

THE STUDY OF CONCEPTUAL METAPHORS IN ESAP L2 WRITING: RANGE AND VARIABILITY

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Abstract

The article presents the study of the influence of professional competence of EFL learners on their academic writing. The task was approached through analyzing learners' competence in specific knowledge domains - knowledge of terms and specific concepts, represented as conceptual metaphors. Conceptual metaphor models were analyzed in the English written texts produced by Russian students with different competences in economics – at both non-professional and professional levels of academic discourse (NPAD and PAD respectively). Metaphor Identification Procedure VU University Amsterdam (MIPVU) was applied to metaphor identification, and alternative metaphor and preferential conceptualization analysis was performed to compare the scope of source and the range of target in NPAD and PAD. Findings highlight the areas of commonality as well as divergence in terms of students' professional competence represented in conceptual metaphors in L2 writing. The main differences in the scope of the source analysis are quantitative rather than qualitative. The range of target comparison between NPAD and PAD indicates a significantly larger range of targets for the professional level students, a lower level of metaphorization for the non-professional level, and inclusive strategies across the two levels. Practical recommendations suggest an improved research methodology for studying metaphor production in EAP and ESP as well as a deeper understanding of ESP content and its structure.

Keywords: metaphor, cognitive linguistics, conceptual metaphor models, academic discourse, professional discourse, English for specific purposes, English for academic purposes, L2 writing, Economics, metaphoric competence

1. Introduction

This paper focuses on studying the influence of professional competence of EFL learners on their academic writing. The paper is structured as follows. Firstly, it provides the definition of academic discourse as a language for specific/professional purpose; secondly, it overviews metaphoric competence studies in regard to ESP through conceptual metaphor analysis, and then it analyzes cognitive metaphor models with alternative conceptualization (how target concepts are construed in multiple ways, the scope of source domains) and preferential conceptualization (gradients in alternative conceptualization, the range of target concepts) in ESAP texts written by students with different professional competences.

The study of languages for academic purposes in relation to learners' competence in specific professional domains has lately been the focus of discourse studies (Myers, 2003: 266; Suomela-Salmi and Dervin, 2009: 1-4; Everaert, Lentz and De Mulder, 2010: 3). Academic discourse is defined as a variety of verbalized human actions, whether they involve "writing articles, books, abstracts, etc. but also discussing orally, presenting our research, etc." (Suomela-Salmi and Dervin, 2009: 2). Linguists define academic discourse as a *language for a specific purpose*, "that of transferring knowledge, be it of linguistic, pedagogic or disciplinary nature [...] Academic discourse is understood as acts of communication and/or interaction, written or spoken, mediated or not, which take place within the Academia and around it (as is the case of popularization)" (Suomela-Salmi and Dervin 2009: 5). This definition is in accord with professional discourse that "includes written texts produced by professionals and intended for other professionals with the same or different expertise, for semi-professionals, i.e. learners, or for non-professionals, i.e. lay people. It also means talk involving at least one professional" (Gunnarsson, 2009: 5). As a result, the degree of professionalization in academic discourse depends on the professional competence of speakers. Ultimately, literature overview provides a general framework for studying levels of learners' competence in specific knowledge domains.

Yet, theoretical works do not provide a clear explanation of how learners' competence in specific knowledge domains, i.e. their level of professional competence, can be investigated in English as a foreign language learning process. Attempts in investigation of linguistic and conceptual challenges faced by ESAP learners (Katiya, Mtonjeni and Sefalane-Nkohla, 2015; Tarnopolsky and Vysselko, 2014) link the stages of professional competence development and the number of years of study in tertiary education, with a non-professional competence stage – in the first two years, and a professional competence stage – in the subsequent years. As Tarnopolsky and Vysselko (2014) found, second-year L2 learners are non-professionally competent in their specific knowledge domains since they are "still insufficiently trained in the fields of their majors to

start studying majoring disciplines in the target language – thus superimposing language difficulties on content difficulties” (p. 47).

