METADISCUSSION USE IN ARGUMENTATIVE ESSAYS WRITTEN BY RUSSIAN STUDENTS AT DIFFERENT LEVELS OF ESAP STUDY OF ECONOMICS

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Abstract
The present study investigates metadiscourse use in argumentative essays written by Russian students at different levels of the ESAP study of economics. Text analysis approach and formal error analysis are applied to the metadiscourse use – its type, frequency, and accuracy. The study specifies the differences in the usage of metadiscourse markers by writers representing nonprofessional and novice ESAP students of economics, which are mainly due to disciplinary practices, the interference from L1 writing conventions in the knowledge domain of economics and instructions provided by ESAP teachers. It also gives the interpretation of formal errors in the most indicative groups of metadiscourse markers. The study has important practical implications for developing EFL students’ metadiscourse competence in the target language academic writing.

Key words
Metadiscourse; academic writing; argumentative essay; formal error analysis; ESAP; economics knowledge domain

1. Introduction
Effective academic communication in writing has always been a challenge for both who teach and learn a foreign language. Academic communication effectiveness in writing is significantly determined by its metadiscursive organization, or “writers’ discourse about their discourse” (Crismore, Markkanen and Steffensen 1993: 39). Metadiscourse is viewed as language that refers to things happening in the text itself (Brandt 1990) to ‘signpost’ movements through the structure of writing (Coffin et al. 2003) and direct readers through reading and evaluating what writers have written about the subject matter (Crismore, Markkanen and Steffensen 1993). Metadiscourse has been a major area of interest not only within various linguistic but also pedagogical research frameworks (e.g., Hyland 2005;
Crismore and Farnsworth 1990; Ifantidou 2005; Intaraprawat and Steffensen 1995), pointing to its role in supporting the writer to express a viewpoint and engage with readers as members of academic community. In the light of English as a Foreign Language (EFL) learning, metadiscourse has been thought of as a key factor in developing pragmatic competence which is defined as “the ability of a user/learner to arrange sentences in sequence so as to produce coherent stretches of language” (Council of Europe 2001: 122) and as a powerful platform for investigating English for Special and Academic Purposes (ESAP) teaching/learning contexts. Despite the importance of metadiscourse in academic writing, there remains a paucity of evidence on the differences in the frequency, distribution and accuracy of metadiscourse use in student writing at different levels of the ESAP study (e.g., in the knowledge domain of economics).

The present study investigates frequency and accuracy of metadiscourse use in the argumentative essays written by Russian students of English in relation to different levels of the ESAP study of economics. This study was undertaken to observe and describe the commonality and divergence of the metadiscourse use so that the research might help increase the pragmatic competence of non-native speakers of English in the target language academic writing. There are additional reasons for investigating the use of metadiscourse in ESAP writing. In the first place, it would provide information on the use of metadiscourse at different professional competence levels in the target language. In addition, the study would allow us to understand the developmental effects of the use of metadiscourse in disciplinary writing in order to make any necessary improvements into ESAP and EMI (English as a Medium of Instruction) content and materials development, and teaching resources development for second language writing instruction.

2. Context for the study

In the changing higher education context, student academic writing continues to be at the centre of teaching and learning in all writing forms. The current significant changes may partly be attributed to social transformations which lead to the curriculum changes, diverse modes of curriculum delivery, contexts for teaching and learning (e.g., Coffin et al. 2003; Abramov, Gruzdev and Terent’ev 2016). Recent reforms of higher education in Russia set up to stimulate higher education research, enhance universities’ academic profile and international research excellence (e.g., Chernyavskaya 2019). To support these aims, Russian universities are following the trend towards internationalization, academic mobility and fostering the academic and educational status of a foreign language. Therefore, of crucial importance in higher education is for students to develop their academic language proficiency defined in the terms of knowledge of academic language and knowledge of specialised subject matter (Krashen and Brown 2007). This is to be able to obtain knowledge about academic literacy and attain proficiency in pragmatics of the language by EFL learners (e.g., Holmes 1982; Crismore, Markkanen and Steffensen 1993; Bruce 2008) and, ultimately, to establish identities.
within the international academic community by producing texts in English in accord with the norms and conventions of their chosen disciplines.

The continuing interest in ESAP teaching programmes is justified by the recognition of the discipline-specific nature of much of academic writing in the university and the usefulness of integrating the teaching of the generic academic writing skills with teaching academic language skills and disciplinary forms of writing. In accord with Lea and Street's writing instruction model (1998), Smirnova (2018) claimed that academic writing is an intrinsic part of social practice and an essential element of academic literacy. Unfortunately, the existing approaches to teaching second language writing do not meet the current demands of students’ foreign language proficiency in writing. The reasons for these are manifold. Some researchers and ESAP courses practitioners agree that EFL writing instructors endeavour to teach illiterate L1 writers how to produce academic texts in English (e.g., Korotkina 2013). Another challenge is that EFL learners are not taught explicitly about metadiscourse and are not provided with comprehensive writing textbooks and handbooks. It can be assumed that predictors of successful L2 writing include, among others, the development of pragmatic competence in the written communication that may facilitate the acquisition and appropriate and effective use of metadiscourse both in the mother tongue and a foreign language (e.g., Holmes 1982; Crismore, Markkanen and Steffensen 1993).

