

DEVELOPMENT OF PROSPECTIVE EFL TEACHERS' QUESTIONING SKILLS IN CLASSROOM DISCOURSE: INTERDISCIPLINARY APPROACH

Tetiana Yeremenko,¹

PhD (Philology), Professor, Head of the Department of the Germanic Philology and Methods of Teaching Foreign Languages

State institution "South Ukrainian National Pedagogical University named after K. D. Ushynsky", Odesa, Ukraine

eremenkote53@gmail.com

ORCID: 0000-0003-2840-8465

Iryna Lukyanchenko,²

PhD (Pedagogy), Associate Professor, the Department of the Germanic Philology and Methods of Teaching Foreign Languages

State institution "South Ukrainian National Pedagogical University named after K. D. Ushynsky", Odesa, Ukraine

dajlin2009@gmail.com

ORCID: 0000-0003-4762-0736

Angelina Demchuk,³

PhD (Philology), Associate Professor, the Department of the Germanic Philology and Methods of Teaching Foreign Languages

State institution "South Ukrainian National Pedagogical University named after K. D. Ushynsky", Odesa, Ukraine

angelinushka12@yahoo.com

ORCID: 0000-0003-0894-1684

Abstract. *The research is devoted to the problem of mastering pre-service EFL teachers' specific proficiency in using questions as an effective tool in the EL classroom discourse and university discourse. The purpose of the paper is to submit the teaching scheme of training pre-service EFL teachers' questioning skills, encouraging them to work out their own teaching*

¹Co-author, responsible for conceptualization, methodology, validation, investigation, resources, data curation, writing an original draft, review and editing, supervision, project administration.

² Corresponding author, responsible for conceptualization, methodology, validation, formal analysis, investigation, resources, data curation, writing an original draft, review and editing, visualization.

³ Co-author, responsible for conceptualization, methodology, validation, investigation, resources, data curation, writing an original draft, review and editing, visualization.

strategies in the future professional activity. The authors substantiate the possibility of improving MA students and pre-service EFL teachers', questioning skills via suggested teaching scheme actualising interdisciplinary connections between the practical course ("English Communication in Academic Discourse") and theoretical-practical course ("Theory and Practice of Speech Communication") and students' teaching practice that are majors of the Master's degree curriculum. The emphasis is laid on the content level – EL classroom discourse acquisition. The experiment was conducted involving 90 MA students, pre-service EFL teachers, of South-Ukrainian National Pedagogical University named after K. D. Ushynsky to clarify the efficiency of the suggested teaching scheme. Data were obtained and analysed via pre-experimental assessment stage, experimental teaching (implementation of the suggested teaching scheme), post-experimental assessment stage employing quantitative and qualitative research methods. Data collection procedures included pedagogical observation, analysis of the students' results, self-assessment questionnaire, student's opinion questionnaire, statistical and mathematical processing of obtained data. The findings of the research indicate that the suggested teaching scheme using interdisciplinary approach helps students become more proactive in constructing their knowledge of questions linguodidactic potential, to transform the acquired knowledge to new ways of verbal behaviour, to model successful communication in the EL classroom through appropriate questions, and to modify their teaching styles. The authors come to the conclusion that it is mandatory to include special consecutive training covering initially purely practical courses with a gradual shift to theoretical-practical ones, and finally – teaching practices as a closing step to improve students' proficiency in using questions effectively in the EL classroom school and university discourse.

Keywords: *questioning skills, teaching strategy, English language classroom discourse, interdisciplinary approach, teaching scheme, pre-service teachers*

1. INTRODUCTION

Modern researches in pragmatics, applied linguistics and EL teaching methodology demonstrate an increased interest in questioning speech acts, questioning as a didactic tool in discourse in general, and in classroom discourse in particular. Questioning is reasonably claimed to be an indispensable and recurrent teaching/learning move in the context of classroom discourse. However, this aspect of prospective EL teachers' professional development is somewhat neglected.

Scientists agree that questioning is an integral part of EL classroom discourse. According to M. Boyd, "questioning is a teacher's most used, and arguably most powerful talk move" (Boyd, 2015, p. 373). The author also states that the question is "the teacher's discursive move of choice" (Boyd, 2015, p. 372). It is in line with other research works that argue the important role of questioning in the EL classroom (Tagnin, Ni Riordain, 2021;

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Wong, 2010). According to Parashchuk (2017), "questions form an important aspect of effective pedagogy" (p. 90).

Focusing on pragmatics of questioning speech acts, Strelchenko (2019) describes echo questions, their illocutionary characteristics and the ways of their realisation in the English conversational discourse. Rosemeyer (2020) studies discourse pragmatics of interrogatives, its forms and functions in English and other languages.

