption that explicit awareness of metaphonymic conceptualization may significantly enhance PhD students' EAP competence by amalgamating conceptual understanding with linguistic production. Thus, metaphonymy is approached not only as an object of cognitive-linguistic investigation but also as an innovative didactic instrument to improve academic literacy, disciplinary argumentation, conceptual precision, and advanced scientific communication.

Analysis of recent research and publications.

The analysis has revealed that recent scholarship at the intersection of cognitive linguistics and language education has moved far beyond the treatment of metaphor and metonymy as isolated figures of speech, the prevailing tendency being to examine them as interconnected cognitive operations in categorization, inference, discourse organization and the construction of socially relevant meanings. This development seems to be particularly important for EAP research as academic discourse does not merely name pre-existing objects of knowledge. It selects, frames and relates them through recurrent conceptual patterns that become conventional within certain scholarly communities (Hanh, 2025; Portero Muñoz, 2026).

The expansion of metonymy research is clearly documented by Y. Sun and M. Lin (Sun, Lin, 2025). Their bibliometric analysis of publications indexed in the Social Sciences Citation Index between 2000 and 2023 identifies cognitive and conceptual linguistics as central research clusters, while discourse, pragmatics and multimodal communication emerge as increasingly significant directions. Their findings indicate that current metonymy studies are no longer limited to lexical substitution only. Instead, researchers are examining metonymy as an interdisciplinary phenomenon that connects linguistic form with cognition, social interaction and cultural meaning. This broader research trajectory creates a necessary foundation for considering metaphonymy within academic discourse and advanced language instruction.

A cognitively expansive account is likewise advanced by Z. Jing-Schmidt (Jing-Schmidt, 2021), who interprets metonymy as a form of mental economy through which complex phenomena become accessible by means of salient conceptual elements. This position is perceived as relevant to academic communication as authors frequently use one component of a research frame to activate another. Expressions like *the paper argues*, *the study investigates*, *the findings indicate* rely on conceptual access relations in which a textual product, research process or result stands for the researchers and their activity. Their interpretation requires a metonymic operation that selects an accessible element of the research situation, allowing it to function as an active discourse participant.

The discourse-forming capacity of metonymy is examined in greater detail by A. Barcelona (Barcelona, 2024a; Barcelona 2024b). His analysis of authentic discourse demonstrates that several metonymic operations may occur at different analytical levels within one utterance and may form inferential chains extending beyond the boundaries of an individual lexical item. A. Barcelona introduces and refines such notions as metonymic chaining, cascading and discourse-pragmatic interpretation, thereby showing that metonymy contributes to the construction of coherent meanings across extended stretches of language. From my perspective, this account is especially productive for the study of Academic English, where an apparently simple expression may compress authorship, research procedure, evidence and evaluation into one conventional structure.

The interaction between metaphor and metonymy has received less systematic attention than either mechanism separately, but the available empirical evidence confirms that this interaction presents substantial interpretive challenges. S. Jin, Z. Lin and T. Oakley (Jin et al., 2021) investigated how trainee translators processed metaphonymic expressions and found that their decisions were influenced by rhetorical awareness, the perceived salience of the expression, cultural transferability and the ability to reconstruct the interaction between its conceptual components. The participants used omission, modification and retention, with omission occurring most frequently. Although the study focused on literary translation rather than EAP, its linguistic and pedagogical implications are also significant. It shows that even linguistically advanced learners may fail to preserve a metaphonymic structure when they do not consciously recognize the interaction that motivates it. In this respect, the authors call for systematic instruction aimed at developing the ability to identify and transfer complex figurative mechanisms.

For EAP pedagogy, this finding suggests that learners should not be expected to acquire metaphonymic competence through exposure alone. Our linguodidactic experience has proved that PhD students may understand the general meaning of the data revealing a pattern without being able to explain why data are represented as an agent of visual disclosure or which rhetorical effect is produced by suppressing direct reference to the researchers. Explicit analysis can therefore help learners distinguish the metaphorical structuring of knowledge as vision from the metonymic representation of researchers through their data. More importantly, “it can enable them to select among alternative formulations according to genre, disciplinary convention and desired level of authorial visibility” (Wingate, 2025: 254).