The significance of student writing has increased with demands of students to participate in international academic communication which may take different formats: “Specialists <> specialists; Specialists <> novices, young researchers; Specialists > general public; Specialists > the media” (Suomela-Salmi and Dervin 2009: 5), or in the written communication between professionals and other professionals with the same or different expertise, between professionals and semi-professionals, i.e. learners, or between professionals and non-professionals, i.e. lay people (Gunnarsson 2009: 5). According to Bromme and Jucks (2018), the divergence of the interlocutors in terms of their professional competence levels or knowledge base can give rise to communication problems. Therefore, both experts and laypeople must adapt their contributions to the interlocutor with a fundamentally different knowledge base in order to establish mutual understanding in expert-laypeople communication. Furthermore, experts may differ from novices in relation to the textual and intertextual contexts of written communication and the degree of writers' adherence to conventional discursive patterns (Persky and Robinson 2017). A further challenge that scholars and practitioners pointed to is a more limited linguistic and rhetorical repertoire that non-native writers of English may exploit or is several forms, e.g., certain discourse markers that they may use excessively or incorrectly (Chovanec 2012). Thus, in the ESAP teaching perspective, of particular concern is to provide insights into what extent EFL learners' competence in specific knowledge domains might influence metadiscourse use and how explicit teaching of metadiscourse has to be arranged so that their writing will be conforming to the discourse norms of the international academic community.
3. Research on metadiscourse in academic writing

Studies on metadiscourse in academic contexts have been observable from various perspectives, ranging from cross-cultural to cross-disciplinary research to professional-popular continuum discourse analysis (e.g., Crismore and Farnsworth 1990; Chang 2018). The use of metadiscourse has been the subject of many studies on the second language written communication in academic settings (e.g., Hyland 1999; Moreno 2003; Mauranen 1993; Valero-Garcés 1996; Silver 2003; Zanina 2016; Bunton 1999; Hewings and Hewings 2002; Longo 1994; Schmied 2012; Povolna 2012; Onder and Longo 2014). Although some researchers have extended this kind of research to students’ coursework in writing and composition (e.g., Williams 1981; Vande Kopple 1985), currently the research on student writing remains an extremely limited area of investigation. For example, Ho and Li (2018) analysed the pattern of metadiscourse use in the argumentative essays produced by first-year university students and made a conclusion that writers of low-rated essays compared to those of high-rated ones used a few metadiscourse markers and experienced much difficulty in using metadiscourse in order to construct convincing arguments in their English academic writing. Their research findings were in accord with Intaraprawat and Steffensen’s study (1995) which revealed a greater variety of metadiscourse features in high-rated persuasive essays written by English as a second language (ESL) university students. Both studies acknowledged that skilled writers controlled the strategies for making the organization of the text explicit and, consequently, the content of their texts more considerate and accessible to the reader.

The concept of metadiscourse has sometimes been referred to the terms of metatext, signaling devices, cohesive means, discourse markers, or discourse elements (e.g., Schiffrin 1987; Maschler and Schiffrin 2015; Fraser 1999). These include all kinds of textual resources that are used to signal coherence relations established between fragments of the text which play an important role in text cohesion to help readers read, organise, understand and interpret the information or propositional content of the subject of the text. The linguistic forms of metadiscourse are crucial for establishing “a research discourse ‘connection’ between the writers and their community of practice through disciplinary conventions in terminology, genre, and other research practices” (Schmied 2012). It has been assumed that in academic communication metadiscourse facilitates technical knowledge transfer and interpretation “by creating the linguistic infrastructure for maximally effective communication of ideas” (Ifantidou 2005: 1350). Following the concept of metadiscourse, proposed by Crismore, Markkanen and Steffensen (1993), we defined metadiscourse as an umbrella term that is used “to refer to the linguistic material in texts, whether spoken or written, that does not add anything to the propositional content but that is intended to help the listener or reader organize, interpret, and evaluate the information given” (Crismore, Markkanen and Steffensen 1993: 40).

Most studies in the field of metadiscourse have isolated its particular grammatical or lexical features and focused on certain types of metadiscourse, for example ‘it clauses’ (Hewings and Hewings 2002), the adverbial (Silver 2003),
hedging and its cross-linguistic differences for intercultural academic communication (Zanina 2016), metatextual references (Bunton 1999), causal metatext (Moreno 2003). Many academic writing researchers (e.g., Ädel 2006; Crismore, Markkanen and Steffensen 1993; Hyland 2005) have acknowledged the need for classifying metadiscourse elements based on the certain semantico-pragmatic criteria. Much effort has gone into the taxonomic elaboration of the metadiscourse based on different criteria, which may be interesting at an exploratory level, but broad generalisations may be of little help in fields such as teaching, especially when it comes to the exclusion of metadiscursive phrases which may express the author’s unique style rather than the universality. To overcome these limitations, we would propose Gubareva’s (2011) categorisation of metadiscourse as a foundation for the present research taxonomy. The reasons are manifold. First, this taxonomy used the previously reported taxonomies as point of departure, but introduced some adjustments to carry out cross-cultural (English-Russian) analysis of academic texts in economics. Another reason for choosing this classification of metadiscourse was that this classification could provide a combined qualitative and quantitative approach to the metadiscursive organization of argumentative essays. A further reason was that this taxonomy would allow us to elaborate a textual frame with any propositional content left out and get a comprehensive model of metadiscourse in academic texts.