The results of various studies dealing with questioning as a didactic tool prove that appropriately chosen questions encourage students to actively participate in the classroom discussions, effectively respond, not only to interact more with each other but listen to each other's contribution (Jan, Talif, 2015). Kao and Weng (2012) stress that the types, not the quantity of questions, determine the interactive level of the English lesson. This statement is sustained by other researchers who claim that the types, cognitive level, and complexity of the questions directly influence students' interaction levels in EFL classrooms (Al-Zahrani, Al-Bargi, 2017; Rimmer, 2019).

Focusing on the nature of questioning used by teachers in interactive classrooms, Khoza and Msimanga (2021) present data that prove the efficacy of the closed-ended questions for students' prolonged interaction in Physics lessons. Such conclusions actually contradict the previous findings claiming that closed-ended lower-order thinking questions contribute much less to students' cognitive engagement (Tagnin, Ni Riordain, 2021), unlike open-ended questions which are a more effective tool for students' motivation and stimulus for active classroom interaction (Kayima, Jakobsen, 2020). Zhang and Patrick (2012) emphasise the importance of clear understanding by prospective teachers of how to phrase and logically order questions, how to get students' constructive feedback, and, finally, how to use different and appropriate questioning techniques in their future professional activity, in the classroom discourse. Parashchuk (2017) concludes that "questioning strategy is a complex verbal skill with an underlying cognitive structure" which should be included as a special course or a separate academic module in the TEFL University curricula.

Our previous findings proved the efficacy of the interdisciplinary approach in developing MA students' questioning skills in classroom discourse (Yeremenko, Lukyanenko, 2020), that goes somewhat against V. Parashchuk's suggestions. This article continues our research into the subject of developing pre-service EFL teachers' questioning skills on the basis of the interdisciplinary approach. Unlike the traditional interpretation of the interdisciplinary approach as a "specific interaction between two or more disciplines" (Toala, Corria, 2021), we imply not only the interaction of two courses ("English Communication in Academic Discourse" and "Theory and Practice of Speech Communication") but also two teaching practices (the teaching practice at High School and University), realised consecutively within one academic year. In our case, the focus is on prospective EFL teachers' questioning skills. Thus, the interdisciplinary connections are actualised at the content level through EL classroom discourse acquisition by combining the content of overlapping themes ("Questioning in Classroom Discourse" and "Classroom Discourse: From Theory to Practice"). The interdisciplinary approach, on the one hand, is aimed at connecting a purely practical course with a theoretical-practical one

(difficulties in using questions effectively as a professional tool in the EL classroom discourse are smoothed out via integrated synthesis of knowledge); on the other hand, this approach promotes the complex application of theory and experiential approbation in practice teaching at High School and University.

The **aim** of the article is to suggest effective ways of improving MA students' questioning skills, encouraging them to work out their own teaching strategies in their future professional activity.

The **hypothesis** is that the suggested teaching scheme, based on interdisciplinary connections within the content of the practical and theoretical-practical courses, and students' school and university teaching practices, would result in improving MA students' specific proficiency in using questions as an effective tool in the EL classroom interaction. Two main consequences following from the hypothesis formulated in this way are singled out. First, the effectiveness of improving MA students' questioning skills is achieved through the use of interdisciplinary connections within the content of the course as well as students' teaching practice. Secondly, the realisation of interdisciplinary connections within the content of the practical, theoretical-practical courses as well as students' school and university teaching practices is more effective than within a theoretical-practical course and students' university teaching practice.

2. METHODS

2.1. Research Design

Both quantitative and qualitative research methods were chosen for data collection purposes in order to reach the validity and reliability of the study. Quantitative methods were involved to analyse and interpret experimental data of the study which were collected via testing for skills level assessment. Qualitative research methods were used to reveal how the educational effect was realised and to corroborate the data.

2.2. Participants

The study was conducted in South-Ukrainian National Pedagogical University named after K. D. Ushynsky, Odessa, Ukraine in 2019/2020 and 2020/2021 academic years. MA students majoring in English Language and Literature (N=90) and researchers (N=3) were the participants in the research. The MA students were all of the 1st year of study. The researchers, experienced EFL lecturers, organised data collection, data analysis and data report, which involved their work in the format of facilitators, focusing on developing pre-service EFL teachers' professional speech skills of using questions effectively in EL classroom discourse.

2.3. Instruments and Procedure

Two groups of students were formed EG-1 (N=45) and EG-2 (N=45). The groups were approximately equal in their educational achievements. Students of EG-1 were suggested the scheme of work for developing MA students' proficiency in questioning in EL classroom discourse realisation within the course "Theory and Practice of Speech Communication" and

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students' teaching practice at University (2nd semester of 2019/2020 academic year). Students of EG-2 worked within the enlarged framework including the course "English Communication in Academic Discourse" and students' teaching practice at High School (1st semester of 2020/2021 academic year). Within the indicated period of time, the educational process was organized in accordance with two different teaching schemes – A for EG-1 and B for EG-2. Each scheme was provided with a special set of tasks for developing and improving students' questioning skills and presupposed the realisation of interdisciplinary connections at the content level through EL classroom discourse acquisition. Scheme A was aimed at connecting a theoretical-practical course and students' university teaching practice, scheme B – at combining the content of overlapping themes within the content of the practical, theoretical-practical courses as well as students' school and university teaching practices.