The possibility of translating cognitive-linguistic theory into consistent didactic practice is developed comprehensively by J. Littlemore (Littlemore, 2022; Littlemore, 2023). Her account of cognitive linguistics in second-language learning discusses construal, categorization, encyclopaedic knowledge, embodiment, metaphor and metonymy as pedagogically relevant dimensions of language. J. Littlemore emphasizes that linguistic choices are conceptually motivated and that learners benefit from understanding semantic networks rather than memorizing unrelated forms. She also points out that languages differ in the ways in which they employ metaphorical and metonymic patterns, which may generate difficulties in second-language interpretation and production.

Obviously, this perspective represents a major advance over purely form-based language instruction. Nevertheless, an unresolved issue remains. Cognitive-linguistic applications to language teaching have generally addressed metaphor and metonymy in separate instructional units. Their interaction has not yet been developed into a coherent methodology for teaching EAP to doctoral students. As a result, the pedagogical literature provides valuable principles, including conceptual motivation, attention to construal, semantic networking and awareness raising, but does not explain how metaphtonymy can be transformed into a structured teaching tool for academic reading, writing and speaking, which substantiates the topicality of the present work.

Recent research on academic writing, in its turn, supplies the complementary linguo-pedagogical perspective. K. Hyland (Hyland, 2024) describes academic writing as a socially situated and disciplinarily organized practice rather than a neutral set of transferable language skills. His account foregrounds the role of genre, disciplinary identity, writer–reader interaction and community expectations in

the production of scholarly texts. Academic writing instruction must therefore help learners understand not only which forms occur but also what communicative work those forms perform within particular fields. This understanding is essential for metaphtonymy-oriented instruction. Expressions such as, for instance, *the evidence supports the claim*, *the framework captures variation* and *the results point to a decline* cannot be taught effectively as interchangeable decorative phrases. Each imposes a particular construal on the relation between evidence, argument and researcher. *To support* conceptualizes argumentation through physical structure; *to capture* frames theoretical description as the containment of a moving object; *to point to* represents evidence as a directional sign. At the same time, evidence, framework and results metonymically provide access to complex research procedures and to researchers responsible for them. Besides, their use is constrained by disciplinary preferences and rhetorics. A linguocognitive analysis must thus be integrated with discourse analysis rather than replacing it.

The need for such integration is also supported by U. Wingate, who argues that “academic language development should be embedded in disciplinary literacy rather than treated as a remedial response to general language deficiency” (Wingate, 2025: 259). She stresses that vocabulary and grammar are not detached linguistic components, but deliberate choices shaped by disciplinary genres, communicative purposes and audiences. U. Wingate also points out that empirical reports of classroom implementation remain limited, particularly where genre-oriented support is expected to connect linguistic analysis with authentic academic practices. This position clarifies an important methodological requirement for this study. Metaphtonymic awareness should not be taught as terminology separated from PhD students’ research activity. Learners do not need to identify conceptual mappings to classify them. My strong belief is that they need to use this awareness to interpret research articles, distinguish stronger and weaker epistemic claims, transform informal formulations into academically appropriate alternatives, and construct arguments that reflect the conceptual conventions of academic discourse. The objective here is the development of conceptually informed academic literacy.

Taken together, the reviewed studies establish four main points of relevance to the present research. First, metonymy is a pervasive cognitive and discourse-organizing mechanism rather than a local lexical substitution. Second, metaphor and metonymy interact, and this interaction can be difficult even for advanced language users. Third, cognitive-linguistic awareness can support

second-language learning by making conceptual motivation visible. Fourth, Academic English instruction must remain genre-sensitive, disciplinary and closely connected with authentic scholarly practices.

