EXPERIMENTAL WORK ON TEACHING FUTURE TEACHERS
SECOND FOREIGN LANGUAGE PRONUNCIATION

Higher pedagogical educational establishments provide their students with an opportunity to become a teacher of two foreign languages. This leads to the necessity of working out teaching methods which allow forming the sufficient level of professional phonetic competence in the second foreign language during a limited period of time. The novelty of the research is in the theoretical grounding and elaborating of methods of forming future teachers’ phonetic competence in English as the second foreign language after German by means of developing the cyclic model of this process and the corresponding subsystem of exercises. The paper aims to present the results of the experimental verification of the effectiveness of the developed methods. The conducted pedagogical experiment started with a test whose results became evidence of a rather low level of future teachers’ phonetic competence in English as the second foreign language and proved the need for systematic work on its development. Experimental training was conducted according to two variants of teaching methods. Variant A was based on the author’s cyclic model of professionally oriented teaching of English pronunciation after German that included the introductory theoretical-practical and practical parts and took into account future teachers’ experience in learning the native and first foreign languages. Variant B was different from Variant A in relying in the teaching process only on the students’ native language. The results of the test carried out after the experimental teaching proved the effectiveness of both variants. However, the comparison of the increased indices of professional phonetic competence levels led to the conclusion that Variant A is much more effective. Thus, it can be regarded more preferable while implementing the developed methods into the teaching process.

Keywords: foreign language communicative competence, future teachers, professional phonetic competence, the first foreign language, the second foreign language.

Introduction
In the context of our country’s integration into European political, economical and educational space the knowledge of several foreign languages is fundamental for an individual’s professional development. The most widespread European languages studied at philological departments of Ukrainian pedagogical universities are English and German. Thus, obtaining the specialty of a teacher of two foreign languages, university graduates must demonstrate the level of professional communicative competence that is sufficient for teaching others both in the first and (FL1) in the second foreign language (FL2). Special attention should be paid to the formation of phonetic competence as a constituent of foreign language communicative competence, since teachers’ pronunciation is perceived as the model by their students acquiring a foreign language.

Over the last decades one can observe extensive research on methods of professionally oriented teaching of foreign language pronunciation. V. M. Gutnyk developed methods of teaching pronunciation to future German teachers in the introductory corrective communicative course [1]. A. V. Dolya worked out methods of developing future English language teachers’ phonetic competence in self-directed learning [2]. Training students to teach English language prosody to schoolchildren became the subject of O. V. Lanova’s candidate’s thesis [4]. V. V. Perlova devoted her thesis to studying the peculiarities of forming professionally oriented English language pronunciation subskills [7]. The scientists also considered the problem of future teachers’ knowledge of phonetics and phonology [14], as well as their phonological awareness [15]. However, the question of forming future teachers’ professional phonetic competence while teaching English as FL2 after German still remains open. Insufficient studying of this issue and an immediate necessity for future teachers to acquire the pronunciation of English as FL2 after German to the extent which would enable them to perform successful teaching practice, stipulates the need of its more particular study.

It should be noted that we define professional phonetic competence in FL2 as teachers’ ability to make phonetically correct FL2 utterances, adequately understand others in situations of intercultural foreign language communication as well as to effectively form their students’ phonetic competence taking into account the their experience of learning the native (NL) and FL1 [8, p. 127].

Having defined the content of professional phonetic competence in the English language as FL2 [8], the linguistic basis [9] and the psycholinguistic peculiarities of future teachers’ acquisition of FL2 pronunciation [12], we theoretically grounded and developed the methods of forming future teachers’ phonetic competence in English relying on their German language phonetic competence whose effectiveness needed experimental verification.
Aims and Tasks
The paper aims to present the results of the experimental verification of the effectiveness of the suggested methods. The aim realization requires solving the following tasks: to outline the contents of the developed methods; to describe the process of organizing and conducting the experimental work; to analyze and interpret the received empirical data.

