





# Technology-Enhanced Instruction into Extensive L2 Academic Reading for Specific Purposes Within the ESP/ESAP Course for Postgraduate Language Pedagogy Students

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**Abstract.** Teaching and learning to read domain specific texts and research articles within the course of academic English for specific/academic purposes (ESAP) is often underestimated and outsourced to students' independent study with minimal instructors' intervention. Students often demonstrate inability to gain knowledge about basic conventions established in the international academic communities such as research article (RA) structure, style, rules of citation and referencing etc. while reading RAs. The study undertaken by researchers of Saint Petersburg State University (SPbSU) and Peter the Great Saint Petersburg Polytechnic University (SPbPU) showed that a specially designed extensive academic reading module (EARM) can help solve this problem. In the first part, the paper describes the underlying rationale for the development of the EARM, its syllabus, and its experimental approbation in the spring term of 2021–22 academic year with two academic groups of postgraduate language pedagogy students taking their master program at SPbSU and SPbPU. The second part of the paper focuses on the analysis of the data collected, namely two questionnaires completed by the experiment participants, their reports about extensive reading of RAs selected, and analysis of some structural and linguistic features of 36 RAs selected by the students which was conducted by the researchers. The role of technology in teaching the EARM is stressed. The positive attitude of students to the EARM and improvement of some their micro academic skills, e.g. pre-reading self-questioning, during the half-term experiment allow the authors to recommend including teaching academic reading module in ESAP course for postgraduate students on a regular basis. Further research steps are outlined.

**Keywords:** ESAP course · Extensive academic reading module · EARM · Structure of research articles · Title of research articles · Reference lists · Self-questioning · Padlet · VersaText

## 1 Introduction

Among all English teaching areas English for specific purposes is most tightly linked to the world of economics and business due to its targeting the language needed in the

occupational or professional spheres. Rapid changes provoked predominantly by digital transformation of all spheres of people's life highlight the need for change in educational sphere [1, 2], which is recognized by a number of international and national goals-setting and standardizing documents (e.g., UNESCO Education 2030 Framework for Action, A New Skills Agenda for Europe, and Russian professional standards) [3, 4].

The dominant role of technologies in these changes determines the need for more complex skills in the more complex world. To be in line with these global changes ESP /ESAP whole course and /or its modules' design should be updated on a regular basis. On the other hand there is a clear trend in the Russian system of HE towards increase in the amount of independent master students studies in University electronic environment [5, 6] which has become especially important during the COVID- 19 pandemics [7].

Extensive reading (traditionally referred to as 'home reading' in the Russian specialist literature) usually falls into the category of students' independent work during the term while ESP instructors just control the results of this work. However, instruction on how to read academically specific texts and research articles within the course of English for specific academic purposes (ESAP) is often underestimated. According to Chmelíková, when studying a foreign language at university, the importance of developing skills in reading special texts is massively underestimated and delegated to students for 'outsourcing' [8]. Her study conducted in a number of universities in Slovakia shows that students of technical specialties read little, often superficially, and have too low level of linguistic knowledge to be able to understand domain-specific foreign language texts. In addition to background knowledge of the topic and linguistic knowledge of predicting, making connections, visualizing, inferring, questioning, and summarizing, the author suggested a number of prerequisites of more successful reading, such as knowledge of different reading models and strategies [8:65–66].

Leading Russian researcher in the sphere of academic writing Korotkina believes that any ESP course must be focusing on developing key academic skills: academic reading and writing that are more relevant for students studying in L1 linguistic environment than listening and speaking skills. It goes without saying that without processing enormous foreign language specialist literature any studies in a contemporary university are not viable. Processing authentic professionally oriented texts allows solving numerous problems predetermined by necessary writing skills as the one is conducive to interpreting research papers structure, style, rules of citation and referencing i.e. awareness of the basic conventions established in the international academic communities [9].

Doing a master degree nowadays presupposes an active involvement of the students into academic activities focusing on writing and publicizing the academic articles, written mostly in English and suggesting the opportunity to be published in reputable scholarly journals (according to leading Russian Universities requirements.). This means that the race *Publish or Perish* [10] begins at the stage of pre-service training of future professionals. This new reality highlights the importance of viewing reading research papers as a basis for development of writing research articles skills.