4. Materials and methods

This study focuses on the quantitative and qualitative comparative analysis of usage of metadiscourse markers by writers representing nonprofessional and novice ESAP students of economics. Our aim was to investigate the influence of discipline specific knowledge (economics) on the use of metadiscourse in argumentative essays. To this end, we analysed types and distribution of metadiscourse markers and errors in metadiscourse markers produced by the ESAP students of economics at a national research university in Russia. Specifically, the following research questions are addressed:

1. In what ways does the use of metadiscourse in ESAP students’ writing vary across discipline specific knowledge levels?
2. To what extent are the ESAP students able to use metadiscourse accurately?

4.1 Participants

The participants of the study were 139 Russian learners of English as a foreign language at the Perm campus of the National Research University – Higher School of Economics (HSE). The dataset included: 1) 77 students in Year 2 attending an EAP course; 2) 62 students in Year 3 attending an ESP course. The criteria we used for selecting the students were age, year in university, and EFL proficiency level (overall foreign language competence level), with the equal level of writing competence. All the participants of this study majored in economics.
Table 1 shows the sample composition by age and language level. IELTS states for International English Language Testing System, an exam that certifies the language level to work, study or migrate to a country where English is a native language. Candidates are graded on a scale 1-9.

Table 1. Age and language level distribution of the sample

<table>
<thead>
<tr>
<th>University course</th>
<th>Number of students</th>
<th>Age</th>
<th>IELTS scores Range</th>
<th>IELTS scores Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAP</td>
<td>77</td>
<td>20-21</td>
<td>4.5-6.0</td>
<td>5.42</td>
</tr>
<tr>
<td>ESP</td>
<td>62</td>
<td>21-22</td>
<td>4.5-6.0</td>
<td>5.44</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>20-22</td>
<td>4.5-6.0</td>
<td>5.43</td>
</tr>
</tbody>
</table>

It should be noted that according to EFL curriculum, an EAP course, which is a language-focused type of provision, was introduced to the learners in their first and second university year. Starting from the third year an ESP course was introduced to students majoring in economics with the aim to develop proficiency in the foreign language learning and discipline-specific learning with the equal emphasis made on both elements of language and content. The ESP course ensured linguistic and subject knowledge acquisition, development of English skills for professional communication, which means L2 learners just started to develop their economic knowledge base. Therefore, the second-year students were not yet prepared to produce texts on economic issues in the target language whereas the third-year students developed a certain level of expertise to engage in both oral and written communication in economics. Hereafter, we would refer second-year university students who attended an EAP course to nonprofessional students and third-year university students who were involved in an ESP study of economics – to novice students, after Gunnarsson (2009), Bromme and Jucks (2018), Persky and Robinson (2017).

4.2 Materials

Two corpora of essays written by 139 Russian learners of English as a foreign language at HSE-Perm were analyzed, corresponding to 77 essays produced by the second-year university students who attended an EAP course and 62 essays produced by the third-year university students who attended an ESP course of economics. The students were assigned to write a discursive essay presenting their personal opinion on academic issues, with 250–300-word limit. When responding to the task, the students were required to write argumentative and evaluative essays with clear, well-structured expositions of complex subjects, with a clear focus on the relevant salient issues, with subsidiary points, reasons and relevant examples, and with the evaluation of different ideas (Council of Europe 2001: 62). The essays analyzed counted 44,283 words, with 23,825 – in the group of nonprofessional students of economics and 20,458 in the group of novice students of economics. Consequently, the samples were considered to be of equal
Comparisons between two groups of essays were made in using metadiscourse markers comprising 1,429 and 1,175 word tokens at the nonprofessional and novice level of the ESAP study respectively.

4.3 Research design

This study set out to determine the frequency and accuracy of metadiscourse use in argumentative essays written by Russian students at different levels of the ESAP study of economics. This study was both quantitative and qualitative in approach and the text analysis was based on comparison and contrast of the selected argumentative essays from the perspective of metadiscourse markers (MDM). To this end, Gubareva’s (2011) categorisation of metadiscourse was adopted as a foundation for the research taxonomy, which evolved the following groups:

1. MDM ordering the information;
2. MDM ordering the material in the text;
3. MDM introducing new or additional information;
4. MDM iterating information;
5. MDM underlining the importance of information;
6. MDM pointing at contrasting with or deviating from the main idea;
7. MDM introducing the examples;
8. MDM pointing at the conclusion;
9. MDM introducing the author’s evaluation of probability, interrelation of the information and the situation;
10. MDM introducing emotive evaluation of the situation;
11. MDM pointing at the source of information;
12. MDM appealing for the background knowledge or the above mentioned facts/material;
13. MDM characterizing the author’s narrative style.

The corpora were searched for metadiscourse elements manually to ensure the validity of the analysis of pragmatic functions of language units. A context-sensitive analysis of each marker was chosen in order to solve the research problem of multifunctionality of metadiscourse categories.

The error analysis was chosen to investigate the accuracy of metadiscourse use. Errors are an inevitable, transient product of the learner’s developing the target competence (Council of Europe 2001: 155) and ESAP learners experience both linguistic and conceptual challenges upon entering into technical discipline (Katiya, Mtonjeni and Sefalane-Nkohla 2015), hence the investigation into an ability to use metadiscourse in ESAP writing accurately is of particular importance. In the tradition of error analysis, formal errors were identified, classified, quantified and explained, basing on the error categorization system developed by Chuang and Nesi (2006). This system includes five categories: omission, overinclusion, misformation, missetection and misordering. We understand an omission error as missing a word or a group of words which would have appeared in a well-formed sentence. Accordingly, overinclusion means a redundant item which would not
have appeared in a well-formed sentence. Misformation refers to a mechanical error while using an incorrect form of a morpheme, and misselection – to the incorrect choice of an item resulting in a more complex hypothetical conclusion (incorrect choice of tense/aspect). And, finally, incorrect placement of an item in a sentence is understood as misordering error (Chuang and Nesi 2006). This method was instrumental in answering the second research question – to what extent the ESAP learners were able to use metadiscourse correctly.

