Stages of the formation of IT specialty students’ pragma-professional communicative competence in foreign language education

The article deals with the stages of the formation of IT specialty students’ pragma-professional communicative competence in foreign language education. The pragma-professional communicative competence has four sub-competences such as pragma-communicative sub-competence, functional-projective sub-competence, discursive-industrial sub-competence, pragma-creative sub-competence. Researcher conducted an experiment with 208 IT specialty students and 10 students were selected to focus group interview. The experiment was aimed to identify the effectiveness of the awareness of stages for the formation of named competence. Before the experiment, the term “pragma-professional communicative competence” and stages for the formation were explained in detail. Pre-test and post-test questions were consisted of 40 various questions. The results of the pre and post tests were analyzed, and the experimental group had shown a significant change from 73 points to 90 points. Focus group interview was aimed to identify students’ perceptions of the formation of pragma-professional communicative competence and its stages. As this study was interested in understanding the perceptions of students about a focused topic, it was felt that a focus group approach was most appropriate. The reason for utilizing focus groups, rather than individual interviews, was that they were pragmatic and time efficient as they are perceived as a tool that can provide relevant data. Focus group interview result shows that students perceive stages for the formation of PPCC as helpful and comfortable to apply in foreign language education.

Keywords: foreign language education, stages, pragma-professional communicative competence, IT specialty, perception, formation, focus group, experiment.

Introduction

Currently, foreign language education has become very popular and recognized as the main requirement for employees. A specialist with a fluent foreign language can be capable of thinking broadly and critically. Additionally, it provides opportunities to speak with interlocutors and solve communication problems. The dynamic development of the society has a great impact on language and English language became a global language. English language is widely used in various spheres such as science, technical, tourism and international communication [1]. Obviously, the new content of language education is focused on mastering the target languages by graduates of higher educational institutions. The process of teaching in higher education is aimed at preparing a responsible, fluent in target language, competent, capable of the functional use of a target language in different fields and in intercultural communication. The process of teaching foreign languages in non-linguistic majors (specialty which is not focused on language education) is very sensitive and should have very different approaches to teaching the target language. Nowadays, the content of the education is focusing on mastering the new competencies and formation of the key competencies in particular. Consequently, higher educational institutions should form key competencies that determine the modern content of education [2]. In our case, our content is focused on the formation of the key competence: pragma-professional communicative competence of IT specialty students in foreign language education. Moreover, the educational standards of vocational education include a foreign language as a compulsory discipline in all areas and spheres, the main purpose of studying which is the formation of a foreign language (intercultural) communicative competence (ICC) that allows the future specialist to carry out interpersonal and professional communication with native speakers in the professional field [3]. However, only ICC is not enough for IT specialty students to form the communication and deal with the pragma-professional problems. Therefore, pragma-professional communicative competence in foreign language is needed for IT specialists, it is the ability to use foreign language tools...
for certain functional purposes related to the activities of an IT specialist who performs communicative functions. This paper aims to determine the stages of the formation of IT specialists’ pragma-professional communicative competence in foreign language education and analyze its components.