The connection between reading and writing is not so self-evident to language teachers as it might appear after reading and analyzing specialist literature. [e.g., 11 – 15]. For example, Hirvela admits that only after about ten years of teaching writing he discovered that 'some of the writing difficulties ... were in fact reading difficulties' [15:10].

In our previous research we also investigated them separately: focusing on the analysis of problems related to formation of writing skills in undergraduate engineering students in the English class [16] and on fostering reading comprehension in English language learners with help of Internet resources during students' independent work [17].

The underestimated was the knowing of conventions of writing that helps read more efficiently understanding how to organize the search, 'what to look for and where to find it' [15:12]. Hirvela concludes that 'it makes more sense to include discussion of reading into writing class than to treat two skills separately' [15:12].

Meanwhile academic reading professionally-oriented authentic academic texts is a multifaceted complicated problem even for those who display C1 language skills and plan to work as the English language teachers in future. This is explained by a number of specific features of a research paper in English as a particular genre.

There is a number of differences between the international and Russian rhetorical and publishing conventions in social sciences and humanities, implying different approaches to formulating headlines [18], writing abstracts, structuring and organizing of an academic article, in-text references, bibliography items formatting etc., identified by the leading Russian researcher in the field Korotkina [19]. By the same token, Hyland emphasizes that a well-known Swalsian IMRD framework for the research article structure and CARS (Creating A Research Space) moves for the Introduction section are typical of RAs in hard fields with 'big journals, big names and big libraries within large discourse communities'. However, the investigation show that the authors of the articles from a number of other countries, e.g., Poland, Latin America, Malasia, Sweden, Russia, newly-independent states do not articulate research gap explicitly [20:317].

In the same article Hyland stipulates the principal difference between a textbook and a academic article. Textbooks are seen as repositories of 'codified knowledge', they serve as sources for the proven truths needed for students' basic training while 'advanced scholarship extends the theoretical envelope, [...] in journal articles' [20:308–309]. Chapters in textbooks do not contain such parts as 'limitations' typical of any serious research papers, much less significance is ascribed to expressions of hedging and boosting, and other rhetorical devices used in research articles. Thus, reading textbooks does not lead to easy reading of RAs, which, among other things, requires developed critical thinking skills rather than 'blind trust' in textbooks students acquire through years [21].

Reading an academic article presupposes a well-prepared reader, familiar with prior texts and research in the field, as the authors often formulate their arguments in a highly standardized code [22], which might be quite challenging to most of novice researchers. By the same token, the authors might use a particular set of favored terms, sentence structures and logical syntax which is not easy for an outsider to comprehend and imitate [23:146].

The search of academic domain-specific articles in field of one's research interest published in reputable academic journals might be rather challenging for a novice researcher and require certain skills that they might lack even when the student continues the research started within the bachelor program though it is often the case that entering master studies program students initiate a completely new research on a newly-articulated theme.

Given all above-mentioned aspects we designed detailed instructions for an extensive academic reading module (EARM) aiming to improve skills of reading RAs. The EARM has been developed within the framework of RF Ministry of Education Regulations on the organization of students' self study work in country's universities [24]. The Document prescribes the stakeholders to allocate up to 25% total study load for independent work including supervised self-study work for all disciplines of the curriculum allowing University departments to organize and structure it according to the specificity of the discipline and students' preferences and needs. The Extensive Academic English module aims to shape and make more focused students' independent work with research articles to help them acquire and retain the RA's most salient features thus contributing to the progress in the ESAP course on the whole. The tasks of the module cover all problematic areas, i.e. the challenges of extensive academic reading of domain-specific periodicals while instructions to them intend to prepare students to overcome the problems and ease the process of self-study work. The major goals of the EARM are:

- To familiarize students with multiple problems they might face while selecting and reading research articles (RAs) relevant to their research interests;
- To teach them to extract maximum useful information from the RA meta-data;
- To draw their attention to a typical RA structure;
- To encourage them to stick to the stylistic language features (vocabulary chosen, syntactic structures, punctuation, etc.) using relevant digital tools (e.g., VersaText);
- To instigate cooperation and information exchange during the independent work using relevant digital tools (e.g., Padlet).

