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Implementing Sino-Russian Educational Programs for Training Chinese Engineers

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Introduction. The relevance of this study is determined by the gradual expansion of contacts between the PRC and the Russian Federation in the educational sphere and the need to improve the national education systems. The purpose of the article is to identify methodological problems in organizing Sino-Russian educational programs for training engineers for the People's Republic of China and to propose the optimal solution to these problems.

Materials and Methods. In considering the problems of organization of the educational process for joint Sino-Russian educational programs, we use empirical methods: description, content analysis, comparison and synthesis. A survey of teaching staff and students was conducted. Students and teachers, who took part in the joint program of Saint Petersburg Electrotechnical University and Xuzhou University of Technology were selected to be interviewed. The survey also involved teaching staff and students of Jiangsu Pedagogical University.

Results. We will suggest recommendations for the development of joint programs, the purpose of which is to prepare highly qualified engineers for the People's Republic of China. These recommendations will improve the educational process, the quality of the professional training of Chinese students, enhance their level of proficiency in the Russian language. Our results suggest that to improve the quality of training of Chinese engineers who receive two diplomas, it is necessary to take into account the motives of Chinese students, their cognitive style of learning, the used learning strategies and the national characteristics of the Chinese education system.

Discussion and Conclusion. The results of this study may be useful to educators involved in collaboration activities between educational institutions of different countries. Following the proposed recommendations, we expect teachers in special subjects to easily write textbooks, including digital ones that suit the topical students' needs and enable teaching staff efficiency.

Keywords: joint program, teaching, Chinese student, engineering specialties, Russian as a foreign language, questionnaire

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Реализация китайско-российских образовательных программ подготовки инженеров для КНР

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Введение. Актуальность исследования определяется постепенным расширением контактов Китая и России в образовательной сфере и необходимостью усовершенствования национальных систем образования. Цель статьи – выявить методические проблемы в организации китайско-российских образовательных программ подготовки инженерных кадров для Китая и предложить оптимальное решение этих проблем.
Материалы и методы. С целью рассмотрения проблем организации учебного процесса в рамках китайско-российских образовательных программ мы использовали эмпирические методы: описание, контент-анализ, сравнение и синтез. Проведено анкетирование преподавателей и студентов. Были опрошены студенты и преподаватели, принимавшие участие в совместной программе Санкт-Петербургского электротехнического университета и Сюйчжоуского технологического университета. В анкетировании также принимали участие преподаватели и студенты Цзянсуского педагогического университета.
Результаты исследования. Предложены рекомендации по разработке совместных программ, цель которых – подготовка высококвалифицированных инженеров для Китайской Народной Республики. Данные рекомендации будут способствовать оптимизации учебного процесса, повышению качества профессиональной подготовки китайских студентов и их уровня владения русским языком. На основе полученных результатов доказано, что для повышения качества подготовки китайских инженеров, получающих два диплома, необходимо учитывать мотивы китайских учащихся, их когнитивный стиль усвоения учебного материла, используемые учебные стратегии и национальные особенности китайской системы образования.
Обсуждение и заключение. Данная проблематика может получить свое развитие в дальнейшем исследовании факторов, влияющих на повышение академической мобильности китайских студентов, что должно способствовать расширению сотрудничества высших учебных заведений Китая и России. Результаты этого исследования могут быть полезны преподавателям, участвующим в совместных международных образовательных программах. Предлагаемые рекомендации могут быть использованы при создании учебников и учебных пособий по русскому языку как иностранному и языку специальности, в том числе и цифровых, которые соответствуют потребностям студентов и позволяют повысить эффективность учебного процесса в целом.

Ключевые слова: совместная программа, обучение, китайский студент, инженерная специальность, русский язык как иностранный, анкетирование

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Introduction

Recently, relations between Russia and the People's Republic of China (PRC) have been very effective in various social and economic areas of life. In our opinion, contacts between the two countries in the field of education are staggeringly promising.

As of 2018 more than 900 partnership agreements have been signed by Russian and Chinese universities and organizations. 120 Russian universities and approximately 600 Chinese universities have been involved in achieving the objectives set. Within the framework of these agreements, joint educational programs for specialists of different competences are being developed[1]. For instance, higher education institutions in Moscow alone support more than 200 partnership ties while universities in Siberia and the Far East have approximately 270. Cooperation includes the implementation of joint training programs for specialists, advanced training courses for scientific and teaching staff, the Chinese and Russian language studies, forums for the rectors of leading universities.

Since 2000s, within the framework of Sino-Russian educational cooperation China has prioritized exchange education programs in the format 2/2 years and 3/1 years for non-linguist students. Chinese students study at a technical university in the PRC for the first 2 or 3 years and then continue their education in a field-specific Russian university. Such an education model allows getting two bachelor's degrees, which provides graduates with a greater chance of finding a well-paid job in China.