**Literature Review**

Pragmatic competence involves language means for certain functional purposes (implementation of communicative functions, generation of speech acts) in accordance with the schemes of interaction [4, 5]. This component also includes the mastery of discourse, cohesion and coherence, recognition of types and forms of texts, irony, and parody. Social interaction and cultural environment have a special influence on the formation of pragmatic competence [6]. Vu [7] claimed that a person who has pragmatic competence should have not only the knowledge of linguistic forms but also need knowledge of sociocultural norms and rules governing the use of these forms. Garcia [8] defines pragmatic competence as “the ability to use the (target) language appropriately according to the communicative situation”. According to Blackman (cited in Warga, 2004) [9] pragmatic competence is as one element of communicative competence. The term pragmatic competence is also quite recent since it was first explicitly mentioned by Bachman in 1990. However, even before Bachman researchers have understood the importance of language use in context, although they have not used the term pragmatic competence; when defining communicative competence many researchers have recognized components that are similar to what is now known as pragmatic competence. Pragmatic competence is the ability to correctly use language expressions in communication. Pragmatic competence provides students with the ability to implement statements in accordance with communicative intentions, situations, and other conditions of communication in the context of the specialty language. Pragmatic competence contributes to the study of the function of language as an instrument of thinking or cognition, given that language is a mean of forming a certain thought. Finally, if the use of language is included in the content of verbal communication itself and each communicative act contains a moment of interaction between communication partners, then pragmatic competence helps to study the main function of the language — communicative [10]. Justification and development of the content of teaching pragmatic competence is offered by both Russian researchers such as Stepanov Yu. S., Apressyant Yu. D., Arutyunova E.M., Belyaeva E.I., Kolshansky G.V., Bespalova S.V., Schukin A.N., and by foreign scientists Rose, Kasper, Bachman L.F., Palmer D.S. and others [11-19]. The research was focused on the development of pragmatic competence in Italian as a foreign language through digital resources. Marta Kaliska [20] conducted a case study to two groups of 15 students and designed several exercises for students to develop their pragmatic competence. He found out that Polish students who are learning Italian are having trouble with getting involved in communication due to the lack of pragmatic knowledge. Students were asked to do tasks from simple to complex one. They observed discourse markers of Italian language and analyzed communication in terms of realization of picked speech acts. Students should have to compare how the speech acts realized in Polish and Italian languages. The last task was focused on making students come up together with native Italians and observing their digital communication acts. Tasks were given both for homework and class work in order to increase the learning opportunity. The findings show that students have developed such skills as: (1) ability to analyze how speech acts are usually implemented; (2) communication with native speakers as part of an online exchange of information; and (3) understanding of received responses. However, he has not tested the effectiveness of those tasks but just interviewed participants. It cannot be considered as a valid and reliable result because of aforementioned reason. Obviously, participants’ answers can be considered as a result, but to be sure the researcher needs to use an experimental method. The effectiveness of certain things should be tested through the results of the pre and post-tests. Kathleen [21] examined the necessity of technologies to enhance pragmatic ability in target language learning. In his study, he pointed out the significance of pragmatic competence in foreign language education and the role of technology in teaching pragmatics. The results were given as examples of available technologies to teach pragmatic knowledge and making students communicate online. He stated that technology provides a lot of opportunities for using authentic materials to form the pragmatic ability. Authentic learning materials can be in forms of book, journal, song, story, discussions, and reports. Also, technology makes learners become autonomous, independent, and assertive. Another study was focused on student's and teachers’ perception of pragmatic and grammatical competence. They found out that students pay more attention to grammatical mistakes rather than pragmatic mistakes and consider them more important. Another line of research was done by Mohammad Bagheri [22] learners’ level of pragmatic awareness was described. This research has shown the results of acceptable level of pragmatic awareness, but they do not have enough pragmatic knowledge. Despite the emphasis on the need for professional, communicative, and pragmatic abilities, IT specialists do not have an acceptable level of
pragma-communicative sub-competence. A fairly limited number of investigations have been conducted to form pragmatic competence among EFL/ESL students, but the absence of studies on IT specialists’ pragmatic competence cause to a new investigation. Liu [23] investigated the differences between outside and classroom environment on the development of pragmatic competence. The results revealed that compared to the environment outside the class, language classes are considered as a poor environment for the development of pragmatic abilities in the target language, since they usually provide low interaction with native speakers of the target language. The pragma-professional communicative competence has four components such as pragma-communicative sub-competence, functional-projective sub-competence, discursive-industrial sub-competence and pragma-creative sub-competences (Fig.).

**Pragma-communicative sub-competence** depicts the ability to evaluate the communicative situations and select the appropriate communication tool [1].

**Functional-projective sub-competence** includes the ability to understand the various types of communications/texts and build/project logical, sequential and holistic statements by using functional styles of foreign language.

**Discursive-industrial sub-competence** is the ability to use meta-language in adequate spoken and written discourse.

**Pragma-creative sub-competence** is the ability to generate/create new ideas and provide original solutions to the pragma-professional problems. The listed sub-competences can be formed only in the course of foreign language training and only under the conditions of a certain way of organized learning, which is presented below by the PPCC formation stage.

Figure. Stages of the formation of IT specialty students’ pragma-professional communicative competence

These stages help to form student’s pragma-professional communicative competence. The participants of the research were 2nd year IT specialty students. The stages were implemented in their English for Specific Purposes Courses and pre and post-tests were taken. The experiment was conducted for 4 weeks and identified whether the selected stages work or not.

**Results and discussions**

Participants of the study were 208 IT specialty students majoring in Computer Science and Mathematical Modelling. Sophomore university students were selected as a sample because they are capable enough to be involved in experiment and need to form new competence according to the need analysis. Ten students were selected to be interviewed about the experiment and their perceptions of pragma-professional communicative competence. Experiment was held during their fall semester. The pre-test and post-tests were taken and analyzed with quantitative research tools. Pre-test and post-test questions consisted of 40 multiple choices, definition, filling in the gaps, and matching.