One of the ways to approach the problem of professional competence in L2 learning is the analysis of conceptual metaphor as a means of understanding and explaining language, which has now been well established (Bailey, 2003; Berendt, 2008; Charteris-Black and Ennis, 2001). Linked to it is “metaphoric competence” (Hashemian and Nezhad, 2013; Littlemore and Low, 2006), which has been acclaimed as indispensable in language use. Researchers argue that metaphoric competence has an important role to play in *all* areas of communicative competence (Bailey, 2003; Littlemore and Low, 2006), giving a range of examples of language use and learner difficulty. It is revealed that metaphoric competence contributes to grammatical competence, textual competence, illocutionary competence, sociolinguistic competence, and strategic competence at all stages of learning. There are attempts to consider the status of conceptual metaphor in current practice in English Language Teaching (ELT) and make the case for explicit inclusion of metaphor in language teaching programs aimed at increasing proficiency in L2 (Alekseeva, 1998; Azuma, 2004; Bailey, 2003; Littlemore, Krennmayr, Turner and Turner, 2014; Mishlanova and Utkina, 2014). However, the studies that relate the relevance of conceptual understanding of specific knowledge to ESP learning are few.

Previous studies have identified the following issues arising in metaphoric competence research in L2 writing. Most of the investigations address teaching/learning metaphor for ESP vocabulary, very much in line with findings in conceptual metaphor analysis (Rodriguez, 2003; Charteris-Black, 2000; Shirazi and Nezhad, 2013). Kathpalia and Carmel (2011) concentrate on metaphorical competence in ESL writing. They suggest that unidiomaticity of second language writers’ metaphors is linked with undeveloped fluency in the target language. Littlemore, Krennmayr, Turner and Turner (2014) research metaphoric competence in relation to language competency levels and make a number of conclusions: 1) different class metaphors, metaphor functions and metaphor clusters vary from level to level, 2) the proportion of metaphors used by learners increases with the proficiency level, 3) the rates of errors involving metaphors are higher than general rates of errors across all levels of the CEFR, 4) the rates of errors involving metaphor and L1 transfer involving metaphors mirror general rates and L1 influence. However, these previous studies did not address ESP L2 writing. Moreover, to date, there are no studies found on how the expansion of specific knowledge (not the language competency) influences L2 writing.

We propose to fill this gap of ESP L2 writing development with conceptual metaphor analysis in the English written texts produced by Russian students. We assume that students’ metaphor models reflect their professional competence in economics (depending on the number of courses/years of studying economics) and, thereby, different levels of professionalization in the ESP educational process.

Following Alekseeva and Mishlanova's (2002) premises of discourse as knowledge processing and verbalization, that results in creating special knowledge, there proves to be interdependence between conceptualization of special knowledge in discourse and metaphORIZATION of discourse. In cognitive linguistics, metaphor is considered to be a universal mental mechanism that engages previously acquired knowledge (e.g. Alekseeva and Mishlanova, 2002; Budaev, 2010; Cassirer, 1990; Chudinov, 2005; Davidson, 1990; Fauconnier, 1997; Gibbs and Steen, 1999; Kubriakova, 1999; Lakoff and Johnson, 1980). Therefore, to investigate different levels of specific knowledge in academic discourse we find it useful to apply conceptual metaphor model analysis as a method of analyzing cognitive processes in discourse. This method enables a comparison of the results obtained through studying different types of academic discourse, namely, professional academic discourse (PAD) and non-professional academic discourse (NPAD).

We apply alternative metaphor and preferential conceptualization analysis, proposed by Kövecses (2005: 70), where the scope of source and the range of target in NPAD and PAD are compared. We do not expect to find a significant qualitative difference between NPAD and PAD in the source domain, as this is not a cross-cultural sample, but we do assume the two levels of professionalization in the scope of source to quantitatively differ. With this hypothesis in mind, we believe students would demonstrate inclusive rather than exclusive strategies in PAD (at a higher level of professional competence) in the scope of the source in metaphor use. As regards preferential conceptualization (Kövecses, 2005: 72) when students at the two levels may have the same and/or different conceptual metaphors for a given target domain, a gradient between the two cases of alternative conceptualization becomes a critical question for the current research.