The main **Research questions** we are seeking to answer introducing this module to students are as follows:

- Have learners become more confident in searching for domain-specific research papers?
- Have learners become more effective readers of the research papers of their occupational/research interests?
- Which aspects of the EAR module have they found the most useful?

## 2 Description of the EAR Module

The Module was developed as a part of compulsory English for Specific and Academic Purposes course at Department of Foreign Languages and Linguodidactics Philology Faculty St. Petersburg State University and as a part of Academic writing course at department of Linguodidactics and Translation Studies Peter the Great St. Petersburg Polytechnic University. Students of both Departments are going to be foreign language teachers. The students have already completed their BA and have received training in teaching a foreign language at this level.

English for Specific Academic Purposes is central in the curriculum and embraces three terms out of four of complete Master program. It is subdivided into specific and academic purposes with two 90-min sessions a week, one of them focusing on academic writing. The course is to focus on ELT terminology studied within the integrated approach, which helps students use the terminology in professionally-oriented discourse. All in all, the materials are subdivided into six major themes: Module 1. Methods and Approaches, Module 2. Curriculum development and Syllabus Design, (1-st term). Module 3. Learning Language and Skills, Module 4. Learning Exercises and Activities (2-nd term), Module 5. Classroom Management, Module 6. Testing and Assessment (3-d term). The other 90 min sessions are devoted to academic writing focusing on grammar revision based on Advanced Learners' Grammar [25], writing academic English based on Writing Academic English textbook [26] with special focus on describing visuals.

During the course students are inclined to read the academic articles relevant to their research. Besides, twice a term students have a so-called "Home reading Class" as a part of their mid-term and final-term assessment. During the home reading classes the students present chapters from monographs (the first term), research articles on the studied theme (second and third terms) doing extensive reading of academic literature mainly independently outside the classroom. Noticing difficulties students face presenting the results of home reading in class stimulated us to develop an Extensive Academic Reading Module (EARM) for increasing efficiency of their independent work.

The EARM included three 45 min classroom sessions in addition to the mid-term class on home reading mentioned above (Table 1).

**Table 1.** The EARM syllabus

Class No./Term week	Class format	Topic	Assignment
1/1	Presentation. Completing Questionnaire 1	Meta-data of research papers. Basic principles of searching papers in e-databases	Search for a RA relevant to the field of research interests. Studying its meta-data. Sharing the lists of journals from Bibliography lists via Padlet
2/2	Presentation. Discussion based on students' selected article	IMRD structure of the RA	Reading the article, compiling a Glossary and critical summary for the 1-st article

*(continued)*

**Table 1.** (continued)

Class No./Term week	Class format	Topic	Assignment
3/4	Presentation Workshop	Using <i>VersaText</i> tools for analysis of language peculiarities of RA	Searching for another two RAs relevant to the research interests; formulating questions to the RA based on meta-data, sharing questions with the instructors; extensive reading and analysis according to the Plan. Preparing a Report on the Module
4/8	Discussion. Submitting Reports on the Module	Mid-term assessment	Completing Questionnaire 2. Preparing a research paper in English during the second half of the term

### 3 Procedure

#### 3.1 Participants

The EARM was tested during the spring term (2-nd term of Master studies) of 2021/2022 academic year with two master groups (18 students in total) majoring in foreign language pedagogy at Saint Petersburg State University (8 female students, 1 male student) and at Peter the Great Saint Petersburg Polytechnic University (9 female students) simultaneously.

#### 3.2 Data Collection

During the experiment three types of data were collected. They are the following.

**The Two Questionnaires.** They were made up in Russian in electronic format using Google Forms.

*The First Questionnaire.* It was completed at the beginning of the first class to establish how much prior knowledge students have on effective reading strategies; meta-data of the research articles (RAs); approaches they use searching for research articles relevant to subject of their Master thesis. All 18 participants in both groups completed it.