As a result of the experiment, it can be displayed the students’ pre and post-test results.
Pre-test of experimental and control groups

<table>
<thead>
<tr>
<th>Levels</th>
<th>Grades</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Students %</td>
<td>Students %</td>
</tr>
<tr>
<td>High</td>
<td>90-100</td>
<td>21 20 %</td>
<td>26 26 %</td>
</tr>
<tr>
<td>Middle</td>
<td>75-89</td>
<td>45 44 %</td>
<td>53 54 %</td>
</tr>
<tr>
<td>Low</td>
<td>50-74</td>
<td>38 36 %</td>
<td>21 20 %</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>104 100 %</td>
<td>104 100 %</td>
</tr>
</tbody>
</table>

Overall students of the experimental group were asked to answer 40 questions related to their profession and IT related topics. 21 students got higher results which means average 90-100 points, while 45 students got 75-89 points, and other 38 students got lower grades as 50-74. However, 26 students got higher, while 53 students got middle results, and the other 21 students got the lowest grade. Before the implementation of the stages, the experimental and control groups’ pragma-professional communicative competence was at the same level.

Post-test results of the experimental and control groups

<table>
<thead>
<tr>
<th>Levels</th>
<th>Grades</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Students %</td>
<td>Students %</td>
</tr>
<tr>
<td>High</td>
<td>90-100</td>
<td>58 57 %</td>
<td>39 37 %</td>
</tr>
<tr>
<td>Middle</td>
<td>75-89</td>
<td>44 43 %</td>
<td>35 34 %</td>
</tr>
<tr>
<td>Low</td>
<td>50-74</td>
<td>12 10 %</td>
<td>30 29 %</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>104 100 %</td>
<td>104 100 %</td>
</tr>
</tbody>
</table>

In pre and post-tests students had to answer the same number of questions. 58 students of the experimental group had a high level, while 39 students of the control group got the same level. As it is seen, there is a significant change in the experimental group. However, in the middle level there is no significant change, 35 and 44 students got middle level. The other 12 students of the experimental group had a low level, in comparison to the control group 30 students had a lower level rather than experimental group students.

Thus, the average students of the experimental group had 73 points in pre-test, while in the post-test they got 90 points on average. On the contrary, the control group during the pre-test had 75, but in the post-test, they got 80 points. There we can say that experimental group students had a slight significant result rather than control group students. As the table shows, the implementation of stages for the formation of IT specialty students’ PPCC was successful.

Focus group interview was aimed to identify students’ perceptions of the formation of pragma-professional communicative competence and its stages. As this study was interested in understanding the perceptions of students about a focused topic, it was felt that a focus group approach was most appropriate. The reason for utilizing focus groups, rather than individual interviews, was that they were pragmatic and time efficient as they are perceived as a tool that can provide relevant data [24]. Moreover, an informal group discussion approach promotes more relevant data as well as less formality than individual interview [25]. The second reason is focus groups tend to be more informal in nature, this kind of approach would enable the researcher acting as a facilitator or moderator to adopt both direct and indirect approaches in the questioning style to encourage and engage participants. In individual interview the responses might be potentially less dynamic due to the limited interaction whereas in focus group participants are engaged more [26]. Focus group provides more
chances to researcher to get more relevant and reliable information from participants. Researcher can observe and listen the interaction, thereby having vantage point of picking up unnoticed phenomena.

The researcher believes that students’ perceptions are positive, and stages helped them a lot. Majority of students commented as:

“With the help of new competence, I have learned how to adopt my speech into professional one. We were focusing on new IT terminology and learned how to use language functions in proper way, and it helped a lot.” S3

“The stages were clear and precise to complete. I understand that there are several ways of using particular words and functions in particular situations.” S6

“We learned how to create professional like situations and created dialogues to cope with those situations.” S5

“For me it was useful to learn new words that I can use in different context. Generally, I liked the course.” S1

“I liked the way teacher explained everything in detail and gave tasks according to the stages, so those tasks helped us to acquire stages and new competence. Teacher explained the term pragmatics and pragmatic-professional communicative competence, after that the stages had a meaning to complete them.” S8

“It was difficult for me to understand how to apply foreign language functions into professional situations. Other three stages were easy enough to acquire.” S7

It is noticeable that students enjoyed the learning process and given stages helped them in various ways. While some students commented that they struggled to acquire last stage. Focus group interviews are helpful to negotiate and analyze each other’s opinions. It provides more relevant and valid information about researched phenomena.