2. Analysis

2.1. Subjects

The present study is a pilot one, presenting the analysis of twenty two essays written by 22 Russian learners of English as a foreign language in the National Research University Higher School of Economics – Perm, Russia: 11 essays at each of the two levels of professional competence (non-professional and professional ones).

Participants of this study were 1st/2nd and 3rd/4th year university students (17 women, 5 men). The age of participants ranged from 18 to 22 years old with a mean of 19.40 (*S.D.* = 0.57). All the students majored in Economics. HSE students take two classes (3 hours) of English per week during the first two years of their studies, and one class of English per week during one semester in the two subsequent years. Participants in this study took the IELTS at the end of

their second year, which is required for all HSE students. Their IELTS scores ranged from 5 to 8 with a mean of 6.12 (*S.D.* = 0.74).

2.2. Material

The students were assigned to write a discursive essay presenting their personal opinion concerning the topics of economics and finance, with a 250–300 word limit (Example 1).

Example 1. Writing task.

You should spend about 40 minutes on this task. Write about the following topic:

Some businessmen claim that cash flow plays a significant role in their business activity. Others feel that it can hardly be a reliable indicator for any business to avoid risks.

What is your opinion?

Give reasons for your answer and include any relevant examples from your own knowledge and experience. Write at least 250 words.

It should be noted that according to HSE curriculum (Educational program, 2015) in the first and second years of studies students majoring in Economics are introduced to the basics rather than the specialist economic knowledge in L1. In the third year they are introduced to an ESP course with the aim to develop proficiency in the foreign language learning and discipline-specific learning, when an equal emphasis is made on the elements of both language and content. Thus, the ESP curriculum is most closely linked to or based on the curricula of students' major disciplines, such as Accounting, Banking, Business Valuation, Financial Management, etc. The ESP course ensures linguistic and specific knowledge acquisition and development of English skills for professional communication, which means L2 learners can reach a professional competence level. Therefore, at the non-professional level of academic discourse students (NPAD) are not yet prepared to produce texts on economic issues whereas they are expected to be capable of both oral and written professional communication in economics at the professional level (PAD).

2.3. Procedures

In order to identify the commonality and divergence of academic discourse types in terms of professional competence the learners' academic texts were divided into two subsets, one representing the non-professional level of academic discourse students (NPAD, 1st/2nd years of study) and the other representing the professional level of academic discourse students (PAD, 3rd/4th years of study). Within the discourse analysis applying both quantitative and qualitative

approaches there are some stages to investigate metaphors in discourse. At the initial stage of analysis, in order to establish the contextual meaning we apply a practical and systematic method for identifying metaphorically used words in discourse, after Pragglejaz Group (2007). The metaphor identification procedure in discourse includes four steps: 1) Read the entire text-discourse to establish a general understanding of the meaning; 2) Determine the lexical units in the text-discourse; 3) (a) For each lexical unit in the text, establish its meaning in context; that is, how it applies to an entity, relation, or attribute in the situation evoked by the text (contextual meaning). Take into account what comes before and after the lexical unit; (b) For each lexical unit, determine if it has a more basic contemporary meaning in other contexts than the one in the given context. For our purposes, basic meanings tend to be: more concrete (what they evoke is easier to imagine, see, hear, feel, smell or taste), related to bodily action, more precise (as opposed to vague), historically older. Basic meanings are not necessarily the most frequent meanings of the lexical unit; (c) If the lexical unit has a more basic current-contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning, but can be understood in comparison with it. 4) If yes, mark the lexical unit as metaphorical (Pragglejaz Group, 2007).

Firstly, we explore metaphorical units in the context, which is a minimum part of the text where the two concepts are represented based on comparison. In agreement with the view that metaphor is a unit comprised by one or several sentences, a word combination, a word, or a morpheme (Mishlanova and Utkina, 2008), this investigation studies 406 metaphorical units – economic terms and specific knowledge concepts in economics – selected from the sample.