The SPSS version 26 (2019) was used to compute statistical analyses, employing paired t-tests. The missing data were not imputed. In all of the analyses, it was seen that the assumptions of homogeneity of variance were met.

4.4 Procedure

The study was conducted in three stages. At the first stage, the participants were selected based on the criteria of age, year in university, and EFL proficiency level (overall foreign language competence level), with the equal level of writing competence. The selected students were given the writing task three weeks before the end of their corresponding course mentioned above in their second and third year of their university study. Afterwards, their written texts were collected and divided into two corpora, one representing essay writing by nonprofessional students and one representing essay writing by novice students.

At the second stage, we analyzed the samples of metadiscourse markers used by nonprofessional students and novice students to establish how both groups of students used these markers with reference to their functions. First, metadiscourse markers were derived from the two essay samples, recorded and classified according to the predetermined categories by following Gubareva’s (2011) classification. The essays and the contexts containing discourse markers were assessed by the two authors independently. In cases of disagreement, the contexts were re-analyzed so that overall agreement could be reached.

Then, the identified metadiscourse markers were analyzed in terms of their frequency and distribution, and the distribution pattern was compared in both samples.

At the third stage of the research, all groups of MDMs in both samples were investigated for the purpose of revealing the formal errors and analyzing them. Within this analysis formal errors were identified, classified, quantified and interpreted, basing on the error categorization system developed by Chuang and Nesi (2006). The errors were identified and classified by the two authors independently. This was followed by discussing any differences in the analysis and reaching overall agreement.
5. Results

5.1 Frequency and Distribution of Metadiscourse Markers

Initially, the research questioned the extent to which there is a significant difference in the metadiscourse use in essay writing by nonprofessional students and by novice students. To reach the research objective, an independent-samples t-test was carried out. Table 2 includes the mean values, standard deviations and the results of the paired t-test of discourse marker occurrence in nonprofessional and novice writing.

The results presented in Table 2 demonstrated that there was a statistically significant difference between the mean values of marker count in nonprofessional writing ($M = 0.06$, $SD = 0.01$) and in novice writing ($M = 0.05$, $SD = 0.01$), $t (137) = 2.23$, $p < .05$.

Table 3 presents the mean values and standard deviations of discourse marker occurrence by marker category in nonprofessional and novice writing. The classification of metadiscourse markers by Gubareva (2011) was expanded within our analysis by enriching the MDMs representation in each category, and the additional constituents were distinguished (see Appendix). For example, 5MDM category of underlining the importance of information and 9MDM category of introducing the author’s evaluation of probability, interrelation of the information and the situation became the most enlarged categories. Each MDM category has a list of common markers for both levels and those which are divergent and may be found in the essays of students with a different level of discipline specific knowledge.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Nonprofessional writing</th>
<th>Novice writing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1MDM</td>
<td>0.12</td>
<td>0.04</td>
</tr>
<tr>
<td>2MDM</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>3MDM</td>
<td>0.23</td>
<td>0.04</td>
</tr>
<tr>
<td>4MDM</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Visual examination of the means (Table 3) suggests that the most frequently used MDM categories in the essay sample of nonprofessional students were 3MDM (introducing new or additional information) \((M = 0.23, SD = 0.04)\), 6MDM (pointing at contrasting with or deviating from the main idea) \((M = 0.16, SD = 0.04)\) and 9MDM (introducing the author’s evaluation of probability, interrelation of the information and the situation) \((M = 0.16, SD = 0.04)\). In the essay sample of the novice students the leading position belonged to 3MDM \((M = 0.27, SD = 0.04)\), 9MDM \((M = 0.15, SD = 0.03)\) and 6MDM \((M = 0.14, SD = 0.03)\).

Table 4 presents the results of paired t-tests for the occurrence of the most representative discourse markers in nonprofessional and novice writing.

**Table 4.** Paired-samples t-test for the most representative discourse marker occurrence

<table>
<thead>
<tr>
<th>Variables</th>
<th>Nonprofessional writing and Novice writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1MDM</td>
<td>(t = 3.01, p = 0.00)</td>
</tr>
<tr>
<td>3MDM</td>
<td>(t = -5.93, p = 0.00)</td>
</tr>
<tr>
<td>6MDM</td>
<td>(t = 2.92, p = 0.00)</td>
</tr>
<tr>
<td>8MDM</td>
<td>(t = -2.63, p = 0.01)</td>
</tr>
<tr>
<td>9MDM</td>
<td>(t = 2.06, p = 0.04)</td>
</tr>
<tr>
<td>11MDM</td>
<td>(t = 0.45, p = 0.65)</td>
</tr>
</tbody>
</table>

As presented in Table 4, significant differences were noted between the means of 1MDM, 3MDM, 6MDM, 8MDM and 9MDM \((p < .05)\). However, there was no statistically significant difference between the means of 11MDM \((p > .05)\). These results reveal that discipline specific knowledge (economics) exerted some influence on the use of metadiscourse in argumentative essays.
5.2 Accuracy of Metadiscourse Use

To investigate to what extent the ESAP students are able to use metadiscourse accurately, a paired-samples t-test was carried out to compare the mean values of formal error occurrence in the most representative discourse markers in nonprofessional and novice writing. The results obtained with the application of error categorization system by Chuang and Nesi (2006) are given in the tables below (see Tables 5, 6).