The Suggested Technique
The developed methods consist in professionally oriented incremental formation of future teachers’ phonetic competence in English as FL2 after German basing on the teaching principles [13], which we defined taking into account the theoretical premises of this process [9; 12], the elaborated subsystem of exercises [11] and the cyclic model of teaching pronunciation [10].

We distinguish the following principles of teaching FL2 pronunciation to future teachers:

1) identical to those used in teaching FL1 pronunciation (the principles of activeness, durability, communicative orientation, integrated formation of communicative skills and subskills, simultaneous introduction and parallel practicing of segmental and suprasegmental phonetic units, incremental formation of phonetic competence);

2) modified owing to the peculiarities of teaching future teachers FL2 pronunciation (the principles of students’ awareness, use of visual aids, scientific character of the teaching process, feasibility and progress from simple to complex);

3) specific for the process of forming professional phonetic competence in English as FL2 after German (the principles of considering artificial subordinative multilingualism, contrastiveness, intensification) [13].

Considering the ways of their realization [13] we created the subsystem of exercises for forming future teachers’ professional phonetic competence in English after German [11] which is based on bilingual and multilingual exercises involving the peculiarities of English phonetic units in comparison with NL and FL1.

The examples of exercises for forming phonetic knowledge, subskills and skills in the process of professionally oriented teaching of English pronunciation after German are provided below.

Example 1 (multilingual exercise)
Aim: to form phonetic knowledge about the articulatory peculiarities of Eng. [ŋ] in comparison with Germ. [ŋ], Eng./Germ. [n] and Ukrainian/Russian [н].

Instruction: Step 1. Look at the profile of the articulation of the Eng. [ŋ], pronounce this sound and underline its phonological characteristics:

Step 2. Analyze the profiles of the articulation of the Germ. [ŋ], Eng./Germ. [n] and Ukr./Rus. [н]. Which sound is identical to the Eng. [ŋ]? Which sounds are different from it? In what way?

Example 2 (multilingual exercise)
Aim: to form phonetic knowledge about the articulatory characteristics of Eng. [h] in comparison with Germ. [h] and [ç] and Ukr./Rus. [x].

Instruction: Tick the characteristics of the sounds:

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Example 3 (bilingual exercise)
Aim: to form the subskills of pronouncing Eng. [ŋ].

Task: Listen and repeat. Pronounce the sound [ŋ] like in the Germ. word «Banks»:
1. Hank [hæŋk]
2. Frank [fræŋk]
3. uncle ['ʌŋkl]
4. wedding ['wedɪŋ]
5. getting ['getɪŋ]
6. giving ['ɡɪvɪŋ]
7. going ['ɡəʊɪŋ]
8. holding ['həʊldɪŋ]
9. marrying ['mærɪŋ]
10. something ['sʌmθɪŋ]

Example 4 (bilingual exercise)

**Aim:** to form the subskills of using the falling melody of special questions.

**Instruction:** *Step 1.* Work in pairs. **Student A:** You are interviewing a job applicant for the position of a tutor at a pedagogical university. Ask him/her the special questions below to find out whether he/she suits the job. Use falling melody like in the Germ. special question “Was haben Sie gemacht?”

1. What is your current occupation? 2. Why should we hire you? 3. Why do you think you can be useful for our company? 4. Why do you want to work for us?

**Student B:** You are an applicant for the position of a tutor at a pedagogical university. Answer the interviewer’s questions to make a good impression on him/her. **Step 2.** Change roles.

Example 5 (multilingual exercise)

**Aim:** to form professional skills to demonstrate the difference in the pronunciation of Eng. [θ], Germ. [s] and Ukr./Rus. [с]. in minimal bilingual pairs of words.

**Instruction:** Read the minimal pairs aloud demonstrating the difference in the pronunciation of the words:

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<td>bath – Bass</td>
<td>bath – ɓac</td>
<td>bath – ɓac</td>
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<tr>
<td>path – Pass</td>
<td>path – nac</td>
<td>path – nac</td>
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Example 6 (bilingual exercise)

**Aim:** to form professional skills to locate and analyze pronunciation mistakes in others’ speech.

**Instruction:** *Step 1.* Listen to your groupmate reading the text below. Underline the words in bold which he/she pronounces without aspirating the sounds [p] or [t]:

When my parents went to work in the morning I stayed with my grandparents. My grand-dad, Ted, took me for a drive in the country and my granny, Pamela, made delicious pies.