As mentioned above, the interdisciplinary approach was realised through actualising interdisciplinary connections between the courses: "English Communication in Academic Discourse", "Theory and Practice of Speech Communication", and students' teaching practice at the content level – EL classroom discourse acquisition.

In the study there were the following stages: (1) pre-experimental assessment stage, (2) experimental teaching, (3) post-experimental assessment stage.

Pre-experimental assessment stage was aimed at assessing MA students' knowledge of question types and their question-generating skills. The students were offered two tasks as follows: (1): to watch a video fragment of the English lesson in the 11th form, to write down the questions used by the teacher and to classify them (a) according to their types and (b) according to their communicative purpose; (2): to read six suggested situations of the classroom interaction and to formulate three questions (for each of them) considering situational communicative context and the pupils' age.

The results were assessed according to the following criteria: (1) the ability to differentiate question types (according to the classification students know); (2) the ability to define the purpose of posing a question; (3) understanding of appropriate questioning in a particular classroom interaction (considering the correspondence of the teacher's questions to the learners' level of English and situational communicative context).

The aim of the experimental teaching was to develop prospective EFL teachers' proficiency in questioning to facilitate classroom interaction. Thus, a special teaching scheme which covers the 1st academic year of the Master degree programme and comprises two consecutive phases was implemented. Phase I was divided into three steps that were implemented within the practical course "English Communication in Academic Discourse" (steps 1, 3), and the teaching practice at High School (step 2) in the 1st semester. Phase II consisted of two steps within the course "Theory and Practice of Speech Communication" (step 1) and the teaching practice at University (step 2) in the 2nd semester. The idea of our teaching scheme is to gradually complicate the tasks aimed at developing and improving students' questioning skills throughout the 1st academic year of the MA programme.

The starting point of Step 1 (Phase 1) was to introduce the classification of question types to the participants of the experimental study as questioning skills are believed to be first

and foremost the ability to identify the types of questions you are going to ask (McComas, Abraham, 2004). As our aim was to increase the MA students' proficiency in questioning as an effective professional tool, the suggested classification correlated with the pedagogical purpose the questions are oriented to in EL classroom interaction.

Thus, on the basis of the classifications overview presented by P. Moritoshi (Moritoshi, 2002), the students were introduced to the following question types: display questions or knowledge check questions (used to ascertain quantity and quality of learner's knowledge, checking it against fixed answers known to the teacher); referential questions (used to obtain unknown information (opinion, attitude, evaluation, learner's original ideas, etc.)) from the respondent, to assist learners in generating genuine information or taking a new direction within the topic under consideration/discussion); interactive questions (used to promote classroom interaction as comprehension checks aimed at obtaining confirmation that the teacher's message was understood correctly, confirmation checks that help the teacher to require the respondent to confirm/disconfirm the assumption presented in a question form in order to interpret learner's understanding of the topic under consideration/discussion, clarification requests aimed at requiring an explanation of the content confusion of a preceding utterance or recoding the previously given information); procedural questions (used to secure classroom management procedure). This classification helped students, prospective EFL teachers, to focus on the teachers' intended purposes (intentions) that are realised in the educational process with the help of questions (eliciting quantity and quality of learner's knowledge, requesting information, his/her opinion, experience, attitude, evaluation, maintaining contact, etc.).

In order to improve MA students' questioning skills in the future professional activity, at first we tried to attract their attention to question types. Thus, Step 1 was initially focused on training one particular type of questions. Taking into consideration MA students' level of English, we focused on developing their skills of operating higher-order questions that "promote deep thinking, requiring students to analyse and evaluate concepts" (Tofade et al., 2013), i.e. involve such cognitive operations as analysis, synthesis and evaluation. All the tasks of Step 1 were aimed at encouraging student-student interaction as follows:

Task 1. Aim: development of the skill to ask interactive questions. Type: communicative productive. Instruction: You are to ask for clarification: (1) Think of an innovation in teaching English as a foreign language. Try to explain what it is, what impact it has had on the modern methodology of teaching English, mention its advantages and disadvantages (if any); (2) Work in a group. Take turns to tell each other about the innovation. Other students should ask for clarification of any points / ideas they do not understand (Could I just check that I got what you meant by ...? Did I hear you correctly when you said...? Could you explain your idea about ... in other words/again? Sorry, but what do you mean by ...? etc.).

