Development of Doctoral Students’ Academic Skills In The Framework of The Study Course “English For Research Professionals”

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Abstract

Foreign languages for academic purposes prepare students for the specific academic requirements at the tertiary level of education. English as the language of international exchange aims not only to improve students’ level of English, but also to develop the language skills necessary for the academic environment, such as reading research articles in the students’ scientific disciplines, understanding vocabulary of the field, listening to lectures, taking notes, discussing scientific problems, presenting the results of their research, critical thinking, time management, etc. As regards the situation of EAP (English for Academic Purposes) in Latvia University of Life Sciences and Technologies (LBTU), the study course “English for Research professionals” is included in the 1st year of the curriculum of the doctoral study programme. A blended learning approach has been implemented in the course. The aim of the present article was to investigate the development of academic skills of doctoral students in the framework of the study course “English for Research Professionals” therefore a survey was carried out to investigate doctoral students’ opinion regarding essential academic skills in foreign languages. The findings showed that reading, reviewing and evaluating scientific literature, using formal academic style in writing, as well as presenting the research results in front of the peers were selected as the most required academic skills. The survey also examined the participants’ perceptions of whether these academic skills were developed in the study course “English for Research Professionals” in the blended learning format. Conclusions of the findings are presented in the end of the article.

Keywords: English for academic purposes, academic skills in foreign languages, blended learning

1. Introduction

Doctoral programmes at universities focus on training adult students to perform research in the specific subject field. Foreign languages for academic purposes as a part of the doctoral studies’ curriculum prepare doctoral students for the specific academic requirements at the tertiary level of education and adds an international dimension to the studies. English as the language of international exchange aims not only to improve students’ level of English, but also to develop the language skills necessary for the academic environment and research activities to publish papers in peer-reviewed international scientific journals. In addition, the labour market in recent years has put an emphases on the necessity of soft skills (i.e., critical thinking, teamwork, problem solving, etc.). Therefore doctoral students are required to have a combination of professional knowledge and skills, academic skills and soft skills to achieve success in their professional and academic career.

As regards the situation of EAP at Latvia University of Life Sciences and Technologies (LBTU), the study course “English for Research professionals” is included in the curriculum of the doctoral study programmes, their duration is one semester in the 1st year of studies. As a part of the course doctoral students develop the language skills necessary for the academic environment, such as reading research articles in the students’ scientific disciplines, understanding vocabulary of the field, listening to lectures, taking notes, discussing scientific problems, presenting the results of their research, etc. It should be noted that in the last three years a blended learning approach has been employed. There was a wide range of communication technology provided for online content: the BigBlueButton (BBB) virtual classroom, chat on the University page, Goggle docs, Kahoot, Miro, Padlet, Mentimeter.

Doctoral study programme entitles students to participate in extra-curriculum activities, i.e., international scientific conferences thus motivating students to enrich their knowledge and develop academic English language skills. Doctoral students are encouraged to present the results of their research activities in annual international scientific conferences organized by the university, for example, the annual conference “Students on their Way to Science” (https://www.sws.llu.lv/) for
undergraduate, graduate and postgraduate students is traditionally organized at the university with the participants from many countries over the years such as Latvia, Lithuania, France, the UK, Slovakia, Czech Republic, Bulgaria, Greece, Canada, the USA, Turkey and others. The conference the working language of which is English is aimed at dissemination of scientific research results, sharing experience, improvement of foreign language skills and cross-cultural competence, as well as establishment of international contacts.