Table 5. Paired-samples t-test for formal error occurrence in the most representative discourse markers

<table>
<thead>
<tr>
<th>Variables</th>
<th>Nonprofessional writing</th>
<th>Novice writing</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error count</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1MDM</td>
<td>0.28</td>
<td>0.36</td>
<td>0.22</td>
<td>0.35</td>
</tr>
<tr>
<td>3MDM</td>
<td>0.09</td>
<td>0.16</td>
<td>0.02</td>
<td>0.08</td>
</tr>
<tr>
<td>6MDM</td>
<td>0.26</td>
<td>0.28</td>
<td>0.28</td>
<td>0.31</td>
</tr>
<tr>
<td>8MDM</td>
<td>0.09</td>
<td>0.27</td>
<td>0.29</td>
<td>0.45</td>
</tr>
<tr>
<td>9MDM</td>
<td>0.21</td>
<td>0.26</td>
<td>0.12</td>
<td>0.20</td>
</tr>
<tr>
<td>11MDM</td>
<td>0.16</td>
<td>0.32</td>
<td>0.53</td>
<td>0.43</td>
</tr>
</tbody>
</table>

As shown in Table 5, the results show that there was a statistically significant difference between a) the mean values of error count in 3MDM in nonprofessional writing ($M = 0.09, SD = 0.16$) and in novice writing ($M = 0.02, SD = 0.08$), $t (137) = 2.79, p < .05$; b) the mean values of error count in 8MDM in nonprofessional writing ($M = 0.09, SD = 0.27$) and in novice writing ($M = 0.29, SD = 0.45$), $t (137) = -3.12, p < .05$; c) the mean values of error count in 9MDM in nonprofessional writing ($M = 0.21, SD = 0.26$) and in novice writing ($M = 0.12, SD = 0.20$), $t (137) = 2.19, p < .05$. The results indicate that essay writing by nonprofessional students and essay writing by novice students contained significantly different erroneous metadiscourse markers which introduce new or additional information, point at the conclusion, or introduce the author’s evaluation of probability, interrelation of the information and the situation.

Table 6 presents the mean values and standard deviations of formal error occurrence in nonprofessional and novice writing by linguistic category.
Table 6. Mean values and standard deviations of formal error occurrence in nonprofessional and novice writing by linguistic category

<table>
<thead>
<tr>
<th>Linguistic categories</th>
<th>Conjunction</th>
<th>Determiner</th>
<th>Preposition</th>
<th>Lexical misconception</th>
<th>Misspelling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP M(SD)</td>
<td>N M(SD)</td>
<td>NP M(SD)</td>
<td>N M(SD)</td>
<td>NP M(SD)</td>
</tr>
<tr>
<td>1MDM</td>
<td>0.0 (0.0)</td>
<td>0.0 (0.0)</td>
<td>0.15 (0.28)</td>
<td>0.16 (0.32)</td>
<td>0.05 (0.17)</td>
</tr>
<tr>
<td>3MDM</td>
<td>0.0 (0.0)</td>
<td>0.02 (0.06)</td>
<td>0.01 (0.06)</td>
<td>0.0 (0.0)</td>
<td>0.01 (0.05)</td>
</tr>
<tr>
<td>6MDM</td>
<td>0.15 (0.25)</td>
<td>0.09 (0.17)</td>
<td>0.0 (0.0)</td>
<td>0.0 (0.0)</td>
<td>0.08 (0.18)</td>
</tr>
<tr>
<td>8MDM</td>
<td>0.0 (0.0)</td>
<td>0.30 (0.45)</td>
<td>0.0 (0.0)</td>
<td>0.0 (0.0)</td>
<td>0.09 (0.27)</td>
</tr>
<tr>
<td>9MDM</td>
<td>0.06 (0.16)</td>
<td>0.0 (0.0)</td>
<td>0.0 (0.0)</td>
<td>0.07 (0.19)</td>
<td>0.0 (0.0)</td>
</tr>
<tr>
<td>11MDM</td>
<td>0.0 (0.0)</td>
<td>0.0 (0.0)</td>
<td>0.14 (0.31)</td>
<td>0.09 (0.25)</td>
<td>0.03 (0.15)</td>
</tr>
<tr>
<td>Total</td>
<td>0.22 (0.30)</td>
<td>0.28 (0.31)</td>
<td>0.13 (0.25)</td>
<td>0.17 (0.28)</td>
<td>0.18 (0.26)</td>
</tr>
</tbody>
</table>

As Table 6 indicates, the error categories most frequently produced by nonprofessional writers were misspelling ($M = 0.30$, $SD = 0.33$) and conjunctions ($M = 0.22$, $SD = 0.30$). In the essay sample of the novice students, they were prepositions ($M = 0.31$, $SD = 0.34$) and conjunctions ($M = 0.28$, $SD = 0.31$). Visual examination of the means (Table 6) suggests that there were some remarkable differences in the formal error occurrence in nonprofessional and novice writing by linguistic category. Generally, the mean values of error count for conjunction, determiner and preposition increased, whereas the mean values of error count for lexical misconception and misspelling decreased from the nonprofessional writing level to the novice writing level.