At the second stage we identify specific features of metaphor in NPAD and PAD in economics by applying a five-step analytical technique that addresses the way that the two conceptual structures (Source Domain and Target Domain) correspond (Steen, 2009) and by using the method of metaphoric modeling based on taxonomic categorization, adopted in most previous studies (Musolff, 2006; Putnam, 1975; Leezenberg, 2001; Alekseeva and Mishlanova, 2002). This method means organizing source domains into specific categories “that provide focal points for conceptualizing the target topic” (Musolff, 2006: 23). These categories include knowledge based primarily on the source concept, from which the respective target concepts are derived (Musolff, 2006: 27). To capture the structural organization of source concepts, we propose to use the category of “taxonomic organisation” which presents a hierarchical list of categories. The category presents the subdomain level of conceptual configurations in metaphoric mappings (Musolff, 2006; Leezenberg, 2001). For the purpose of the present study we use the term of target which is structured as frame, or the mental representation of target or structure of concept (specialized knowledge) and that of source or the other part of the metaphor which is represented as the metaphor model. The metaphor model consists of two basic domains: HUMAN and NATURE. The first of these domains includes two metaphor models:

Human Being and *Human Activity*. The second, NATURE, is made up of two metaphor models: *Animate Nature* and *Inanimate Nature*.

The methods applied allow us to compare metaphoric representations in NPAD and PAD in terms of scope of source and range of target and give uniform treatment to different metaphoric representations. Consequently, different types of discourse can be contrasted and compared. As metaphoric modeling is based on natural categorization, linguistic data is interpreted with the help of dictionary entries given in Longman Dictionary of Contemporary English (2015) to identify basic and contextual meanings of lexical units.

The following example illustrates the proposed procedure. One of the metaphor models that can represent the specific knowledge in economics is Cash as *Human Activity*. In the following example **“But on the other hand cash flows that are built incorrectly can lead to a liquidity crisis”** the word ‘*build*’ is not used in its basic meaning, which pertains to human activity, but displays another meaning in this context. This contextual meaning is analyzed by setting up contrast or similarity relation with the basic meaning. After the metaphor-related word has been identified, the propositional analysis is carried out, which involves the transformation of linguistic expressions into conceptual structures in the form of a series of propositions, which are technical representations of source domain and target domain. In this example, the source domain is ‘*build*’, that is ‘to make something, especially a building or something large’ (Longman Dictionary of Contemporary English, 2015). Based on the analogy, there is a cross-domain mapping: the target domain concept Cash is related to the source domain concept *Human Activity*. Thus, cash like any other object may be produced or made at a particular time and in the case of not meeting the production requirements it might cause some problems, even a crisis.

At the third and final stage a comparative analysis of scope of source and range of target in NPAD and PAD in economics is performed which is complemented with a discussion of similarities and divergence of academic discourse types.

3. Results

3.1. Scope of source

Following the procedures, metaphor related words in NPAD and PAD in economics were identified and categorized according to their basic meaning. Both sub-samples of NPAD and PAD provide the range of conceptual metaphors within source domains. Table 1 presents a comparison of metaphor models in NPAD and PAD in economics.

Table 1. Scope of source in NPAD and PAD

Source domain	NPAD	PAD
NATURE <i>Inanimate Nature</i>	<i>flow, movement, liquid, liquidity, holes, track, strength</i>	<i>flow, movement, liquid, liquidity, stream, clean, track, future short/ long-term period, speed</i>
NATURE <i>Animate Nature</i>		<i>growth, grow</i>
HUMAN <i>Human Being</i>	<i>go out, go, immovable, health, incentive, handle, allow, help, worry</i>	<i>go, stay, run, in, come into, out, return, stop, position, health vital, stimulate, analyzing, analyze, analysis, determine, define, illusion, precise, informative, represent, disclose, calculating, calculate, evaluate, evaluating, understand, identify, forecast, consider, indicate estimate, estimation, give the necessary information, statement, concept, lifeblood, allow, let, help, ability, carefully</i>
HUMAN <i>Human Activity</i>	<i>paint an accurate picture, play a role, comfortable, safety, dangerous, force, work, use, activity, build overcome difficulties</i>	<i>tool, competitive, value, profitable, give a clear picture, play a role, active player, show, show the whole picture, exponent, spiral, key, tie up function, wide, impede, load, struggle, use, using, activity, active provide a lot of information, earn, take, make, making, create, measure measuring, perform, performance, operating, operation, lead, success, model</i>