Task 2. Aim: development of the skill to ask referential questions. Type: communicative productive. Instruction: You are to ask for evaluation/opinion/experience: (1) Work in pairs: find out about your partner's experience, their opinion/evaluation of online learning during the

quarantine period by asking appropriate questions (How do you assess the quality of online learning? How do you evaluate the appropriateness of the methods used during the online learning period? What advantages/disadvantages of the online learning can you point out? Has your commitment to learning changed due to working online? etc.); (2) Work in a group: share your experience of online learning with your group-mates, expressing your pros and cons. Other students should find an opportunity to ask clarifying questions about things they do not or they are not sure to understand correctly.

The objectives of Step 2 were as follows: to check in practice an improvement of MA students' questioning skills after Step 1 training as well as their ability to apply them in a professionally oriented format, to stimulate meaningful questioning practice in EL classroom discourse. Thus, during teaching practice at High School the participants firstly were offered to fill in observation sheets to find out the distribution of EL teachers' questions they regularly use in the lessons. It was necessary to note down teacher's questions, define their types, functions and classroom activities in which these questions were used. As a task to the lessons when they acted as teachers, participants were asked to fill in a reflective journal to reveal their awareness of the question types they used: to define types of questions, their functions, the correlation between classroom activities and questions implemented. Also MA students were offered to video record their demo lessons (according to the curriculum they are supposed to give two control lessons). Reflection on these during-practice tasks was fostered within Step 3.

Step 3 was carried out during the post-practice period within the same course "English Communication in Academic Discourse". It was aimed at developing pre-service EFL teachers' skills of self-assessment and evaluation of students' progress. Besides, to continue MA students' ability to mastering questioning skills, they were introduced to the classification of question types according to the levels of thinking and cognitive operations, aligned to Bloom's taxonomy: lower-order thinking questions that imply such cognitive operations as knowledge, comprehension, application, and higher-order thinking questions that involve analysis, synthesis, evaluation (Ertmer et al., 2011).

Thus, to reach the stated goal, the participants of the experiment were offered to work in small analyse-share groups of 2-3 to watch video fragments of their demo lessons, to analyse their reflexive journals and to make conclusions about (1) the types of questions (according to their functions, levels of thinking and cognitive operations involved) they used more frequently in the EL classroom discourse; (2) what questions turned out to be the most productive for definite types of classroom activities; (3) what types of questions (according to their functions, levels of thinking and cognitive operations involved) they consider to be the most effective to break/get over the language barrier, to overcome fear of communication in English, to improve pupils' EL fluency; (4) what questions are of higher efficacy to develop pupils' critical thinking, to stimulate teacher-pupil interaction, pupil-pupil interaction.

As mentioned above Phase II was implemented within the course "Theory and Practice of Speech Communication" and the teaching practice at University in the 2nd semester of 2019/2020 for EG-1 and of 2020/2021 for EG-2.

Step 1 of this phase was aimed at stimulating meaningful practice through understanding questioning speech acts (QSAs) which occur in EL classroom discourse, “changing the priority from readymade knowledge to students’ cognitive activity on the basis of careful classroom discourse analysis, building their awareness of learning via cognition” (Yeremenko, Lukyanchenko, 2020, p. 124). Following the same scheme (for EG-1 and EG-2) the work at Step 1 was organised in the form of the joint teacher-student project work “Questioning Speech Acts: Teaching Challenges”. The project work was realised within 3 stages, each including analysis, discussion, result (product). At the 1st stage MA students were introduced to the taxonomy of QSAs, the focus was on developing their skills to distinguish types of QSAs, to analyse their potential impact on the addressee (learner), to define the appropriateness of their use in view of the proficiency level and lesson stage. The taxonomy suggested correlated with the classification given at Step 1 (Phase 1) and was based on the teacher’s intended purposes realised via these QSAs in the classroom discourse (see Yeremenko, Lukyanchenko, 2020, p. 125). At the 2nd stage the participants of the experiment were advised to extend their awareness of QSAs, mastering the skills of versatile analysis of QSAs and their functions in the classroom discourse. The 3rd stage was aimed at developing MA students’ abilities to construct their own repertoire of QSAs, to effectively use their variety in the EL classroom in order to achieve educational goals. The students were offered to work in project groups of 3 at the 1st and the 2nd stages with teacher control in Google Forms and individually at the 3rd project stage. Working over the project “Questioning Speech Acts: Teaching Challenges” MA students were constructing their knowledge of QSAs as a professional tool of EL classroom interaction through understanding the following: What is it? What are the types? How does it function? How is it used? that provided extensive use of QSAs during their teaching practice at University. The work of the project is described in detail in our previous research (Yeremenko, Lukyanchenko, 2020).