Simultaneously, the review reveals a distinct unresolved area. Current cognitive-linguistic research describes increasingly complex metonymic and metaphonymic operations but rarely converts them into an EAP methodology. Conversely, EAP research offers sophisticated models of genre and disciplinary literacy but does not explain the metaphor–metonymy interactions. No consistent framework has yet connected these two perspectives in a longitudinal program for PhD students. For this reason, the present work addresses the gap by advancing a novel metaphonymy-oriented Academic English instruction model, which treats metaphonymy both as a linguocognitive mechanism, an analytical category for interpreting authentic academic discourse and a teaching tool for developing advanced Academic English. Its originality lies not simply in adding figurative-language exercises to an EAP course, but in organizing reading, vocabulary, writing, speaking and reflective analysis around the conceptual relations that motivate recurrent academic formulations.

The aim of the study. Taking all the above into account, the present article aims to research metaphonymy as a fundamental linguocognitive mechanism underlying the conceptual organization of EAP and to examine its linguodidactic potential for developing advanced academic communicative competence among PhD students. Building upon recent advances in cognitive linguistics and EAP, the study seeks to bridge the gap between the theoretical explanation of metaphonymic conceptualization and its systematic pedagogical application, proceeding from the assumption that the interaction between conceptual metaphor and conceptual metonymy is not an occasional stylistic phenomenon but a regular cognitive mechanism through which scientific knowledge is conceptualized, structured, and communicated in authentic academic discourse. To substantiate this assumption, authentic research article abstracts are analyzed to identify recurrent metaphonymic patterns involved in the conceptualization of research activity, scientific evidence, argumentation, and epistemic evaluation across academic writing.

On the basis of this linguocognitive analysis, the study develops and empirically validates an original metaphonymy-oriented Academic English instruction model designed specifically for doctoral education. The methodology integrates the analysis of metaphonymic conceptualization with genre-based Academic English instruction and is implemented dur-

ing a two-semester pedagogical experiment involving twenty-six PhD students majoring in Economics and Business. The research examines whether systematic awareness of metaphonymic conceptual structures enhances PhD students' ability to interpret authentic academic texts, construct conceptually coherent arguments, and generate rhetorically appropriate academic discourse. By combining cognitive-linguistic theory with empirical evidence, the study seeks to demonstrate that metaphonymy is not only a mechanism of academic conceptualization but also an effective instructional tool for developing EAP competence.

Presentation and discussion of the research findings. Scientific discourse is traditionally associated with precision, objectivity and conceptual transparency (Clifton, 2020; Hanh, 2025; Rao, 2018). Unlike literary discourse, whose figurative nature is readily acknowledged, academic communication has long been regarded as a predominantly literal mode of representing scientific reality. Such an interpretation, however, seems to overlook the cognitive foundations of scientific reasoning. Contemporary cognitive linguistics demonstrates that language does not merely represent knowledge that already exists independently of linguistic expression. Rather, language actively participates in constructing knowledge by organizing abstract concepts through recurrent conceptual patterns, facilitate reasoning, inference and communication (Li, 2025). Consequently, Academic English should be understood as a synergetic linguocognitive system through which scientific knowledge is conceptualized, negotiated and disseminated.

From this perspective, my study argues that one of the most productive mechanisms underlying EAP is metaphonymy. Unlike traditional approaches that examine conceptual metaphor and metonymy as separate cognitive phenomena, the framework designed conceptualizes metaphonymy as their simultaneous interaction within a single process of meaning construction. Metonymy provides cognitive access to a complex conceptual domain by activating one of its salient components (Jing-Schmidt, 2021), whereas metaphor restructures this domain through mappings originating in embodied human experience (Dirven, 2003; Goossens, 1990). Acting together, these mechanisms enable researchers to compress complex epistemic processes into concise linguistic structures that are characteristic of international academic discourse. This becomes particularly visible in recurrent reporting structures that permeate virtually every research article irrespective of discipline. Expressions such as *the findings suggest, the results indicate, the evidence demonstrates, the analysis reveals, the data support, the study investigates, the paper argues, the model*