**Step 2.** Does absence of aspiration lead to a foreign accent or the change of meaning? What language(s) that you know can cause such a mistake in English?

The teaching principles and the subsystem of exercises provided the basis for creating the cyclic model which presupposes incremental formation of professional phonetic competence in English after German and consists of two subcycles. The theoretical-practical subcycle is devoted to the students’ introduction to the main components of FL2 phonetic system and the initial automation of their use relying on FL1 and NL. The practical subcycle aims to further develop the subskills of using separate FL2 phonetic units using future teachers’ experience in learning FL1 and NL [10].

**Research Methods**

For the validation of the developed methods we chose forming field pedagogical experiment which was conducted in two series and included five stages: diagnostic, prognostic, organizational, practical and generalizing. The diagnostic stage aimed at studying psychological and pedagogical theory with further determination of theoretical premises of FL2 professional phonetic competence development [9; 11]. Taking into account the mentioned premises we set up the hypothesis that incremental organization and professional orientation of the teaching process, as well as the use of exercises and techniques which are based on students’ experience in acquiring not only the NL, but also FL1 will make a considerable contribution to the increase in the effectiveness of forming future teachers’ FL2 phonetic competence.

The verification of the formulated hypothesis stipulated the necessity to set the following objectives of the both series of experimental work: 1) to define the initial level of the students’ professional phonetic competence in FL2; 2) to conduct experimental teaching of English pronunciation after German to future teachers; 3) to define the achieved level of professional phonetic competence in English; 4) to conduct a poll aimed at analyzing students’ attitude to the developed methods; 5) to compare, analyze and interpret the received empirical data; 6) to make conclusions regarding the effectiveness of the developed methods.

During the organizational stage we defined variable and invariable factors of the experiment and chose its participants.

19 future teachers took part in the first series of the experiment (Term 1, Academic year 2015 – 2016), and 22 participated in the second series (Term 2, Academic year 2016 – 2017). All the participants were first-year students of Foreign Philology Department of H. S. Skovoroda Krarkiv National Pedagogical University.
Thereby, the experimental training involved 41 students who studied English as FL2. The groups of the first series received the codes EG1 and EG2; the ones of the second series were called EG3 and EG4.

The only variable factor of the experiment was variants of methods. Variant A (EG1 and EG3) was based on the developed cyclic model and presupposed the consideration of students’ experience of learning both NL and FL1. Variant B (EG2 and EG4) was different from Variant A in exclusive reliance on future teachers’ NL.

To define the students’ interiorized level of professional phonetic competence at the initial stage of studying FL2 at university we commenced the practical stage of the experiment with a pre-experimental test that lasted 3 class hours in each group and included 25 subtests of such formats as multiple choice, matching, reading aloud, imitation and roleplay. Regarding the contents of professional phonetic competence in English as FL2 [8], we chose such objects of assessment: differential sensibility to phonetic units of FL2 in comparison with NL, phonetic knowledge, phonetic subskills in listening, phonetic subskills in reading aloud, phonetic subskills in speaking and phonetic skills of locating pronunciation mistakes in other people’s speaking.

It is necessary to note that we differentiated between four levels of FL2 professional phonetic competence development: initial, medium, sufficient and high. The index lower than 0.6 was considered to be initial. According to 100-point grading scale it is equal to 1 – 59 points and traditionally corresponds to the “unsatisfactory” grade in Ukrainian pedagogical higher educational establishments. The index 0.6 – 0.73 presented the medium level. It equates to 60 – 73 points and in the process of teaching future teachers is regarded to be “satisfactory”. The level which equaled to 0.74 – 0.89 (74 – 89 points) was sufficient that according to the traditional national scale is considered to be “good”. The high level of professional phonetic competence equaled to or was higher than 0.9 (90 – 100 points) and was the ground for receiving the “excellent” grade.