It is evident that some metaphors are readily linked to the more universal source domains both in NPAD and PAD (*Inanimate Nature, Human Activity*). Others reflect divergent professional experiences in the aspects of *Animate Nature* and *Human Being* concepts.

Results of the analysis show some universality in metaphorical conceptualization. The non-professional academic discourse (NPAD) and the professional academic discourse (NPAD) in economics share metaphor related words that can be grouped in the domain of NATURE and associated with cash and money. What is especially important is that this source domain is quantitatively dominant in NPAD. In-depth analysis of the source (sub-)domains indicates that the metaphor model of *Inanimate Nature* with taxonomic categories of *space and landscape, natural phenomena* tend to overlap in both sub-samples. In other words, both NPAD and PAD use a particular set of metaphors, such as *flow, movement, liquid, liquidity, track* for conceptualizing cash and money. However, the NATURE sourcing area of subject metaphor in

NPAD (1) may correspond to predicate metaphor in PAD (2) [Note: The examples given in the article are quoted exactly as they stand in the original].

- (1) Thus a *flow* of money is one of the important condition of economy existence (Candidate, NPAD)
- (2) Cash comes into the business mostly through sales of goods or service and *flow out* to pay for costs such as raw materials, transport, labour, and power (Candidate, PAD)

Another crucial issue arising in the analysis of the NATURE source domain is that, apart from the same target domains of Cash and Money in both types of discourse, there is some difference in the range of target domains in NPAD and PAD. In particular, in NPAD *space and landscape* metaphors are used to conceptualize Cash, Money, Earnings, Costs, Accounts, Income whereas in PAD these metaphors are employed to map the respective source domains on different target concepts of Cash, Money, Capital, Revenue, Expense, Funds, Business, Finance. In the examples below the metaphor of *movement* is the metaphoric representation of the target domain of Earnings and Costs in NPAD (3) opposed to that of the target domain of Revenue and Expense in PAD (4):

- (3) Another argument for cash flow is that companies work for getting profit which is the difference between earnings flows and costs flows, therefore it is important to know about *movement* of these flows (Candidate, NPAD)
- (4) Cash flow is an revenue or expense *movement*, usually measured during some period of time (Candidate, PAD)

Another sourcing area in PAD only is the metaphor model of *Animate Nature*. At the professional level students use the *plant* metaphor to relate to the target domains of Company and Business, i.e they regard company and business as a plant that “exists and develops in a natural way” (Longman Dictionary of Contemporary English). Furthermore, the basic metaphor model of *Animate Nature* is represented differently in subject metaphor (5) and predicate metaphor (6).

- (5) Whereas the *growtrh* of the business born more profits and liabilities, so the cash flow becomes rises faster (Candidate, PAD)
- (6) In other words, how company leads it business, what is it chances to stay in the market and *grow* (Candidate, PAD)

Let us now take a further source domain of HUMAN that turns out to be common in both types of academic discourse. The quantitative analysis reveals that HUMAN is a dominant sourcing area in the professional academic discourse with the most representative metaphor model of *Human Activity* followed by the other metaphor model of *Human Being* within the HUMAN source domain. Although there is a difference in the number of metaphors in this domain in NPAD and PAD, both types of discourse show some common features. It should be noted that the overlapping source domain of HUMAN mostly refers to the metaphor model of *Human Being*. In particular, the target domains of Cash and Money in both types of discourse are conceptualized as a subject who can come

or go in and out, who is able to stimulate or provide some incentives or allows somebody to do something. The way that the target domains of Cash and Money are conceptualized in the non-professional (7, 9) and professional academic discourse (8, 10) is illustrated below.