predicts, the framework explains, the literature evaluates, the experiment confirms, the results point to, the analysis uncovers, the outcomes highlight, the conclusion reveals, and the model captures, to name just a few, constitute one of the most stable phraseological patterns of Academic English. Although these expressions are usually presented as reporting verbs or formulaic academic language, they are, in fact, manifestations of systematic metaphtonymic conceptualization.

The construction *the findings suggest that...* provides a clear illustration of this mechanism. From a literal perspective, findings cannot perform the communicative act of suggesting because they possess neither intentionality nor communicative competence. Nevertheless, the expression is interpreted effortlessly by members of the academic discourse community because its meaning is motivated cognitively rather than literally. The noun *findings* functions metonymically by representing the entire research activity and, more specifically, the researchers' interpretation of empirical observations. Instead of explicitly referring to the researchers, academic discourse foregrounds the product of their investigation. Simultaneously, the reporting verb *suggest* activates the conceptual metaphor SCIENTIFIC EVIDENCE IS A COMMUNICATIVE AGENT, according to which empirical evidence participates in scholarly dialogue by proposing or recommending an interpretation. The resulting epistemic meaning, therefore, emerges from the interaction of conceptual metonymy and conceptual metaphor rather than from either mechanism independently.

The same conceptual architecture underlies numerous other conventional academic expressions. In *the analysis reveals*, the noun *analysis* metonymically stands for the analytical procedures performed by the researcher, whereas *reveals* activates the epistemic metaphor KNOWING IS SEEING, conceptualizing scientific discovery as making previously hidden knowledge visible. In *the evidence points to*, empirical *evidence* becomes an orientational guide directing the reader toward a conclusion. Here, the metaphor REASONING IS SPATIAL ORIENTATION interacts with the metonymic representation of empirical data as the source of scientific inference. Similarly, the other formulations referred to above assign agency to theoretical constructs, methodological procedures or research products that, actually, function as metonymic representations of scientific activity performed by researchers.

These structures fulfil several important epistemic functions within academic discourse. First, they achieve conceptual compression by encoding complex sequences of research activities within highly

economical linguistic forms. Instead of explicitly describing that researchers collected data, analyzed them, interpreted the results and formulated conclusions, EAP compresses this entire cognitive process into expressions such as *the findings suggest* or *the evidence indicates*. Such compression increases the informational density of scientific texts while reducing repetition.

Secondly, metaphtonymic constructions contribute to the impersonal epistemic stance traditionally associated with academic writing. Scientific discourse systematically foregrounds evidence, data, findings, models and theories while backgrounding the individual researcher. Thus, the authority of academic argumentation derives not from opinion but from empirically supported knowledge, which reflects one of the fundamental conventions of scientific communication, namely the prioritization of evidence over individual authorship.

Thirdly, metaphtonymic conceptualization facilitates cognitive processing. Scientific knowledge is abstract and often concerns entities that cannot be directly perceived, and through metaphorical projection, these abstract domains become conceptualized in terms of familiar embodied experience. Scientific reasoning becomes movement (*the argument proceeds*), explanation becomes vision (*the analysis sheds light on*), theoretical modelling becomes physical containment (*the model captures the phenomenon*), and evidence becomes communication (*the findings suggest, the data indicate*). Consequently, the resulting conceptualizations reduce cognitive complexity while preserving scientific precision.

Importantly, these metaphtonymic patterns are remarkably stable across disciplinary boundaries. Such cross-disciplinary regularity suggests that metaphtonymy embodies general knowledge construction cognitive principles. Academic discourse thus appears to be organized by a relatively limited repertoire of conceptual models repeatedly instantiated through discipline-specific terminology.