As one of the project outcomes MA students were to make a list of QSAs to be implemented during Step 2, i.e. their teaching practice at University that included delivering one lecture and two practical classes. The difference in the procedure of Step 2 in EG-1 and EG-2 was a task to fill in a reflective journal (recommended for pre-service teachers’ questioning skills assessment (Muroda et al., 2020)) as follows: to protocol QSAs used at the lecture and at the practical classes, to define and compare the types and functions of QSAs employed during the lecture and practical classes, to analyse the correlation between classroom activities and QSAs implemented. Like students-participants of EG-1, EG-2 representatives were asked to evaluate themselves in a self-assessment questionnaire (SAQ) to clear up the impact of the suggested project-work format on MA students’ professionally oriented EL classroom questioning skills.

Post-experimental assessment stage was aimed at evaluating MA students’ progress in questioning in EL classroom discourse. The tasks set and grading scale were similar to those used at the pre-experimental assessment stage. Also, students-participants were asked

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to fill in a student's opinion questionnaire (SOQ) to elucidate their opinions and attitudes to the suggested integrated scheme of work.

2.4. Data analysis

The results of EG-1 and EG-2 obtained at the pre- and post-experimental assessment stages were processed with the help of mixed (quantitative and qualitative) analysis. Quantitative methods (mathematical processing of obtained data) were used to calculate every student-participant's total score (assessed in the range from 5 to 30 points) in pre- and post-experimental testing and to define proficiency levels of professionally oriented questioning skills in students of EG-1 and EG-2 (the total score for testing of 25-30 points corresponds to a high level, 19-24 points – to a good level, 13-18 points – to a sufficient level, 5-12 points – to a low level); to determine the mean number in points of each group; to rate the data of self-assessment questionnaires (at the completion of Step 2, Phase II) and the data of opinion questionnaires. In order to ascertain the possibility of experimental teaching, Pearson fitting criterion was employed for the initial levels of skills in EG 1 and EG 2 comparing. To analyse statistical significance of the experimental data which were collected via pre- and post-experimental testing Student's criterion was chosen. Initially, t-criterion of Student for two dependent samples was employed to validate the difference between the achievements of the students of the corresponding group at pre- and post-experimental assessment stages. Further analysis was to compare results obtained by representatives of EG-1 and EG-2 while studying following scheme A (EG-1) and scheme B (EG-2) in order to confirm or refute the difference between the achievements of MA students who studied on the basis of the suggested teaching schemes. For this purpose, t-criterion of Student for two independent samples was used.

Self-assessment questionnaire (SAQ) was to clarify students' thoughts on their own progress in using QSAs effectively in EL classroom discourse. Therefore, it was elaborated on the basis of the student-participants' knowledge and practical skills developed at Step 2. The SAQ was ranked on the 4-level scale: High level – Average level – Low level – Unable. Student's opinion questionnaire (SOQ) was used to get MA students' feedback, their view on the workability and suitability of the suggested teaching scheme. Both questionnaires, the SAQ and the SOQ, were offered to the respondents in the Google form format.

Qualitative methods (observation, analysis of the students' learning activity results) were employed to make qualitative analysis of students-participants' results, to reveal challenges MA students met working on the suggested scheme.

2.5. Ethical Issues

Students-participants gave their voluntarily consent to take part in the experimental study by signing their consents for data processing and participation. They had a possibility to withdraw without any consequences on their status.

3. RESULTS

The suggested teaching scheme, based on interdisciplinary connections within the content of the practical and theoretical-practical courses, and students' school and university teaching practices, was hypothesised to result in improving MA students' specific proficiency in using questions as an effective tool in the EL classroom interaction. In this section the results obtained via the experiment are described.

The results of MA students' testing for skills level assessment are shown in the table below.

Table 1. MA students' testing for skills level assessment

Group	Students' score (points)	Test results			
		Pre-experimental testing results	Mean number in points	Post-experimental testing results	Mean number in points
EG-1	25-30	4 (9%)	16.2	17 (38%)	22.1
	19-24	11 (24%)		20 (44%)	
	13-18	21 (47%)		5 (11%)	
	5-12	9 (20%)		3 (7%)	
EG-2	25-30	4 (9%)	16.6	27 (60%)	23.4
	19-24	10 (22%)		16 (36%)	
	13-18	22 (49%)		2 (4%)	
	5-12	9 (20%)		-	

According to the pre-experimental testing results, the proficiency level of professionally oriented questioning skills was rated as low (20%) in both EG-1 and EG-2, sufficient – 47% in EG-1 and 49% in EG-2, good – 24% in EG-1 and 22% in EG-2, high level was demonstrated by only 9% of students in both groups. The mean number in points (max. 30) totaled 16.2 in EG-1 and 16.6 in EG-2. The obtained data were validated via the χ^2 -criterion of Pearson (Pearson fitting criterion) and regarded as relevant for representatives of experimental groups and as a basis for the use of the same criteria for further assessment of the students' specific proficiency in using questioning techniques as an effective tool in the EL classroom discourse.