The students’ level of the main components of professional phonetic competence in FL2, that corresponded to the objects of assessment, was defined according to qualitative and quantitative criteria which is a conventional approach in teaching foreign languages [6, p. 171].

Determining the index of the development of differential sensibility to phonetic units of FL2 in comparison with NL we considered the qualitative criteria such as: 1) the correctness of students’ perception of similarities/differences between speech units pronunciation in English and NL; 2) the accuracy of the pronunciation of the speech units reproduced by the students relying on their NL to the English language pronunciation standards.

The qualitative criteria for defining the level of the development of phonetic knowledge were the correctness of students’ understanding of: 1) phonetic characteristics of English sounds and their peculiarities as compared to NL; 2) peculiar properties of English suprasegmental phonetic units in comparison with NL.

In order to assess the level of phonetic subskills in listening we took into account the correctness of students’ perceiving articulatory-acoustic features of sounds, pronunciation of words, sentences and larger speech unit in FL2.

The correspondence of the pronunciation of speech units reproduced by students to the English language standards became the qualitative criterion while determining the level of phonetic subskills in speaking and reading aloud. An additional qualitative criterion in the latter was the speed of reading.

Assessing the level of students’ phonetic skills of locating pronunciation mistakes was conducted according to the qualitative criterion of the correctness of perceiving the absence/presence of pronunciation inaccuracies while listening to others speaking English.

The results of all the subtests were subjected to quantitative analysis. To define students’ indices of the development of separate phonetic competence components we divided the number of correct answers in each subtest by the number of maximum correct answers which could possibly be given in this part of the test and calculated the arithmetic mean of the results of all the subtests aimed at assessing some definite component. The general level of students’ professional phonetic competence was equal to the arithmetic mean of the indices, received for all the objects of the assessment.

While evaluating the subtests on imitation, reading aloud and roleplay the correct answer was considered to be students’ accurate reproduction of all the phonetic characteristics of sounds, their modifications in connected speech, word stress, phrasal stress, rhythmic patterns and melody types. The incorrect answer was the distortion of these characteristics.

The speed of speech was calculated by dividing the number of syllables by the duration of utterance in minutes. To define the index of the development of phonetic subskills according to this criterion we divided the students’ speed of reading by the average speed of FL2 speech that constitutes 240 syllables a minute.

The main criterion of the effectiveness of the developed methods was considered to be achieving the sufficient level of the development of the main phonetic competence components by most students as a result of the experimental teaching.

Having finished the experimental teaching we conducted a test following the principles identical to those used in pre-experimental testing, and a written poll of the students aiming to study their attitude to the suggested methods.

The generalizing stage of the experiment was devoted to analyzing and interpreting the received empirical data.

Research Results

Empirical findings received in the pre-experimental testing allow us to draw an inference that the level of all
the groups’ professional phonetic competence is rather low (see Table 1). 29% of the students demonstrated the index of success lower than 0.6. The level of the rest 71% was medium. This proves the necessity of systematic formation of professional phonetic competence in the process of teaching English after German.

Table 1.

Comparison of Pre- and Post-Experimental Tests Results

<table>
<thead>
<tr>
<th>Group code</th>
<th>Indices of students’ success (separate objects of assessment)</th>
<th>Average indices of success</th>
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<td>1</td>
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<tr>
<td>EG1</td>
<td>Before experiment</td>
<td>0.61</td>
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<td>After experiment</td>
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<td>EG2</td>
<td>Before experiment</td>
<td>0.61</td>
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<td></td>
<td>After experiment</td>
<td>0.81</td>
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<td>EG3</td>
<td>Before experiment</td>
<td>0.63</td>
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<td></td>
<td>After experiment</td>
<td>0.91</td>
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<td>EG4</td>
<td>Before experiment</td>
<td>0.61</td>
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<td></td>
<td>After experiment</td>
<td>0.82</td>
</tr>
</tbody>
</table>

List of symbols:
1 – differential sensibility to FL2 phonetic units in comparison with FL1 and NL; 2 – phonetic knowledge; 3 – phonetic subskills in listening; 4 – phonetic subskills in reading aloud; 5 – phonetic subskills in speaking; 6 – phonotics skills of locating pronunciation mistakes in other people’s speaking.