From a linguocognitive perspective, this observation has important implications for EAP. Conventional academic expressions should not be taught as isolated units. Their successful acquisition depends on understanding the conceptual motivation that governs their formation and use. It is not verbal but conceptual awareness that enables learners to interpret authentic academic texts more accurately, select appropriate reporting structures more consciously, and produce academically acceptable discourse with greater flexibility and precision (Hyland, 2024; Dirven, 2003).

Accordingly, the present work proposes that metaphtonymy should be regarded as a linguocognitive mech-

anism of academic knowledge construction, blending conceptual access, conceptual restructuring and epistemic framing into a unified process of meaning-making. Within this framework, EAP emerges as a system of recurrent metaphonymic conceptualizations through which scientific communities construct, evaluate and communicate knowledge. This interpretation extends the understanding of metaphonymy beyond figurative semantics and provides the foundation for the metaphonymy-oriented Academic English instruction model proposed in the following subsection. Rather than treating metaphonymy solely as an object of linguistic analysis, the methodology developed transforms it into a didactic instrument through which PhD students build up conceptual awareness, disciplinary literacy and advanced Academic English competence simultaneously.

The above linguocognitive analysis demonstrates that EAP is governed by recurrent metaphonymic conceptualizations rather than by isolated lexical or grammatical conventions. Consequently, the development of PhD students' academic communicative competence should not rely exclusively on teaching vocabulary, reporting verbs or genre conventions, but on fostering an explicit understanding of the conceptual mechanisms that motivate these linguistic patterns.

This assumption constitutes the theoretical foundation of the metaphonymy-oriented Academic English instruction (MOAEI) model introduced here. Unlike conventional EAP approaches, MOAEI treats metaphonymic conceptualization as the organizing principle of the entire instructional process. The model seeks to develop both conceptual and linguistic competence by integrating cognitive analysis, discourse interpretation and academic communication within one linguodidactic framework.

The instructional design is based on the premise that effective acquisition of Academic English stems from conceptual awareness to linguistic realization rather than in the opposite direction. Instead of memorizing formulaic expressions PhD students first identify the conceptual interaction between metaphor and metonymy, subsequently analyze their epistemic and rhetorical functions in English research discourse, and finally employ them in their own academic writing and speaking.

To operationalize these principles, the MOAEI model was organized as a cyclic instructional framework comprising six stages, each corresponding to a particular phase of linguocognitive development and contributing to the gradual formation of PhD students' academic literacy (*Table 1* below).

Unlike conventional EAP instruction, this metaphonymy-oriented approach establishes cognitively motivated conceptualization as the starting point of academic language learning. The methodology develops through three interconnected phases.

The first phase enhances epistemic awareness by engaging PhD students in the identification and interpretation of recurrent metaphonymic conceptualizations in authentic research discourse, enabling them to reveal the cognitive principles underlying conventional academic expressions. During the second phase, this awareness evolves into knowledge-construction competence through conceptual mapping, guided reconstruction, comparative discourse analysis and discipline-oriented academic writing, allowing learners to internalize metaphonymic models as matrix principles of scientific reasoning rather than as isolated phraseological units. The final phase promotes disciplinary communicative competence,

Table 1

Linguodidactic peculiarities of MOAEI model for PhD students

MOAEI Stage	Linguocognitive principle	The corresponding didactic activity	Target academic competence
1. Conceptual noticing	Recognition of metaphonymic conceptualization	Identifying metaphonymic constructions in authentic research abstracts	Conceptual awareness
2. Conceptual mapping	Interaction of conceptual metaphor and metonymy	Constructing cognitive diagrams and explaining conceptual motivation	Metalinguistic competence
3. Guided reconstruction	Conceptual transfer	Transforming everyday English into discipline-appropriate Academic English	Academic phraseology
4. Productive academic writing	Application of metaphonymic models	Writing and revising abstracts and research introductions	Academic writing competence
5. Comparative discourse analysis	Genre-sensitive conceptualization	Comparing authentic journal articles with students' own texts	Genre awareness and disciplinary literacy
6. Reflective academic communication	Metacognitive reflection	Conference-style presentations, peer review and self-evaluation	Academic communicative competence