It consisted of 8 closed questions of a multiple-choice format with a single (5 questions) or several possible answers (3 questions) and 2 open-ended questions. The multiple-choice questions with a single answer dealt with meta-data of RA and here the

students were asked whether they notice which institution(s) the authors are affiliated with, in which journal the RA was published.

The multiple-choice questions which assumed several answers concerned the sources of information about the article, memorization and comprehension techniques used by the students and techniques that help students overcome the difficulties they face reading original RAs. The items for reading memorization and comprehension techniques were adapted from questionnaires developed by other researchers in the field [27, 28].

*The Second Questionnaire.* It was filled out by the experiment participants after the 4-th Module session to elicit their reactions to the Module, its scope and content, as well as to its procedures. Only 16 students responded this time.

The questionnaire contained 8 questions. 5 out of them targeted the optimization of the academic search (finding the proper articles) and taking into account of the RA meta-data. The types of the questions included multiple choice format with a single (one question) or several possible answers (one question) and three open-ended questions with a numeric answer, in which the respondents were to indicate  $\kappa$  how many new for them academic journals in line with their research they have found thanks to the Reference lists of the RAs they read, how many names of the researchers conducting their investigations in the same field they found and, and how many new academic journals they got to know thanks to the posts made by their group mates on the Padlet. Two questions were formulated with 5-point Likert scale. Open-ended question asked if the respondents found answers to these questions while reading their RA and if they undertook any steps to find answers to questions which remained unanswered by the author(s).

**The Student's Reports.** The participants had to submit reports on extensive reading of two RAs relevant to their research interests they found after the second-class session of the Module. The reports were carefully studied by the researchers to evaluate how students progressed in independent extensive reading of scientific papers. Reports were written according to a prescribed Plan developed by the researchers. It included the following rubrics:

- Analysis of the RA title;
- Info about the authors;
- Analysis of references;
- The list of journals they shared with their groupmates using Padlet;
- Analysis of vocabulary and grammar structures of Introduction section of the RAs using VersaText tool [29];
- Glossary of 30 preferably multi-unit vocabulary items with translation into Russian and explanations/definitions if necessary;
- Analysis of the structure of the RA in relation to the standard Swalsian IMRD structure;
- A critical review of the RAs.

**The Analysis of Some Linguistic and Discourse Features of RAs.** It was conducted by the researchers to verify conclusions about the structure of RAs in the field of Applied Linguistics.

## 4 Results and Discussion

### 4.1 Questionnaires 1 and 2

The analysis of students' replies to the question of the Questionnaire 1 concerning memorization and comprehension techniques they use demonstrated the most popular strategies were: making notes in the text, rereading of the unclear parts of the text, taking notes of the most outstanding ideas of the source.

At the same time only 11% chose the option "formulate the questions, answers to which can be given in the article". The analysis of the literature confirms that self-questioning techniques are most efficient for assisting better understanding of the text of RA [30]. However, it is not clear at which stage of reading (before, during, and after reading text) self-questioning is most beneficial. Under the conditions when the most important part of the work of reading the RAs is the students' independent work, formulating questions before full-fledged reading based on the title analysis and the analysis of the Abstract seems to be the most efficient as it allows teachers to coordinate students' reading in the distant mode.

Students had to submit their questions to their teachers together with the article for obtaining approval of the article from the teacher. As they were not sure whether or not the teacher approves of their choice of the RA they had hardly read the whole text before asking the questions. So, we can expect that the questions had been formulated before students read the RAs carefully. Thus, the self-formulated questions could be an additional stimulus to more focused reading of the RA seeking answers. Most of the respondents found answers to all questions they had asked. Only three students wrote that they did not find answer to one of the questions asked. To find the answers they read the articles in the similar academic fields and conducted a search on the Internet. The analysis of the pool of the students' questions let the researchers conclude, that they were mostly of factual type (e.g. *How long did the experiment last? Which software (apps) was used in the experiment?*), and the presence of the answer to them was well expected. This revealed that a micro-skill of formulating inferential questions should be trained on purpose.

The finalizing survey (Questionnaire 2) displayed 93,8% of respondents chose the option "completely agree" (75%) and "agree" (18,8%) with the statement "Formulating questions on the content of the article BEFORE reading it increases the efficiency if the academic reading". The same number of participants agreed with the statement that "EARM within the ESAP framework was useful" (62% choose "completely agree" option and 31,3% - the "agree" one).