One of the lowest indices of students’ success was received for the object of assessment “phonetic knowledge” (see Table 1), where 32 students (78%) showed the initial level. Such results bear evidence to the fact that the theoretical aspect of the language is the most difficult to acquire and, considering the need of professional orientation of future teachers’ training, requires special attention.

The highest indices were received for the subtests on phonetic subskills in speaking (see Table 1), where 37 students (90%) were assessed to have the level 0.6 and higher. Its logical explanation could be that while speaking an individual uses familiar language units, thus, the percentage of correctly pronounced words and intonation groups is, as a rule, bigger than in reading aloud.

At the end of experimental training the average indices of the level of phonetic competence formation in all the groups for all the objects of assessment changed considerably in comparison with the pre-experimental test results (see Table 1). All the participants of the experiment reached the index 0.74. 10% of them had the high index of success. It proves the effectiveness of the both variants of methods.

It should be mentioned that the level of phonetic knowledge is the lowest one in all the groups that can be explained by its low initial indices. Such results can be improved provided that the period of implementing the suggested methods is extended.

On the basis of comparing the pre- and post-experimental tests results we built a diagram to visually represent the increase in the level of FL2 professional phonetic competence formation (see Figure 1).

In Figure 1, we can see that the average increase of the level of phonetic subskills in speaking in all the groups is the lowest. We explain this by its quite high
Discussion

The empirical data received in the process of experimental teaching confirm the conclusions made by V. M. Gutnyk [1] and V. V. Perlova [7] about the expediency of professional orientation of teaching foreign pronunciation to future teachers and are consistent with the results of Y. M. Kazhan’s [3] and L. V. Molchanova’s [5] studies on teaching future teachers the second foreign language.

Conclusion

Having put forward the hypothesis about possible facilitation of teaching FL2 pronunciation by means of considering students’ experience in acquiring other languages, we conducted the experimental training. The analysis of the empirical data received in the pre-experimental testing enabled us to make a conclusion that the level of future teachers’ phonetic competence in FL2 was low and required further systematic development. As a result of variable training all the participants of the experiment demonstrated the sufficient or high level of FL2 professional phonetic competence. However, the indices, received by the students of EG1 and EG3 appeared to be much higher than those of EG2 and EG4 that confirmed the hypothesis and stipulated the necessity of implementing Variant A of methods in the process of teaching.

The results of the poll proved that students’ attitude to the developed methods is on the whole positive. The findings serve the ground for working out methodological recommendations regarding the use of the developed model of professionally oriented teaching of FL2 pronunciation in pedagogical universities.

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**ЛІТЕРАТУРА**


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ЕКСПЕРИМЕНТАЛЬНА РОБОТА З НАВЧАННЯ МАЙБУТНІХ УЧИТЕЛІВ ВИМОВИ ДРУГОЇ ІНОЗЕМНОЇ МОВИ

Вищі педагогічні навчальні заклади надають можливість своїм студентам отримати спеціальність учителя двох іноземних мов. Це зумовлює необхідність у розробці методик, яка дозволяє найбільш ефективно протягом обмеженого часу формувати в майбутніх учителях англійську вимову після німецької.

Метою дослідження було теоретично обґрунтувати та розробити методику формування в майбутніх учителях вимови після німецької, що включала вступний теоретично-підготовчий аспект. Експериментальна робота була розподілена на дві стадії: варіант А – розроблені автором циклічні моделі професійної фонетичної компетентності у майбутніх учителях англійської мови після німецької, а варіант Б – розроблені автором циклічні моделі професійної фонетичної компетентності у майбутніх учителях іноземної та рідної мов.


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