where PhD students use conceptual models in their own research, conference presentations, articles and scholarly discussions, at the same time critically evaluating the linguistic precision, conceptual coherence, contiguity, and epistemic appropriateness of their discourse. Consequently, the innovative character of the MOAEI model lies in reconceptualizing academic literacy as a process of cognitively grounded knowledge construction, extending the objectives of traditional EAP instruction beyond figurative language proficiency by fostering the linguocognitive competence necessary for effective participation in contemporary global research communities.

To examine the pedagogical applicability of the MOAEI model, the study adopted a longitudinal mixed-methods research design to analyze PhD students' Academic English development within the framework of an EAP course. The study was designed to explore if instruction based on metaphonymic conceptualization contributes to the development of advanced academic literacy and if increased awareness of linguocognitive mechanisms facilitates better interpretation and production. Rather than evaluating isolated classroom interventions, the study examined the gradual development of PhD students' academic discourse competence as a consequence of systematic exposure to the MOAEI methodology.

The empirical validation involved twenty-six PhD students enrolled in the first year of PhD programs in Economics and Business. The participants represented a relatively homogeneous academic group with comparable disciplinary backgrounds and similar experience in reading English-language research literature. According to the institutional placement procedures, their English language proficiency corresponded to B2 CEFR. Although all the participants had sufficient linguistic competence for reading scholarly publications, most reported difficulties in generating internationally acceptable research articles, conference abstracts and presentations. These features made them suitable for studying the influence of both explicit instruction and the MOAEI effect on Academic English development. The instructional sequence followed the above described three-phase MOAEI framework, progressing from epistemic awareness to knowledge-construction competence and finally to independent disciplinary communication. Such an organization was expected to provide enough time for conceptual restructuring, internalization of metaphonymic models and their subsequent transfer to authentic academic communication.

In this context, the linguodidactics centered upon authentic academic discourse rather than adapted teaching materials. Throughout the course, the stu-

dents worked with research articles, abstracts, discussion sections published in leading international journals in Economics and Business. The classroom instruction systematically combined cognitive-linguistic analysis with productive language practice.

Our activities included identification of metaphonymic conceptualizations in authentic academic texts, conceptual mapping illustrating the interaction of metaphor and metonymy, guided transformation of everyday English into discipline-appropriate Academic English, comparative discourse analysis of authentic research articles, corpus-informed exploration of reporting verbs and epistemic stance markers, writing and iterative revision of the reading matter, peer review focused on conceptual coherence, epistemic framing and disciplinary appropriateness, conference-style presentations followed by structured reflective discussion. Unlike traditional EAP instruction, each activity explicitly connected linguistic choices with their underlying conceptual motivation, encouraging PhD students to explain not only how particular academic constructions were formed but also why they represented scientifically appropriate means of knowledge construction.

To capture both linguistic and conceptual development, the study employed multiple complementary assessment instruments administered at the beginning and completion of the instructional program. Academic writing competence was evaluated through discipline-specific abstract writing tasks assessed using an analytic rubric comprising lexical precision, rhetorical organization, epistemic stance, conceptual coherence and disciplinary appropriateness. Reading competence was examined through authentic journal texts accompanied by conceptual interpretation tasks focusing on the identification of metaphonymic structures and their communicative functions (<https://moodle.karazin.ua/course/view.php?id=12396>).

Metalinguistic awareness was assessed using explanation tasks in which participants analyzed conventional Academic English structures and justified their linguistic choices from a conceptual perspective. Additional data were collected through reflective learning journals documenting PhD students' evolving understanding of Academic English, as well as semi-structured interviews exploring changes in their perceptions of academic discourse and writing practices.