Answers to the question about the ways of searching the research articles relevant to their own research interests in the Questionnaire 1 allowed us to conclude that the following ways are the most popular: search for the articles on the Internet (100%), following the recommendations of their scientific advisors (88.9%), and using Google Scholar (72.2%). Much less often they resort to the search in the specialized bibliographic database (Scopus, Web of Science) (16.7%), or address the web-sites of the relevant journals (22.2%) and use the references of the RA they have already read (33.3%).

The use of internationally-recognized bibliographic databases for the search of academic reading for the novice researchers is connected with access problems. Although



major universities in Russia have the subscription to these databases they can be accessed only from the university campus. That is why we decided to make students pay more attention to Bibliography/Reference lists of RAs and the web-sites of the relevant journals within the EARM. Students were to analyze reference lists in RAs they had chosen. In the Report they were to:

- Indicate the number of the sources that the articles of their choice contained;
- Check up whether the reference list included the earlier works of the author/s of the RA, and
- Find out whether there were authors whose works they had read earlier;
- Select 3–5 journals publishing articles on the topics close to their academic interest and to share the list of these journals and find and present information about them (e.g. open acronyms of the name of the journal, if the article cited the contracted name (Applied Linguistic for Appl. Linguist, for example), URL of the journal's web-site, its impact-factor in Scopus. Students were also to visit the posts of their groupmates with brief information about journals on the Padlet app specially created for EARM for each group of students.

## 4.2 Students' Reports Analysis

We should admit that in some Reports (out of 18 submitted by the participants of the experiment) the table with the information about journals contained factual mistakes: the students put into it not only the journals, but also the conference proceedings, monographs and on some occasions even unpublished Master theses. This made it obvious that some students do not take into account the differences in the bibliography of different types that, besides, might be different in different journals. Regardless the disciplines that should have taught bibliography-related skills, this issue must be embraced by the EARM explicitly.

The replies to Questionnaire 2 on the ways of finding relevant RA within the EARM, which contained the same option that Questionnaire 1, clearly showed that the number of students who made use of reference lists from the first article and advice of their groupmates that those posted on the Padlet for finding the second and the third articles significantly increased: 68,8% of the learners addressed the professional journal web-sites and 56.3% used the reference list for the first article.

Totally, in their Reports students described 36 articles from 34 journals and 2 international conference materials. All the articles were open-access ones or were available through the University subscription. 11 journals and 2 conference materials were not registered in Scopus.

While reading the RA students were supposed to take note of the RA macro-structure, pointing out in their Reports subheadings of all parts of the RA structure (actual section heading) and compare it with the Swalsian IMRD structure. The level of variability among the rubrics appeared to be rather high. In all the articles except two there were found such rubrics as Introduction and References; in 3 articles Introduction sections contained from 2 to 6 subdivisions. In many RAs “the history of the issue” was presented in detail in the parts following the Introduction. It was presented under such headings as

*Theoretical background* or *Literature review*. The most detailed description in the articles based on experiments was the one of *Methods* which, as a rule, included 5–6 smaller parts. This is well in line with Swales and other researchers in the field [31, 32], who maintained that in hard science the researchers tend to strictly comply with the prescribed standard methodology of conducting experiment and, thus, describe their experiments rather briefly, while in humanities the procedures of nearly every investigation has unique features and, thus, is described in all possible details, sometimes taking about 2 pages in a journal. The theoretically-focused articles may not possess the section *Research Methodology* at all.

The researchers have analyzed the structures of the articles that had been collected by the students participating in the EARM independently. The Results can be seen in the Table 2 presenting the headings found in the 36 articles more than once.