- (7) To begin with, company's accounts have a lot of holes, where huge amounts of money *go out* from the company (Candidate, NPAD)
- (8) Cash *comes into* the business mostly through sales of goods or service and flow out to pay for costs such as raw materials, transport, labour, and power (Candidate, PAD)
- (9) Cash *allows* people to buy or to see products even if there is no electronic equipment, or there are some problems with it (Candidate, NPAD)
- (10) Cash reflects any business made in the business and so *allows* to understand financial position of firm in whole or, for example, in its industry (Candidate, PAD)

To sum up, the source domain of HUMAN reveals commonality in both types of discourse. However, NPAD and PAD differ in the exclusiveness or inclusiveness of *Human Activity* metaphor model into the HUMAN domain. In particular, in NPAD metaphors of *Human Activity* conceptualize Cash, Money, Company, Investment whereas in PAD they represent Cash, Assets, Company, Firm, Market, Business, Finance, Debt, Profit.

3.2. Range of target

Results of analysis show that there were some similarities as well as differences in the range of source domains that both types of academic discourse discussed in this article had available for the conceptualization of the target domains in economics and finance. It should be stressed that there are more differences in the range of target in non-professional academic discourse than that of professional academic discourse than similarities (Table 2).

Table 2. Range of target in NPAD and PAD

Targets in NPAD	Targets in PAD	Comparison of target in NPAD and PAD
	Business	PAD only
Company	Company	Different
	Enterprise	PAD only
	Firm	PAD only
Finance	Market	PAD only
	Finance	Different
	Accounting	PAD only
Accounts		NPAD only
	Capital	PAD only
	Assets	PAD only

Targets in NPAD	Targets in PAD	Comparison of target in NPAD and PAD
	Funds	PAD only
Investment	Investment	Different
Cash	Cash	Similar
Money	Money	Different
Earnings		NPAD only
Costs		NPAD only
	Revenue	PAD only
	Expense	PAD only
Income		NPAD only
	Profit	PAD only
	Debt	PAD only
	Bankruptcy	PAD only
	Intangibles	PAD only

Among the most common targets in both types of academic discourse is Cash with no difference in the source domains. Both NPAD and PAD share the source domains of NATURE and HUMAN, including the metaphor models of *Inanimate Nature*, *Human Being* and *Human Activity* for the target domain of Cash. Nonetheless, at the professional level of academic discourse students conceptualize Cash using a wider range of metaphors. For example, ESAP learners in PAD refer to *natural phenomena, space and landscape, vital activity, positions and movements, personal characteristics, painting, theatre, professional activity, inner organs, memory and cognition, politics and war, school subject, housekeeping, and mechanism* to conceptualize the Cash target domain while only the first eight metaphors listed are used by learners in NPAD. The examples below show that Cash can be conceptualized either as a person involved in some cognitive activities (11, 12), or some object referred to a mathematical figure (13), only in PAD.

- (11) Other people believe that cash flow is unimportant to an organization because it can create an *illusion* that your financial statements are clean (Candidate, PAD)
- (12) To sum up, I believe cash flow is of vital importance to a business, because it *gives the necessary information* for its health estimation (Candidate, PAD)
- (13) On the other hand, cash flow is such a complicated *exponent*, which is not easy to calculate (Candidate, PAD)

As shown in Table 2, the targets of Company, Finance, Investment, Money are shared by both types of the academic discourse. Given the targets of Money and Investment, the common pattern in NPAD and PAD is the one in which these concepts are expressed by the metaphors of *personal characteristics* and *space and landscape*. The examples below illustrate how learners in NPAD and PAD use Investment is *help* metaphor for comprehending the concept of Investment (14, 15) and Money is *water* metaphor for the concept of Money (16, 17):