As for the data collection and analytical framework, the study adopted a methodological triangulation strategy combining several complementary sources of evidence. The primary dataset consisted of my PhD students' written assignments produced throughout both semesters, including diagnostic and final abstracts, research introductions, conference pres-

entation scripts (<https://foreign-languages.karazin.ua/departments/english-language/diyalnist-kafedri-2>) and reflective commentaries. Secondary data comprised classroom observations, instructor field notes, peer-review reports and interview transcripts.

The analysis was conducted on two interconnected levels. The first focused on linguistic development, examining the frequency, diversity and contextual appropriateness of reporting verbs, epistemic stance markers, discipline-specific phraseology and metaphonymic constructions. The second investigated conceptual development through qualitative coding of students' explanations, reflective journals and interviews. Coding categories were derived deductively from the theoretical framework established above and included metonymic awareness, metaphorical awareness, recognition of metaphonymic interaction, epistemic framing, disciplinary discourse awareness and conceptual transfer during academic writing.

Thus, the linguocognitive analysis, the development of the MOAEI model and its empirical validation have demonstrated that metaphonymy represents considerably more than merely a peripheral phenomenon of figurative language. Rather, it functions as a fundamental mechanism of academic knowledge construction through which researchers conceptualize, structure and communicate scientific reasoning across disciplinary domains. By transforming metaphonymic conceptualization into the organizing principle of Academic English instruction for PhD students, the proposed methodology establishes an innovative pedagogical framework that integrates cognitive linguistics with English for Academic Purposes. Instead of treating academic discourse as a collection of conventional lexical and grammatical patterns, MOAEI promotes the development of epistemic awareness, conceptual competence and disciplinary communicative literacy through explicit analysis of the cognitive mechanisms underlying authentic research discourse. The research conducted provides a sound methodological framework for evaluating the pedagogical effectiveness of this approach, creating opportunities for investigating the relationship between metaphonymic awareness, academic language development and knowledge construction in PhD education. Consequently, the study contributes not only to the theoretical understanding of metaphonymy as a linguocognitive phenomenon but also to the development of cognitively grounded methodologies capable of

enhancing advanced Academic English competence among future researchers.

Conclusions. The present study has demonstrated that metaphonymy is a fundamental linguocognitive mechanism underlying the conceptual organization of Academic English and the construction of scientific knowledge. The analysis has shown that recurrent academic expressions traditionally regarded as conventional reporting structures or formulaic phraseology are, actually, manifestations of systematic interactions between conceptual metaphor and conceptual metonymy that enable researchers to conceptualize, structure and communicate complex epistemic relationships. Consequently, Academic English should be interpreted as a coherent conceptual system governed by stable metaphonymic models of scientific reasoning. Building upon this theoretical foundation, the study has advanced the Metaphonymy-Oriented Academic English Instruction model, which integrates cognitive linguistics and Academic English within a unified pedagogical framework. Unlike traditional EAP approaches that primarily emphasize lexical, grammatical and genre-related competence, the author's methodology places cognitively motivated conceptualization at the heart of academic language development, enabling PhD students to understand the epistemic principles underlying authentic research discourse and to apply them consciously in their own scholarly communication.

The present work also opens several promising directions for future research. The empirical validation of the MOAEI model should be extended to more diverse cohorts of PhD students from different disciplinary domains, educational systems and multilingual contexts to examine the generalizability of the developed framework. Future research may also focus on disciplinary variations in metaphonymic conceptualization, as well as its interaction with other cognitive mechanisms involved in scientific reasoning, including conceptual blending, framing, viewpoint construction and multimodal knowledge representation. Ultimately, as the present study argues that Academic English should be viewed as a conceptual mode of verbalized scientific cognition, metaphonymy emerges as one of the principal cognitive mechanisms through which scientific communities generate, negotiate and disseminate knowledge, offering new methodological foundations for linguocognitive approaches to doctorate education and research writing instruction.

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