**Table 2.** Sections and Subsections distinguished by students in their RAs

Sections and Subsections	No. in RAs	Percentage in RAs
Introduction	34	94.4%
Conclusion	34	94.4%
Discussion	25	66.6%
Methodology	21	55.5%
Results	16	44.4%
Literature review	5	13.8%
Findings	4	8.3%
Research questions	4	8.3%
Background	2	5.5%

One may find that the results of our analysis of pedagogical RA's structure correlate with Anthony & Bowen's conclusions about the structure of mathematics papers which varies considerably from article to article following a less rigid format described in academic writing textbooks [33]. Interestingly, we noted that two RAs of our sample do not have heading Introduction, only one follows a typical IMRD pattern, and many papers break or drastically change this pattern. For example, RA *Contrasting Orthographically Similar Words Facilitates Adult Second Language Vocabulary Learning* [34] includes 4 headings of the 1-st level (Introduction – Experiment 1 – Experiment 2 – General discussion – Conclusion), 13 subheadings of level 2 (numbered e.g. 1.1., 2.3, etc.), and 23 subheadings of level 3 (numbered e.g., 1.1.1., 3.2.1, etc.).

This observation means the following: 1) taking into account the variety in structure of real research papers in Applied Linguistics field it can be recommended to draw students' attention to this fact, encourage them to contrast an IMRD pattern with a structure of RAs they read independently in the ESAP course and illustrate the variety of RAs' structures with particular examples during class discussion. 2) When teaching

academic writing students must be trained to write short articles for the professionally-oriented conferences which seem to have a structure closest to IMRD pattern.

Formulating a title of the paper is another important thing. Although all style guides and journal requirements give recommendations how to formulate titles of RAs, many of them seem vague or contradictory for novice writers as Hyland and Zou noticed giving examples of such recommendations in their latest paper [35]. In their research they compiled a corpus of 5070 RA titles from six domains, which exceeded all previous studies of titles. They discovered that RA titles in Applied Linguistics (App. Ling.) and Education (Educ.) tend to be quite long: over 12.5 words (over 75% of RA from these domains), most of them are indicative (not interrogative), compound, i.e. include two or more parts separated by punctuation, usually a colon (63.6% in App.Ling. and 70.7% in Educ.) thus allowing authors to extend the topic usually expressed with a noun group. Most of them are descriptive, that is, highlight only the subject of the article without details about the method used or results obtained though the detailed titles accounted for 28.2% in App. Ling. and 42.5% in Educ. We decided to check if RAs selected by the experiment participants can be described in these terms. Table 3 presents the results of our analysis.

**Table 3.** The features of RA titles

Pattern	No/%
Titles longer than 12 words	9/24
Titles with colon sign	10/27
Descriptive titles	24/67
Detailed titles	12/33

The results obtained show that 67% titles are of descriptive type and 33% are detailed ones, which is in a good agreement with Hyland and Zou findings. Thus, the task of analysing the form and structure of RA title should be included in the EARM. To get more experience students should be recommended to analyse not only the titles of RAs they have found but also those found by their classmates and shared via services such as Padlet.

**Compiling a Glossary and Mastering VersaText.** Compiling a Glossary is an important skill focusing key lexis while reading. It is also important in methodology as it allows teachers to check how attentive the student was in the reading. The EARM was to make students expand their keyword lists which are inalienable part of most of the RAs (33 out of 36 RA in our sample contained them). While the teachers were to invite students' attention to the fact that noun phrase prevail in the keyword lists the students' glossaries could include verb patterns as well on the condition that they were frequently met or important for the RA.

As a part of experiential learning they were to select collocations on the basis of frequency with the help of the VersaText tool. The said resource works with a single text

as a corpus. After inserting the text in text format into a special frame the user gets the word cloud of most frequently met words of different colours that can be “formatted” alongside with the following parameters the amount of frequently used words (from 10 to 100 with a step of 10), instead of the words one can form a cloud of lemmas, tags, indexes of parts of the speech (the 1-st group), including or excluding content words and function words (2-nd group). Unlike the first group of parameters where only one value is selected within the second group one can choose any combination. Clicking the word one can see it either in the view mode of Concordance where the target word is in the middle of a concordance line and can be sorted out by the left or right context, or in the context of a complete sentence or with the keyword missing (as a draft for a test).