The post-experimental testing results showed that after the experimental teaching the students of both groups (EG-1 and EG-2) improved their scores. The number of MA students in EG-1 with a high level increased from 9% to 38%, with a good level – from 24% to 44%. The number of EG-1 students with sufficient and low levels decreased significantly – from 47% to 11% (the sufficient level) and from 20% to 7% (the low level) accordingly. As can be seen from table 1, students of EG-2 demonstrated higher results compared with EG-1: a high level was observed in 60% (increased by 51%), good – in 36% (increased by 14%), sufficient – in 4% (increased by 45%) of students-participants and there were no MA students with low level left. The mean number in points totalled 22.1 in EG-1 and 23.4 in EG-2.

In order to validate the data, the t-criterion of Student was employed for two dependent samples. The testing results obtained in EG-1 at pre-experimental and post-experimental assessment stages were considered to be sample 1.1 and sample 1.2 respectively; the results of EG-2 – samples 2.1 and 2.2. Next, to conduct data analysis using the t-criterion of Student for two dependent samples we formulated two statistical hypotheses: H₀, which indicates the absence of differences between results of (a) sample 1.1 and sample 1.2, (b) sample 2.1 and sample 2.2, and H₁, which states the significance of differences – the results of the experimental testing in samples 1.2 and 2.2 are statistically significant in favour of samples 1.1 and 2.1 respectively. Therefore, the results of post-experimental testing are higher than those of pre-experimental testing at a significance level of $\alpha = 0.05$ (McLeod, 2019). According to the results of EG-1, $t_{emp} = 22$, $t_{cr} = 2.02$. There are statistically essential differences in EG-2: $t_{emp} = 25.3$, $t_{cr} = 2.02$. Thus, only hypothesis H₁ is accepted.

To clarify the effectiveness of the schemes suggested, t-criterion of Student for two independent samples was used. For this purpose, the results obtained in EG-1 (teaching scheme A) and in EG-2 (teaching scheme B) were compared. The testing results of EG-1 students at the post-experimental assessment stage were considered to be sample 1; the results of EG-2 – sample 2. Two hypotheses were formulated: H₀ – the results of the post-experimental testing in sample 2 are not more significant than in sample 1, and H₁ – the post-experimental testing results in sample 2 are more significant than in sample 1, i.e. scheme B is more effective.

Analysis of the data reveals that $t_{emp} = 2.6$, $t_{cr} = 1.99$ at a significance level of $\alpha = 0.05$ (McLeod, 2019). Thus, the obtained empirical value of the t-criterion is in the area of significance, the H₀ is rejected and H₁ which indicates the existence of differences in the obtained results of two samples is accepted, i.e. the proportion of the students who achieved appropriate proficiency level of professionally oriented questioning skills according to the results of the post-experimental testing in EG-2 differs significantly from EG-1.

Basing on the obtained quantitative results, we can conclude that (a) both variants of the suggested teaching scheme aimed at developing MA students' proficiency in questioning in EL classroom discourse realisation have a positive effect on improving prospective EL teachers' specific question-generating skills as an effective tool in the classroom interaction; (b) scheme B, tested in EG-2, is proved to be more effective than scheme A, tested in EG-1.

The analysis of the pre-experimental assessment stage results made it possible to identify and characterise the difficulties MA students, pre-service EFL teachers, met. It turned out that the primary problems were related to defining and choosing the appropriate types of questions that should be used in particular classroom activities, conforming to a particular situational communicative context and the learners' age, as well as in the classroom discourse to encourage pupils' learning motivation, their critical thinking, and to stimulate their involvement in the classroom discussion.

Analysis of the post-experimental assessment stage results revealed that the majority of the students from EG-1 and EG-2 mastered the skills of questioning initially as the participants of the educational process, demonstrating knowledge and ability to use the

appropriate types of questions in the suggested communicative context/situation and the learners' age, aiming at fulfilling a definite linguistic task; and further as prospective teachers applying various questions in the classroom discourse to reach concrete teaching goals. However, as our observation shows, the quantity of high-order thinking questions in EG-2 is exceeding one in EG-1.

It should be noted that regular analysis and correction of students' errors carried out while summing up the results of various classroom activities decreased the probability of their occurrence during teacher training practices.

The analysis of students' SAQ which they were to fill in at the completion of Step 2, Phase II (see Yeremenko, Lukyanchenko, 2020) provides MA students' positive reflection on their achievements in the activities aimed at constructing their knowledge of QSAs as a professional tool of EL classroom interaction (see Table 2).