2. Literature review

English for Academic Purposes (EAP) is a branch of ESP (English for Specific Purposes) which in the literature [1] has been divided into English for General Academic purposes (EGAP) and English for Specific Academic purposes. The first type refers to the skills associated with study activities, for example, reading research articles, listening to lectures, taking notes, time management, etc. The second type integrates general academic skills in foreign languages with the actual subject tasks involving cooperation with the actual subject department. The importance of developing academic skills is mentioned by such authors as Alexander, Argent, Spenser [2] who mention that EAP course should have a broader scope and meet doctoral students’ expectations to develop skills necessary for the academic community, de Chazal [3] who considers that the role of EAP is to provide students with standard academic skills and awareness of broad academic conventions. Ozola, Sinkus, Grasma [4] believe that such language skills and aspects as research skills, public speaking, written communication, collaboration skills and critical thinking are necessary for the international scientific space to describe and present doctoral students’ research findings. The researchers Alexander, Argent, Spenser [2] suggest that student autonomy and critical thinking are developed along with learning a foreign language, English in EAP is the language of academic discourse, moreover, EAP courses focus on vocabulary, grammar and discourse features typical of the scientific texts and academic communication. The researchers [2] also argue that, as regards in EAP courses, information is conveyed and students are assessed mainly through written texts, however, according to the authors’ experience, developing public speaking skills has been increasingly practiced in recent years in EAP courses.

A useful research was carried out by Watson and Lyons [5] to determine knowledge, attributes and skills a mechanical engineering industry would like to see in engineering PhD students. The survey was based on the list of skills that were selected through analysis of job advertisements in the industry and was carried out among the working engineering PhD students. The results showed that such soft skills as learning independently, working in teams, written and oral communication, solving problems and working independently were considered the most important skills, while marketing products and processes, managing others and identifying customer needs were the least required skills for PhD students. The fact that students put communication skills in the 3rd place signifies how important language skills are in the world of work.

As the blended learning approach was used in the study process, advantages and disadvantages of the approach are worth mentioning. El-Mowafy et.al. [6] believe that blended learning, should be used in professional higher education courses as it is the most appropriate way to satisfy the need of industry and profession and enhance student learning by maximizing the understanding of theoretical principles, gaining knowledge and development of technical, practical and professional skills, ensuring students’ active involvement in the learning process.

There are the following other advantages of blended learning described in research literature (Garrison, Vaughan [7], Namyssova et.al. [8], Linder [9], Yılmaz, Malone [10], Sinkus, Ozola [11]): higher levels of student achievement can be reached, students can access materials easily, students’ attitudes towards learning can be improved, students can work at their own pace and to be ensured they fully understand new concepts before moving on, learners can have more autonomy, self-regulation, and independence in order to succeed. Moreover, education becomes personalised, replacing the model where a teacher stands in front of the classroom and everyone is expected to stay at the same pace, students’ simultaneous independent and collaborative learning experience for university is facilitated, student-centred approach can be used, teachers can support individual students who may need individualised attention, academic language skills and English communication skills can be developed, self-directed learning skills are promoted, students become more confident in talking about their professional activities and research. As regards the disadvantages of blended learning, such experienced shortcomings come into mind, according to the authors’ opinion, as loss of the opportunity to communicate with the teacher and peers face-to-face, technical issues and internet connection problems, insufficient IT skills of both teachers and students, time consuming preparation for online classes on the behalf of teachers, etc.
3. Materials and methods
The aim of the study was to examine doctoral students’ opinion regarding the academic skills’ preparation level in the course “English for Research professionals” at the Latvia University of Life Sciences and Technologies. After the literature review on the topic and in order to achieve the aim of the research, the case study was used as the research method. It consisted of two stages: firstly, the respondents were asked to vote for the skills they considered important for a researcher and should be therefore developed in the study course “English for Research Professionals”. After the first stage the academic skills were ranged according to their priority in the respondents’ opinion, and the least mentioned skills were excluded from the next stage. Secondly, at the end of the course, after having studied academic English during one semester, PhD students (n=26) participated in a survey to find out the respondents’ opinion based on their self-assessment as to which of academic skills they have developed most during the course.