The students were to get acquainted with the VersaTex studying the Introductions to the chosen RAs and to enjoy the usability of Concordance mode for the most frequently met nouns in the word cloud which was meant to help them find proper collocations. The benefits of applying this resource in compiling Glossaries was appreciated by the most of the students as they helped them in finding such combinations as *ESP courses*, *ESP teaching and learning*, *ESP program*, *ESP landscape*, *Objectives set*, *Core objectives*, *Learning objectives*, *Student's general objectives*, *EMI teaching faculty*, *EMI program*, *EMI experience*, *EMI environments*, *EMI implementation* etc. The majority of participants plan to use it in their further research and teaching activities.

**Summary Writing.** A number of researchers consider summary writing as an efficient tool for comprehension check-up [24]. The skills for writing summaries are being developed along with studying English within any course and ESAP also does it. Thus, we assumed that the 1-st year master students majoring in language pedagogy possess the skills of text paraphrasing, summarizing and evaluating. Students were to stick to the following structure of the summary. Their summaries were to start with a paraphrased abstract of a RA, in the second paragraph students supplemented it with details that they found most interesting, important, relevant, or striking during extensive reading of the RA (in particular, we asked them to pay special attention to the description of the experimental procedure if they chose to read an experimental RA). In the last paragraph students had to evaluate the RA in terms of relevance to the research interests, familiarity with the underlying theory or experimental procedure, comprehensibility, ability to repeat the experiment in their settings/with their students etc. The number of words in the summary equaled 500 words.

The summaries' scrutiny revealed that students were not very much successful in paraphrasing of the original abstracts as most of them opted to abridge the abstract, not trying to change syntactic structures of the sentences or find proper synonyms. Not all of them indulged in critical thinking as the last part presupposed that they would express their own opinion. In spite of the stipulated number of words assigned the length of the summaries varied from 224 to 732 words with the average length being 477.1 (*SD* 86.6).

## 5 Conclusions and Further Work

The above-described research indicated the expediency of including a module focusing on the coordination of the students doing their Master degree on extensive reading of research papers within the framework of an ESAP course.

The approbation displayed that students changed their learning behaviour towards RA meta-data, became more proficient in the use of reliable and verified sources in the search of the academic literature for their reading to write a qualification paper. They started more intensively use the academic journal's web-sites of journals in which their RA were published or RA from the reference lists to the RA of their choice. The exchange of information about relevant journals through modern Internet-services of sharing and cooperation, such as Padlet, for example, is beneficial for the purpose.

The experiment proved that formulating questions before reading based on the title and abstract analysis increases the efficiency of reading and motivates students to continue the search of the needed answers, if they are not present in the RA. It is possible to develop the habit and improve the quality of the questions before reading the RA if to insist on students' sending their questions together with the article to their instructors to get them approved. The analysis of the structure and the length of the title is important as a skill needed for formulating efficient titles of their own academic articles in future.

Glossaries and critical reviews are effective tools for checking reading comprehension. Such tool as VersaText Online allows users to find easily collocations of most frequently used nouns to be included in the RA Glossaries. Scrutinizing critical reviews revealed, that the skills of paraphrasing and the text analysis require further development within the ESAP course. The problem should be regarded as the one ascribed to Academic Writing class bearing in mind that unintended plagiarism among the novice authors writing in English is the reflection of their fear to make a mistake when attempting formulating an important statement put in their own words due to the lack of linguistic or subject competence. This explains why it is so important to introduce them to the best practices of the use of the reference lists when writing their own RA or other kinds of academic papers [36, 37].

The spotted within the experimental learning the diversity of structures among the RAs selected by the students for extensive reading allows teachers to propose specific research tasks focusing on the comparing and contrasting to well-known IMRD structure and invite students to writing short papers for the academic conferences where the structure would be the closest to the IMRD pattern.

The approbation of the EARM in the second term of studying the ESAP course showed that it is advisable to include this module into every term of an ESAP course. However, the priority for EARM in the 3-rd concluding term should be given to text comprehension strategies when reading different, sometimes conflicting RAs in the field of the academic interest (their Master theses) with the purpose of the following synthesis describing "the research field rather than independent sources" as Boulton once put it. The study although limited by a relatively small sample of participants clearly demonstrated the necessity of including teaching academic reading depending on the university provisions at least through EARM that can be a good addition to any postgraduate studies.

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