Table 2. Self-assessment questionnaires results (at the completion of Step 2, Phase II)

Students' knowledge and skills	Students' self-assessment (number of students)							
	High level		Average level		Low level		Unable	
	EG-1	EG-2	EG-1	EG-2	EG-1	EG-2	EG-1	EG-2
Understanding of a QSA as a unit of the classroom discourse	34 (76%)	39 (86%)	11 (24%)	6 (14%)	-	-	-	-
Understanding of QSAs linguodidactic potential	30 (67%)	34 (76%)	11 (24%)	11 (24%)	4 (9%)	-	-	-
Ability to recognise QSAs of different types	39 (86%)	40 (89%)	6 (14%)	5 (11%)	-	-	-	-
Ability to construct one's own repertoire of QSAs	32 (71%)	37 (82%)	13 (29%)	8 (18%)	-	-	-	-
Ability to define the appropriateness of a certain QSA in view of learners' proficiency level	31 (69%)	38 (84%)	14 (31%)	7 (16%)	-	-	-	-
Ability to define the appropriateness of a certain QSA in view of the lesson stage	33 (73%)	38 (84%)	12 (27%)	7 (16%)	-	-	-	-
Ability to use QSAs to achieve educational goals during the lesson	31 (69%)	34 (76%)	14 (31%)	11 (24%)	-	-	-	-
Ability to analyse the potential impact of speech acts on the addressee (Learner)	24 (54%)	27 (60%)	19 (42%)	16 (36%)	2 (4%)	2 (4%)	-	-
Ability to implement the knowledge obtained from the course in the EL classroom discourse realisation	28 (62%)	34 (76%)	17 (38%)	11 (24%)	-	-	-	-

It is noteworthy that both EG-1 and EG-2 are majorly positive in their assessments. At the same time, students of EG-2 revealed better results. This agrees with post-testing results and pedagogical observation. We can see from the SAQ results that students-participants of both groups consider themselves able to understand a QSA as a unit of the classroom discourse and its pragmatic value in the classroom context but 4 students of EG-1 admit that their understanding is at a low level. In spite of the fact that in both groups students increased their questioning skills and evaluate them primarily at high and average levels, representatives of EG-1 are less positive of their practical abilities to construct the repertoire of QSAs, to define the appropriateness of a certain QSA in view of learners' proficiency level and lesson stage, to use QSAs to achieve educational goals at the lesson and to implement them in the EL classroom discourse. It can be explained by the fact that teaching scheme B provides more opportunities to raise students' awareness of linguodidactic potential of questions and to develop skills of using questions effectively in the EL classroom discourse. Thus, the SAQ data in general corroborates students' progress in using questions effectively in the EL classroom discourse.

The SOQ aimed at elucidating MA students' opinions as to the suggested scheme of work and the necessity of its implementation in the EFL teacher training curriculum. The results of the students' opinion questionnaire are presented in Table 3.

Table 3. Students' opinion questionnaire results

Statement	Highly agree	Agree	Not sure	Disagree	Highly disagree
Suggested teaching scheme suits my professional needs as a prospective English language teacher	75 (83%)	15 (17%)	-	-	-
Suggested teaching scheme can help me build my awareness of questioning as a valid part of EL classroom discourse	82 (91%)	7 (8%)	1 (1%)	-	-
Suggested teaching scheme can improve my specific proficiency in using questions as an effective tool in the EL classroom interaction	84 (93%)	6 (7%)	-	-	-
Suggested teaching scheme can encourage me to work out my own teaching strategies in the future professional activity	73 (81%)	12 (13%)	5 (6%)	-	-
Suggested teaching scheme can help me get practical experience as a component of my professional competence	86 (95%)	4 (5%)	-	-	-

As can be seen from the table, data analysis of the SOQ demonstrates that students-participants' positively assess suggested teaching scheme. None of them chose variants "Disagree" or "Highly disagree" and only a small percentage of the respondents chose "Not sure" in points 1 and 4. At the same time, most students are sure that this teaching scheme can help them build their awareness of the appropriateness of question in EL classroom discourse ("Highly agree" (91%) and "Agree" (8%)) and improve their skills of using questions effectively in classroom interaction ("Highly agree" (93%) and "Agree" (7%)). They consider it suitable to meet their needs as pre-service EFL teachers ("Highly agree" are 83%, "Agree" – 17%) and helpful to get practical experience ("Highly agree" are 95%, "Agree" – 5%). Thus, predominantly all the students-participants' expressed their highly positive attitude towards employing our teaching scheme to improve their questioning skills in the future professional activity.

4. DISCUSSION

The research results are in agreement with the concept that questioning should be a substantial part of theoretical and practical linguistic disciplines included in EFL teacher training curriculum. Our idea was to suggest effective ways of developing MA students', pre-service EL teachers', professional speech skills of using questions appropriately in EL classroom discourse. This agrees with S. Joseph's standpoint, which fairly emphasises the necessity of implementing a more deliberate approach to teaching questions to pre-service teachers, i.e. to consciously teach and model good questioning which should be an integral part of the teacher training process (Joseph, 2018). For this purpose, we worked out a special teaching scheme actualising interdisciplinary connections at the content level through EL classroom discourse acquisition by combining the content of overlapping themes between the practical ("English Communication in Academic Discourse") and theoretical-practical ("Theory and Practice of Speech Communication") courses and students' teaching practices.