In-depth analysis of errors revealed that conjunction errors concerned predominantly confusing the parts of speech or redundant words. The error in each example is underlined, followed by its correction marked in brackets. For example,

(1) In this case *and [redundant “and”]* people might want to do other activities for example selling drugs or agricultural products illegally (Nonprofessional writer)

(2) All things considered *that [redundant “that”]*, I should say that I agree with the first opinion that everybody should be equal, otherwise there will be no incentives for people to get education, work better and increase their income (Novice writer)
Among determiner errors the leading position belonged to missing definite articles. For example,

(3) The next point because all people should pay taxes, is *fact [missing “the”], that taxes goes to support the army (Nonprofessional writer)
(4) *Second argument [the second] is that such companies should pay the same taxes, as large companies (Novice writer)

Lexical misconception may be illustrated by the following examples:

(5) The first issue *proclaims [is] that large companies have more power to stay in the market (Nonprofessional writer)
(6) *Subsequently [respectively], the more risky the idea, the more profitable the result (Novice writer)

Divergence appeared in preposition category with dominance in the essay sample of the novice students and misspelling category, prevailing in that of the nonprofessional students. The vast majority of preposition errors are using redundant ones. For example,

(7) *Provided that for [redundant “for”] taxes will be constant, first group of people will not mind about taxes, because they are very low to their income, and second group of people will not know how to pay it, because tax is very high to their income (Nonprofessional writer)
(8) Of course, I knew it, but nevertheless I decided to be an economist, even *despite on [redundant “on”] that my both relatives had medical education (Novice writer)

As for misspelling, we mostly found omitting letters or unfamiliarity with the right spelling. For example,

(9) *Rational [rationale] for using this method was unsustainable (Nonprofessional writer)
(10) *Consequently [consequently], their individual performance become more successful, and student will gain more goals in their study of future career (Novice writer)

6. Discussion

The present study was designed to explore the frequency and accuracy of metadiscourse use in argumentative essays written by Russian students at different levels of the ESAP study of economics. In reviewing the literature, very little was found on the question of how ESAP student writers use metadiscourse in terms of frequency and accuracy when they progress to a higher level of economic studies in the contexts of non-English-speaking universities. The results reported here
confirm our initial supposition of variation in metadiscourse use in the essays produced by student writers of different levels of the ESAP study of economics from the nonprofessional to novice level. It is possible that the research findings may provide more important insights into the thresholds for pragmatic competence development and help resolve theoretical and practical issues of ESAP learning/teaching in non-English-speaking academic settings.

The results of this study indicate that the students of different levels of the ESAP study of economics used all categories of metadiscourse markers, which provides partial evidence for the universality of metadiscourse. Statistically, there was a significant difference between the occurrence of discourse markers in nonprofessional writing and in novice writing in general. In particular, significant differences were noted in the occurrence of the following groups of discourse markers: ordering the information, introducing new or additional information, pointing at contrasting with or deviating from the main idea, pointing at the conclusion, introducing the author’s evaluation of probability, interrelation of the information and the situation.

It is also shown that the metadiscourse in the texts written by nonprofessional and novice students manifests an interesting feature: as long as students progressed to a higher level of economic knowledge base through the ESAP studies, they tended to use more metadiscourse markers which introduce new or additional information, but fewer metadiscourse markers which order the information, point at contrasting with or deviating from the main idea, point at the conclusion, and introduce the author’s evaluation of probability, interrelation of the information and the situation. These findings support the work of other studies in this area linking L2 learners’ competence levels in their specific knowledge domains and instructional approaches to teaching major disciplines in the target language. For example, it is suggested that students’ acquisition of a specialised disciplinary literacy, in particular the use of metadiscourse, is greatly influenced by the university textbooks which provide limited rhetorical guidance and appropriate forms of written argument (Hyland 1999). Another possible interpretation of the results is that metadiscourse is linked to disciplinary practices. In particular, economic texts would use heavily linguistic devices of reformulation and exemplification (Hyland 2007). Furthermore, the results obtained stand as evidence of the interference from L1 writing conventions in the knowledge domain of economics. The previous research proved that the metadiscourse in English-language coursebooks on economics explicitly express the communicative relationships between the writer and the reader whereas the metadiscourse in Russian-language coursebooks on economics refers to the linguistic elements used by the writer to organize the textual material (e.g., Gubareva 2011).

We complemented our findings with formal errors analysis by applying error categorization system, after Chuang and Nesi (2006). We found a statistically significant difference in the occurrence of errors in 3MDM, 8MDM, 9MDM in nonprofessional writing and in novice writing. These results can be explained by the fact that an attempt to use a more variable list of constituents within the MDM group leads to more formal error occurrence. Another reason of divergence in formal error occurrence is complexity and representation of MDM group. For
example, 9MDM introducing the author’s evaluation of probability, interrelation of the information and the situation appears to have caused difficulties in application at both levels, given prominence to the errors at the nonprofessional one because the writers express their over personalized opinion.

Both quantitative and qualitative analysis revealed both positive and negative changes in the formal error occurrence in nonprofessional and novice writing by linguistic category. In terms of positive change of accuracy by discourse marker from the nonprofessional writing level to the novice writing level, 6MDM demonstrated changes in the means of error categories of conjunction and lexical misconception; 1MDM – in lexical misconception; 3MDM and 8MDM – in misspelling; 9MDM – in conjunction and misspelling. However, the following metadiscourse markers showed a negative change of accuracy: 6MDM and 9MDM – in the means of error categories of preposition; 8MDM – in conjunction; 11MDM – in determiner, preposition and lexical misconception.