4. Results and discussion
The study course “English for Research Professionals” at LBTU has been designed for doctoral students to develop the knowledge and skills needed to succeed in research work. It focuses on improving scientific writing skills, presentation and oral skills (discussion and fluency building), research vocabulary building, and search and selection of relevant information, using authentic research literature. Doctoral students’ English language proficiency level ranged from B1 to C1 (mostly students had levels B2 and C1).
In order to achieve the aim of the research, a two-stage study design was developed. The first stage of the research involved online voting poll activity during the online lesson of the study course “English for Research Professionals”. The E-Voting poll activity on Moodle course enabled the doctoral students to vote via their smartphones or laptops and to have the results displayed on a graph in real time. The respondents had a possibility to choose multiple answers from the list of academic skills which was designed by the authors on the basis of the above literature review. The total number of answers was 120. The results in the order of priority are shown in ‘Figure 1’ below.

![Fig.1. Doctoral students’ opinion regarding the essential academic skills for a researcher](image)

The results identified fifteen important skills that a researcher should acquire, such as discussing scientific problems, using quotations, defining terms related to research, writing conference abstracts analysing information from different sources etc. It can be concluded that doctoral students consider that skills related to describing and presenting the doctoral students’ research findings to be of great importance. It is interesting to note that only one skill ‘leadership’ was not mentioned by the PhD students and, therefore, was excluded form the next stage of the present research. One explanation
could be that the PhD students did not associate development of the academic language skills with leadership at work.

During the second part of the research, the PhD students participated in a survey, which took place in the end of the course. Twenty-six PhD students (n=26) were asked to assess the level of their own academic skills' preparation in the framework of the course “English for Research Professionals”. Students’ reflections help them understand what they have achieved and assess if any progress has been made. The results of the survey are summarised in the Table 1 below.

Table 1

<table>
<thead>
<tr>
<th>Academic skills</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. discussing scientific problems</td>
<td>7.7</td>
<td>15.4</td>
<td>53.8</td>
<td>23.1</td>
<td>2.92</td>
<td>.845</td>
<td>5</td>
</tr>
<tr>
<td>2. using quotations</td>
<td>11.5</td>
<td>30.8</td>
<td>15.5</td>
<td>42.3</td>
<td>2.88</td>
<td>1.107</td>
<td>6</td>
</tr>
<tr>
<td>3. presenting results of research</td>
<td>11.5</td>
<td>23.1</td>
<td>53.8</td>
<td>11.5</td>
<td>2.65</td>
<td>.846</td>
<td>8</td>
</tr>
<tr>
<td>4. defining terms related to research</td>
<td>7.7</td>
<td>46.2</td>
<td>38.5</td>
<td>7.7</td>
<td>2.46</td>
<td>.761</td>
<td>11</td>
</tr>
<tr>
<td>5. recognising academic register</td>
<td>7.7</td>
<td>15.4</td>
<td>38.5</td>
<td>38.5</td>
<td>3.08</td>
<td>.935</td>
<td>3</td>
</tr>
<tr>
<td>6. answering questions about research</td>
<td>11.5</td>
<td>38.5</td>
<td>34.6</td>
<td>11.5</td>
<td>2.48</td>
<td>.872</td>
<td>10</td>
</tr>
<tr>
<td>7. understanding reference lists and bibliographies</td>
<td>7.7</td>
<td>19.2</td>
<td>38.5</td>
<td>34.6</td>
<td>3.00</td>
<td>.938</td>
<td>4</td>
</tr>
<tr>
<td>8. describing graphs and tables</td>
<td>11.5</td>
<td>42.3</td>
<td>34.6</td>
<td>11.5</td>
<td>2.46</td>
<td>.859</td>
<td>11</td>
</tr>
<tr>
<td>9. recognising fact, opinion and evidence in texts</td>
<td>7.7</td>
<td>19.2</td>
<td>19.2</td>
<td>53.8</td>
<td>3.19</td>
<td>1.021</td>
<td>1</td>
</tr>
<tr>
<td>10. identifying plagiarism</td>
<td>0.0</td>
<td>38.5</td>
<td>42.3</td>
<td>19.2</td>
<td>2.81</td>
<td>.749</td>
<td>7</td>
</tr>
<tr>
<td>11. analysing information from different sources</td>
<td>3.8</td>
<td>15.4</td>
<td>42.3</td>
<td>38.5</td>
<td>3.15</td>
<td>.834</td>
<td>2</td>
</tr>
<tr>
<td>12. communication and collaboration with groupmates</td>
<td>3.8</td>
<td>19.2</td>
<td>30.8</td>
<td>46.2</td>
<td>3.19</td>
<td>.895</td>
<td>1</td>
</tr>
<tr>
<td>13. summarising information</td>
<td>11.5</td>
<td>38.5</td>
<td>26.9</td>
<td>23.1</td>
<td>2.62</td>
<td>.983</td>
<td>9</td>
</tr>
<tr>
<td>14. using paraphrase in writing</td>
<td>7.7</td>
<td>30.8</td>
<td>50.0</td>
<td>11.5</td>
<td>2.65</td>
<td>.797</td>
<td>8</td>
</tr>
<tr>
<td>15. writing conference abstracts</td>
<td>7.7</td>
<td>57.7</td>
<td>23.1</td>
<td>11.5</td>
<td>2.38</td>
<td>.804</td>
<td>12</td>
</tr>
</tbody>
</table>