The obtained results prove the suggested teaching scheme involving interdisciplinary approach to be more effective, allowing pre-service EFL teachers to build a deeper understanding of the most productive questions for the classroom school and university discourse in comparison to a previous teacher-student project work. Our findings sustain the conclusions about the interdisciplinary approach as a creative one in pursuing meaningful and motivating educational strategies, promoting learning and teaching quality for teacher training, rather useful for increasing students' input, efforts and learning motivation, and developing the skills required to become a teacher on the basis of integrated knowledge (Bolat, Karakus, 2017; Holmbukt, Larsen, 2016; Jitpranee et al., 2020; Santaolalla et al., 2020).

Our teaching scheme provides students with a deeper understanding of productive questioning across practical and theoretical-practical courses in combination with school and university teaching practice, encourages them to analyse the types of questions the EFL teacher should ask to engage pupils/students in the lesson/lecture or practical class in

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general and to stimulate classroom discussion and/or interaction and pupils'/students' critical thinking in particular.

Noteworthy is that suggested teaching scheme corresponds to the idea of meaningful learning (Mystakidis et al., 2019; Mystakidis, 2021; Omara et al., 2019) being a combination of versatile activities (both teaching and learning) that gives MA students an opportunity to construct their knowledge on the basis of inquiry and analysis, to create connections between their prior knowledge and newly-learned concepts linking theory and practice and making this practice meaningful. Feature characteristics of meaningful learning such as active, constructive, cooperative, intentional and authentic (Kostiainen et al., 2018; Mystakidis, 2021) are realised in the teaching scheme as follows: (1) students are engaged in the cognitive-communicative activities aimed at active knowledge constructing; (2) working within the scheme, they create their own strategies integrating their prior knowledge with new concepts, observation and reflective tasks being an essential part of students' work; (3) teaching scheme format provides various interactive tasks, team work; (4) students have an opportunity to set their own educational goals and, to some extent, regulate their learning pathway; (5) the tasks are professionally-oriented, aimed at developing in pre-service teachers relevant and applicable question-generating skills; obtained knowledge and skills are put into practice – classroom school and university interaction.

The comparative analysis of EG-1 and EG-2 indexes show that the gradual shift from teaching MA students, pre-service EFL teachers, to ask isolated types of questions in the process of student-student communication, clearly distinguishing their purpose and function, to teaching questioning speech acts as a major part of teacher talk (Nurani, 2015; Santosa & Kurniadi, 2020) is a much more successful scheme. Initially it brings pre-service teachers understanding of the importance of being able to find a balance between low-level cognitive questions and high-level cognitive questions because, on the one hand, higher-order thinking questions foster students' high-level processing of information, on the other hand, it is impossible to eliminate lower-order thinking questions as they have quite definite functions in the classroom discourse (checking knowledge, managing classroom procedures, etc.). Phase I provides a smooth switching from simple to complex, from merely acknowledging the fact that "teachers spend the majority of school time asking questions" (Joseph, 2018) to cognitive awareness of pragmatic potential of questioning speech acts at Phase II, from displaying productive questioning skills to implementing acquired theoretical knowledge of QSAs into practice, resulting in successful in-service EFL teaching. These findings confirm our initial claim as to the efficacy of interdisciplinary approach to developing pre-service EFL teachers' questioning skills, polemising with Parashchuk (2017) who emphasises the necessity to include either a special course or a separate academic module teaching questioning in the prospective teachers' curricula.

5. CONCLUSIONS

In sum, the experiment with participation of 90 MA students showed the efficiency of two suggested schemes for developing pre-service EFL teachers' professional questioning

skills. Our findings indicate the implementation of these two teaching schemes in the educational process helped MA students, who participated in the experiment, become more proactive in constructing their knowledge of questions linguodidactic potential, to transform the acquired knowledge to new ways of verbal behaviour, to model successful communication in the EL classroom using appropriate questions, and to modify their teaching styles. At the same time, teaching scheme B, suggested for EG-2, proved to be more effective due to the realisation of the interdisciplinary connections both within the content of the theoretical-practical course and students' university teaching practice and those initially implemented in the practical course in combination with a school teaching practice, all the scheme constituents being components of the Master degree curriculum.

As the hypothesis of our study is confirmed, we argue that it is mandatory to include this teaching scheme in the educational process covering initially purely practical courses with a gradual shift to theoretical-practical ones, and finally – teaching practices as a closing step. Taking into account the obtained findings, we suppose that extrapolation of a similar teaching scheme at junior courses of BA level may bring even better results. The research outcomes may be the reference for educators interested in teaching pre-service EFL teachers at tertiary level.

To devise and test a teaching scheme for developing professionally-oriented questioning skills in the BA level pre-service EFL teachers is a perspective line for the further research.

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