The observed increase in the formal error occurrence at the novice writing level may be explained as follows. The linguistic category of conjunction was broader represented in the novice students’ writing, perhaps, due to the fact that at this level students tried to arrange their ideas in more complex grammar structures. The linguistic category of determiner demonstrated a higher occurrence of formal errors in the novice students’ writing. It is obvious that the novice students tried to order information in a more variable way compared to the nonprofessionals, as well as referred to extensive sources of information which led to less careful use of determiners. A much higher percentage of formal errors in the linguistic category of preposition in 6MDM category in the novice students’ writing can be explained by novices’ frequent attempts to contrast and deviate from the main idea. The nonprofessionals, on the contrary, avoided this approach or revealed lexical misconception. Misspelling appeared at both levels being a distinguishing feature of the nonprofessionals as it was present in all MDM categories.

The qualitative analysis of the linguistic error categories revealed that all the students used prepositions similarly to they would do it in Russian and experienced much difficulty in using determiners correctly for their absence in the mother tongue. The lexical misconception at the nonprofessional level is characterized by using words of an absolutely different meaning in the context given, while at the novice one very often – by confusing the exact meaning. The great number of errors in spelling in both types of writing is omitting letters. The sensibly higher occurrence of this error type in student writing at the nonprofessional level may be explained by insufficient knowledge of spelling conventions or unfamiliarity with the right spelling that leads to an attempt to write as they hear. Another common cause is time pressure when nonprofessionals are forced to write an essay during the restricted time period. This may well coincide with the general observation that foreign-language learners might experience some difficulty in the use of some metadiscourse categories because of the possible differences in the normal use of metadiscourse in the two languages (Crismore, Markkanen and Steffensen 1993: 41). Another possible explanation is that either positive or negative L1 transfer may continue into advanced stages of L2 learning (Han 2008). These findings reflect those of Moreno (1998), Yang (2010), and Zheng and Park (2013) who pointed to
the fact that errors may not always be caused by the influence of L1; they could also reflect some learning strategies, developmental effects on student writing and limitations to students’ ability to practice their English due to the L2-L2 environment (non-native speakers of English at non-English-speaking universities), even though students might have learnt English for a long time.

These findings provide further support for the hypothesis that it is advisable to adopt the approach of explicit teaching and learning of metadiscourse use which might ensure positive transfer from the mother tongue to the target language (Crismore, Markkanen and Steffensen 1993). It is highly recommended that the textbooks on academic writing should be based on comprehensive descriptions of the particular aspect of discourse as it behaves in the genre intended to be learned by EAP learners (Moreno 2003). It is also suggested that the early instruction and guidance in the styles and genres of academic writing in English should help undergraduate students to acquire skills that are proving increasingly indispensable in their academic career and in the modern academic community (Chovanec 2012). Practical implications of the current research suggest that ESAP learning/teaching in non-English-speaking academic settings, in particular, writing support should focus on the overt teaching of the metadiscourse with the priority given to the teaching of 1MDM, 3MDM, 6MDM, 8MDM and 9MDM groups. ESAP teachers should also provide students with supplementary materials that exemplify both effective and ineffective use of metadiscourse in texts written by a variety of writers in many contexts. A final point made is both ESAP teachers and learners should have knowledge and awareness of how errors could be treated so that the number of errors could be reduced.

7. Conclusion

This study represents attempts towards understanding the relationship between EFL learners’ competence in specific knowledge domains and their use of metadiscourse in student writing through comparing the metadiscourse used by Russian students at different levels of the ESAP study of economics. The investigation has illustrated that metadiscourse is equally important in student writing at both nonprofessional and novice level, where writers create the linguistic infrastructure to organize, interpret and evaluate the economic concepts and ideas. The analysis has shown both commonality and divergence in the occurrence of discourse markers in the argumentative essays written by the nonprofessional and novice ESAP students of economics. The nonprofessional ESAP students demonstrate a more frequent use and a wider range of metadiscourse markers compared to novice ESAP students of economics; however, the novice students apply some of the selected metadiscourse markers incorrectly. Thus, when ESAP students progress to a higher level of the ESAP studies of economics, they tend to show either higher or lower pragmatic competence in their writing, which might be caused by L1 transfer of the disciplinary writing conventions and developmental effects on student writing in ESAP courses.
The results obtained and attention to detail in error observation may be of great value in the ESAP/EFL teaching in any field (not only economics) when students are taught metadiscourse as a very important part of language use and in further education when they are taught academic writing for publishing purposes. The current study only considered the within-culture variation, one discipline – economics and one genre of writing – argumentative essay. In order to overcome these restrictions, the comparative study of metadiscourse markers in first and target language along with the investigation into disciplinary differences are considered as perspective research topics.