During a short-term program at a different University, students should acquire professional competence envisioned by their educational program while studying at a higher educational institution in a specific field. Thus, exchange education content is determined by curricula developed independently by each university.

Understanding the need to introduce educational technologies into educational process, Russian language teachers have to increase the efficiency of teaching standard Russian language and technical Russian parlance to Chinese non-linguist students both inside and outside Russian-speaking environment and to prepare students for the exchange education in Russia.

Literature Review

In recent years, studies have been found out that the purpose of which is to identify and describe the ethno type of Chinese students. Academic studies have been performed not only by Russian and Chinese scientists and practicing teachers [1; 2], but also foreign colleagues teaching English to Chinese students [3–7]. The main research areas are as follows: ethnopsychological characteristics of Chinese students, cognitive style and motivation in learning a foreign language, the mentality of Chinese culture-bearers (Confucianism), teaching methods used at Chinese schools and universities.

Many teachers are interested in questions related to optimizing the process of teaching the Russian language to Chinese students. The reason for this is the growing number of Chinese students studying Russian in the PRC and in Russia. As of 2018, the Russian language is taught as a major subject in more than 130 universities in China. It should be mentioned that Russian as a foreign language (RFL) is discipline included in the curricula of some Chinese secondary education institutions [8, p. 322].

Not only Russian researches study methods of teaching the Russian language to Chinese students, but also Chinese ones do. Liuy Wenhua examined some problems of designing a practical Russian language course "Vostok" ("East" – textbook complex for Chinese students majoring in linguistics)[2]. Nationally oriented textbook should prompt communicative competence and socio-cultural competence and professional competence [9, p. 6–7]. At present, Chinese linguists majoring in the Russian

[1] Volga Region Educational Portal: Website [Electronic recourse]. Available at: http://www.vedu.ru/news-rossijskie-i-kitajskie-vuzy-bolee-900-partnerskih-svjazej (accessed 12.01.2019).

[2] Li Ren, Zalmanova T.S., Jiang Tsongye, Rimskaya-Korsakova N.N. [Educational complex "Vostok"]. 2nd ed. Beijing: Beijing University of Foreign Languages; 2002. (In Russ.)

language use different textbooks, but none of these general courses of Russian as a foreign language offers enough topics for improving oral speech.

Du Guychzhi considers foreign language learning processes as cognitive and psychic highlighting the role and the function of human memory and demonstrates that the most important goal of teaching a foreign language is fostering linguistic consciousness in Chinese students [10].

Analyzing the current situation of teaching the Russian language in Chinese universities, Dai Hui puts it: "students willing to continue their education in Russia are provided special support in China. Thus, Harbin Institute of Technology and Beijing Polytechnic University have student exchange programs funded by a national support program; the number of students coming to Russia as part of the academic exchange program between the two countries is growing" [11, p. 8–9].

In this regard, designing didactic materials for teaching Russian as a foreign language in the universities of the PRC and Russia is a relevant issue. Up to the present, there are many unsolved issues in the field of teaching Chinese non-linguist students within the framework of joint programs.

Especially pressing is the problem of cooperation among Chinese and Russian teachers of the Russian language who teach Chinese students studied in non-linguistic faculties.

Despite the undoubted achievements in the development of psychological and didactical aspects and methods of teaching the Russian language to Chinese students, many problems of teaching at secondary schools and universities remain unresolved. Indeed, personal communication in Russian with Chinese students who came to study to the 'LETI' revealed a low level of general language skills and a limited knowledge of academic language. This makes it necessary to review the content of the program, namely, to shift the accent from reading and retelling texts to speaking in various communication situations [12, p. 130].

We need to use new educational technologies of the 21st century, for example, STEAM (Science, Technology, Engineering, Mathematics) education [13], because "active learning approaches such as technology-enhanced learning, cooperative learning and project based approach make up a sustainable teaching-learning set up in professional education courses" [14, p. 959].

Materials and Methods

In our study, we consider the organization of the educational process for joint Sino-Russian educational programs and the learning outcomes of Chinese non-philologists students who participate in these programs. For this, we use traditional empirical methods: description, content analysis, comparison and synthesis. This study is based on a survey conducted among 206 Chinese engineering students and Russian teaching staff participating in joint Sino-Russian educational programs.

Results and analysis of data

Survey among 2nd and 3rd-year students of Xuzhou University of Technology (XZTU) and 4th-year students of St. Petersburg State Electrotechnical University 'LETI'. 60 Chinese students of the second, third and fourth year (48 men and 12 women) took part in the survey conducted in September 2016 at Xuzhou University of Technology and Saint Petersburg State Electrotechnical University 'LETI'. Respondents were from 19 to 22 years of age. Students of the first year of education were not involved in the survey as they had learnt Russian only in its everyday and cultural aspects.