- (14)... because, for example, investments *help* to a business to overcome some difficulties and to improve methods of management, skills of employees, etc (Candidate, NPAD)
- (15) On the one hand cash flow is investments that *let* business develop (Candidate, PAD)
- (16) Moreover, whereas money is the most *liquid* property, cash flow can be used for any financial business (Candidate, NPAD)
- (17) Cash flow is usually defined as the money *stream* into (revenues) and out (expenses) of a certain firm measured for a certain period of time (Candidate, PAD)

However, some differences in the choice of source domains are obvious. To illustrate this, NPAD conceptualizes the targets of Money and Investment through the source domains of professional activity and positions and movements (18, 19), whereas the PAD conceptualization is restricted to mechanism (20).

- (18) If money are involved in the process of production and transaction in business, then money *works* and it is included in cash flow (Candidate, NPAD)
- (19) For example, many people are convinced that the most appropriate form of money is *immovable* property or securities (Candidate, NPAD)
- (20) These cash needs of the firm would not be met should a business have its monies *tied up* in the areas (Candidate, PAD)

The opposite trend is observed in regard to the targets of Company and Finance with a divergent set of source domains in PAD (*Animate Nature* and *Inanimate Nature*) compared to the source domains in NPAD.

There are targets which are specific to each of the two types of the academic discourse. In PAD the target domains of Capital, Revenue, Expense, Funds, Accounting, Enterprise, Firm, Bankruptcy, Intangibles, Assets, Market, Debt, Profit are conceptualized through *natural phenomena, space and landscape, personal characteristics, memory and cognition, politics and war, professional activity, and housekeeping* concepts. The widest range in this group of target domains belongs to Business, which is represented by the following metaphors: *plant, space and landscape, positions and movements, vital activity, politics and war, professional activity, and housekeeping*. On the contrary, non-professional academic discourse is characterized by specific target domains of Accounts, Earnings, Costs and Income related to the metaphors of *space and landscape*.

4. Conclusions

Overall, the analysis highlights the areas of commonality as well as the divergence in the terms of students' professional competence represented in conceptual metaphors in L2 writing.

The scope of the source analysis in conceptual metaphor models predominantly reveals the quantitative difference between the non-professional academic discourse (NPAD) in economics and the professional academic discourse (PAD) in economics in L2 writing. This confirms our initial supposition of low metaphor variation production, based on homogeneous cultural background of the sampled writers. In quantitative terms, metaphor sources persist and naturally increase, even though they may shift their target domains in NPAD and PAD. These findings confirm the intuitive observations from EFL/ESP teaching practice when teachers meet the necessity to teach synonymous variation and parts-of-speech shift function in L2 writing at a higher level.

The range of target comparison between NPAD and PAD clearly indicates a significantly larger range for the professional level students and also the tendency towards *plant* metaphor in relation to Company and Business at non-professional level, which reflects a lower level of metaphORIZATION (Permyakova and Utkina, 2014). In addition, the metaphor model of *Animate Nature* tends to change from the subject metaphor at NPAD to predicate metaphor at PAD.

The results confirm the hypothesis of inclusiveness across the two levels, in particular, with regard to the metaphor model of Human Activity. It means at a higher level of professional education L2 students incorporate a broader scope of sources in their writing. Following this conclusion, it is evident that there are more differences in the range of target in non-professional academic discourse than that of professional academic discourse than similarities. ESAP learners in PAD refer to a vastly higher range of targets to conceptualize specific professional domains than NPAD candidates do.

A limitation of the study was the relatively small sample size. For this reason, the findings cannot be generalized. Other reservations for generalization of the conclusions include mono-culture variation, requirements and the genre of writing as well as a mode of production.

Practical recommendations upon the conclusions may involve a deeper understanding of ESP content and its structure, an improved research methodology for studying metaphoric competence in EAP and ESP, especially writing. Hopefully, with the prospect research the data can be incorporated into strategies for ESAP content introduction and adaptation, content and language integrated learning (CLIL) and English as a Medium of Instruction (EMI) materials development, ESP complexity assessment (for instance, measuring cognitive load) and general teaching resources development.

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