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## Appendix

### Table. Additional constituents to Gubareva’s MDMs classification

<table>
<thead>
<tr>
<th>MDM category</th>
<th>Common for both nonprofessional level and novice level</th>
<th>Divergent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nonprofessional level</td>
</tr>
<tr>
<td>1 MDM ordering the information</td>
<td>one issue/advantage/fact, another issue/advantage, the next point/issue, the last argument, the last but not the least, to start with, thirdly, one more issue/argument, the third, the last one, the first, the second, after all, so on, fourthly</td>
<td>at first, at second</td>
</tr>
<tr>
<td>2 MDM ordering the material in the text</td>
<td>which was shown above, as I have just said, as it was written earlier, as it was said earlier, to come back to the point raised at the beginning, the following arguments, let us consider each of them in turn</td>
<td>I repeat</td>
</tr>
<tr>
<td>3 MDM introducing new or additional information (addition, cause, effect)</td>
<td>a) addition: above all, again, by the way, to add, I want to add; consider, considering, as far ... as concerned b) cause: because, since, as, for this reason, due to the fact that, the reason is, one more reason why c) effect: therefore, thus, so, consequently, as a result, lead to, that’s why, thereby, then, subsequently, results in, hence</td>
<td>a) addition: constituents b) cause: a further argument c) effect: considering the following</td>
</tr>
<tr>
<td>4 MDM iterating information</td>
<td>that is, in other words, this/that/it means, it/that implies, all these mean, it doesn’t mean, that/it is, which means/ suggests</td>
<td>I mean</td>
</tr>
<tr>
<td>5 MDM underlining the importance of information</td>
<td>only, even, especially, of course, I want to say, I would say, I should say, really, I want to compare, we can suppose, we can see, let’s compare, I would like to say, it is very clear, it is necessary to say, it is obvious, we understand, I’d like to say, quite, it is really important, it is worth remembering, it would be interesting to consider, I’d like to consider, I want to consider, I can say, it must be considered, it should be said, I can suggest, it is possible to add, it is extremely important, at least, just, I would like to add, it’s important to emphasize, it could be mentioned, it is essential to mention, absolutely, it’s not easy to try to obtain, I’m ready to give some factors or reasons, we should not forget about that, it’s clear, I’d like to highlight the importance</td>
<td>I try to obtain, I’m ready to give some factors or reasons, we should not forget about that, it’s clear, I’d like to highlight the importance</td>
</tr>
<tr>
<td>MDM category</td>
<td>Common for both nonprofessional level and novice level</td>
<td>Divergent</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>say, let me define, let’s move, it’s hard to imagine, what’s more interesting, it is important to remember, it is necessary to understand, to speak about</td>
<td>Nonprofessional level</td>
</tr>
<tr>
<td>6 MDM pointing at contrasting with or deviating from the main idea</td>
<td>however, although, while, whereas, but, nevertheless, on the one hand, on the other hand, despite the fact that, because of, on the contrary, at the same time, otherwise, though, on the other side, vice versa, conversely, rather than, nevertheless</td>
<td>But others argue, another issue</td>
</tr>
<tr>
<td>7 MDM introducing the examples</td>
<td>examples which show, a good example of, there is an example of, an, the illustration, to show an example, by this example, there is a good example of, including, there are many examples of, there are a lot of examples, for instance</td>
<td>statistics show</td>
</tr>
<tr>
<td>8 MDM pointing at the conclusion</td>
<td>all in all, taking everything into account/consideration, in conclusion, to sum, to summarize, summarizing preceding arguments, I find it difficult to reach a conclusion</td>
<td>At the end</td>
</tr>
<tr>
<td>9 MDM introducing the author’s evaluation of probability, interrelation of the information and the situation</td>
<td>likely, less likely, more likely, unlikely, might, may, seem, perhaps, no doubt, there are no doubts, undoubtedly, to some degree, definitely, may be, certainly, can’t, as for my opinion, as for me, regarding, , what about me, to my mind, to my way of thinking, in my view, in my view, from my point of view, I am convinced that, it seems to me that, as far as I am concerned, I (do ) believe, I guess, I consider, I suppose, I think, I am absolutely sure, I agree (with this view), I hope, I cannot agree, it is undeniable, I have my viewpoint, I totally disagree with this point of view</td>
<td>I absolutely think differently, no one can say exactly, what about me, I guess, I should admit, if I am not mistaken, I absolutely feel, let me express what I think of it, as far as I am able to judge</td>
</tr>
<tr>
<td>10 MDM introducing emotive evaluation of the situation</td>
<td>unfortunately, awful, fortunately,</td>
<td>It is preferable, it is hard to imagine, it is dishonest, it is unfair</td>
</tr>
<tr>
<td>11 MDM pointing at the source of information</td>
<td>with reference to, according to, with respect/ regard/ reference, regarding, concerning, some/many people say/believe/claim, a lot of people think,</td>
<td>Supporters of, those who mention</td>
</tr>
<tr>
<td>MDM category</td>
<td>Common for both nonprofessional level and novice level</td>
<td>Divergent</td>
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<td>--------------</td>
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<tr>
<td></td>
<td>someone believes, those who oppose... think, those who support... think/consider, some people consider, some countries consider, these people believe, most people feel, people say that, there is...point of view</td>
<td>Nonprofessional level</td>
</tr>
<tr>
<td>12 MDM appealing for the background knowledge or the above mentioned facts/material</td>
<td>in fact, actually, it is argued, as we know, as it is known, it is generally agreed, it is said that, in fact, as all know, it is considered, you know that, it is commonly known, it is obvious, there is an opinion that</td>
<td>The conventional wisdom is, it is well known fact,</td>
</tr>
<tr>
<td>13 MDM characterizing the author's narrative style</td>
<td>to tell the truth, well, and...and...and, also...also...also</td>
<td>–</td>
</tr>
</tbody>
</table>

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