By analysing PhD students’ academic skill mean values and standard deviation, it can be concluded that they have developed the following skills better than other skills in the course:
1. recognizing fact, opinion and evidence in texts (mean 3.19, SD 1.021)
2. communication and collaboration with groupmates (mean 3.19, SD .895)
3. analyzing information from different sources (mean 3.15, SD .834)
4. recognizing academic register (mean 3.08, SD .935)
5. understanding reference lists and bibliographies (mean 3.00, SD .938)
6. discussing scientific problems (mean 2.92, SD .845)

The student reflections and self-assessment are very useful to analyse the effectiveness of the aspects and topics studied during the course and raise awareness of the areas that should be improved upon during the EAP course in the future. The results of the survey allowed to compare students’ and teachers’ expectations from the course. The best result in the respondents’ opinion was received by the academic skill “the finding specific information while reading texts”, which could be explained by the importance of reading scientific texts in the subject field. The second priority was given to “communication and collaboration with groupmates”. Doctoral students were actively participating in the discussions (they often worked in groups in BBB breakrooms of the Moodle platform). The result correlated with the point expressed by other authors on the collaboration in the EAP courses, for example, Duff [12], who argues that academic discourse socialization is socially situated process to help students to become members of this academic discourse community. It is important for PhD students to communicate and collaborate not only with a teacher, but also with peers to become aware of the complicated nature of academic discourse and simultaneously to develop their English language skills. The next three skills: “analyzing information from different sources”, “recognizing academic register” and “understanding reference lists and bibliographies” refer
to reading and writing scientific papers, which is in the core of the study course. The last one “discussing scientific problems” focuses on the development of PhD students’ speaking skill and signifies that students were given an opportunity to practice the skill during the lessons. The results of the study show that the following skills received lower evaluation by the doctoral students:

- writing conference abstracts (mean 2.38 SD .804).
- describing graphs and tables (mean 2.46, SD .859),
- defining terms related to research (mean 2.46 SD .761).

This might be due to the complexity and specifications of the tasks to be accomplished. Therefore, in the future more emphasis should be placed on practicing writing conference abstracts, describing graphs and tables and defining terms related to research during lessons. Moreover, further studies would be necessary to explore how to improve these underdeveloped skills.

5. Conclusions
1. EAP study course should have a broad scope and meet doctoral students’ expectations to enrich their knowledge and develop skills important to become a member of the international academic community.
2. The results of the survey of the doctoral students’ self-assessment show that the following skills have been better developed during the course: 1) recognizing facts, opinion and evidence in texts, 2) communication and collaboration with groupmates, 3) analyzing information from different sources, 4) recognizing academic register, 5) understanding reference lists and bibliographies and 6) discussing scientific problems.
3. The skills that doctoral students have mentioned as the ones they have prepared most are the essential skills that allow them successfully participate not only in research activities and academic community, but also in various complex circumstances and spheres of life as they relate to critical thinking, ability to relate to other people in society, working productively in teams.

References