Conclusion

The article focused on the implementation of the stages for the formation of IT specialty students’ pragma-professional communicative competence. The experiment took place for four weeks and the experimental group had a significant result. The research described the components of pragma-professional communicative competence, and the definitions were given. The stages can be used for further studies and can be updated according to the needs of the students and specialists.

References


7 Vu N.M. Teaching pragmatics in English as a Foreign Language at a Vietnamese university: Teachers’ perceptions, curricular content, and classroom practices [Electronic resource] / N.M. Vu — 2017. Access mode: http://hdl.handle.net/2123/16157


15 Колышек, Г. К. Лингвокоммуникативные аспекты речевого общения / Г. К. Колышек. // Иноземные языки в школе. — 2006. — ISSN: 0130-6073
17 Щукин А.Н. Теория обучения иностранным языкам (лингводидактические основы) / А.Н. Щукин. — 2012.

К.Т. Жайыкбай, Г. Дянкова, Т.З. Жусипбек

**ИТ мамандығы студенттерінің шет тілін өқытудағы праґма-қәсіби коммунікативтік құзыреттілігін қалыңтаястыру кезеңдері**

Макалада IT мамандығы студенттерінің шет тілін өқытудағы праґма-қәсіби коммунікативтік құзыреттілігін қалыңтая аударып, оның әр түрлі құзыреттілікті қалыңтаясыз тәрізді салу ықтімділігін анықтау қамтыйды. Ол, олардың мәдениетінен қалыңтаятын тәрізді оқытудағы кеңейтін құзыреттілік қалыңтаясыз тәрізді оқытуға қатысты. 

**Кізіл сөздер:** шет тілін өқыту, кезеңді, праґма-қәсіби коммунікативтік құзыреттілік, IT мамандығы, қабылдау, қалыңтаясту, праґма-қәсібі, експеримент.
К.Т. Жайыкбай, Г. Дянкова, Т.З. Жусипбек

Этапы формирования прагма-профессиональной коммуникативной компетенции студентов IT-специальностей в иноязычном образовании

В статье рассмотрены этапы формирования прагма-профессиональной коммуникативной компетенции студентов IT-специальностей в иноязычном образовании. Прагма-профессиональная коммуникативная компетенция имеет четыре субкомпетенции, такие как прагма-коммуникативная, функционально-преквентивная, дискурсивно-производственная и прагма-творческая. Авторы провели эксперимент с 208 студентами IT-специальностей. 10 студентов были отобраны для проведения фокус-группового интервью. Эксперимент был направлен на выявление эффективности осознания этапов формирования названной компетенции. Перед экспериментом были подробно разъяснены понятие «прагма-профессиональная коммуникативная компетентность» и этапы формирования. Предвестные и поствестные вопросы составляли из 40 различных вопросов. Были проанализированы результаты пре- и посттестов. Экспериментальная группа показала значительное изменение с 73 до 90 баллов. Фокус-групповое интервью было направлено на выявление представлений студентов о формировании прагма-профессиональной коммуникативной компетентности и его этапах. Поскольку данное исследование имело цель — понять степень восприятия студентами определенной темы, авторы пришли к выводу, что подход фокус-группового интервью наиболее подходящий. Причина использования фокус-группового, а не индивидуального интервью заключалась в том, что первые являлись прагматическими и эффективными по времени, поскольку воспринимались как инструмент, который может предоставить соответствующие данные. Результаты фокус-группового интервью показывают, что студенты воспринимают этапы формирования ПКК как полезные и удобные для применения в обучении иностранному языку.

Ключевые слова: иноязычное образование, этапы, прагма-профессиональная коммуникативная компетентность, IT-специальность, восприятие, формирование, фокус-группа, эксперимент.

References

7 Vu, N.M. (2017). Teaching pragmatics in English as a Foreign Language at a Vietnamese university: Teachers’ perceptions, curricular content, and classroom practices. Retrieved from http://hdl.handle.net/2123/16157


16 Bespalova, S.V. & Afinogentova, A.A. (2020). Chienie s ostanovkami i voprosy Bluma kak sposoby razvitiia umenii re- fleksivnogo chtenia (angliiiskii yazyk, yazykovoi vuz) [Reading with stops and Bloom’s questions as ways to develop reflective reading skills (English language, Language University)]. *Dnevnik nauki — Science diary* [in Russian].

17 Shchukin, A.N. (2012). Teoriia obuchenii inostrannym yazykam (lingvodidakticheskii osnovy) [Theory of teaching foreign languages (linguodidactic foundations)] [in Russian].