The questionnaire included 20 items with 2–4 answer options (Tab. 1). In order to create comfortable conditions for students, the questions had been translated into Chinese.

Respondents were asked to answer questions covering such aspects as listening, reading and comprehension as well as usage of terminology in its written and oral form.

Table 1. **Survey results of 2nd and 3rd-year students of XZTU and 4th year of 'LETI'**

№	Statement	Answer	Maximum number of answers, %
1	To remember a new word or a new term, I need to repeat it no less ...	5-10 times	86.66
2	I understand the meaning of new words or terms better if they appear ...	in a combination of words or in a phrase	75.0
3	I remember a new word or term better if ...	I read and write it multiple times	80.0
4	I rather quickly learn a word or term when ...	I read it	85.0
5	After reading a mini-text with familiar words one time ...	I remember 25-50 % of the text	93.33
6	I easily understand the meaning of Russian terms if ...	I am explained the meaning of the term in Chinese.	68.33
7	I easily remember ... numbers.	two-digit and three-digit	73.33
8	To better remember a word or term ...	I need a text for reading and a text for listening	78.33
9	Russian terms most difficult for remembering are phrases ...	noun + preposition + noun and participle + noun	76.66
10	For mastering Russian terms homework is ...	necessary	73.33
11	I easily retell a field-specific text if ...	there is a list of terms, drawing or formula	68.33
12	I read abbreviations ...	with difficulty	75.0
13	I easily understand a profession-oriented text if ...	terms and text are translated into Chinese	86.66
14	When doing vocabulary and grammar exercises ...	I need keys	95.0
15	When explaining a formula, I use abbreviations ...	rarely or very rarely	83.33
16	If there is a text for reading and an audio text on the same topic, I understand the topic ...	easily	68.33
17	To better understand a professional topic, audio text is needed ...	before the text for reading	71.66
18	At the lessons I remember a new word or term better if ...	we repeat it in chorus together with the teacher or write them down	71.66
19	When memorizing formulas in Russian, the most difficult thing for me is ...	recognition by ear and writing down to teacher's dictation	45.0
20	Phonetic properties of a term ...	are important / very important	96.66

The survey helped to determine basic cognitive and learning strategies used by Chinese non-linguist students when they study professional disciplines in the Russian language:

1) repeated utterance (individually and in chorus), reading and writing new words (at least 5 times);

2) reliance on visual representation of a term;

3) repeated reading of a text of any complexity;

4) using a bilingual dictionary;

5) better memorization of single-word terms;

6) retelling texts based on terms, drawings or formulas;

7) refusal of abbreviations;

8) understanding an audio text based on its script;

9) doing exercises with keys provided.

Therefore, for semantization of lexical material, its consolidation and stimulation of its usage, one should confine oneself to using only two methods: visualization and translation into students' native language.

Audiovisual media should be used as a supplementary component of the textbook. The main form of working with new terms should be simple copying without any transformations.

In addition, teachers must use the trend in modern linguistics "whereby theories of grammar have increasingly put more syntax into the lexicon and correspondingly less into rules" [15, p. 157].

Survey among 2nd and 3rd-year students of Xuzhou University of Technology (XZTU) and Jiangsu Pedagogical University (JPU). In March 2016 and April 2018, surveys were conducted among 90 Chinese students of the second and the third year at Xuzhou University of Technology and Jiangsu Pedagogical University.

The purpose of the survey was to identify problems that students face when they listen to field-specific lectures in Russian, to determine students' motivation level to study academic style of the Russian language. Respondents were to answer 10 questions: 9 multiple-choice and 1 open-ended question (Tab. 2).

The obtained data made it possible to reveal the difficulties that Chinese students experience when they listen to field-specific lectures in Russian:

1) lack of terminology knowledge used in academic Russian and specific vocabulary that leads to a complete or partial misunderstanding of the entire lecture, and, consequently, to a loss of interest in the subject;

2) insufficient knowledge of grammatical constructions common for academic Russian;

3) underdeveloped mechanism of contextual guess allowing to retrieve the meaning of a term from context;

4) inability to correlate a pronunciation of Russian terms of foreign origin with a corresponding English terms;

5) underdeveloped listening skills in Russian;

6) weak command of the Russian language on the whole.

Thirty percent of respondents would prefer the lectures to be printed in the Russian language with a parallel translation into Chinese (preferably in the form of a textbook). In addition, students noted that lectures could be supplemented with slides or a presentation (Power Point) also in the Russian language and a translation into Chinese.

About nineteen percent of students believe that before listening to lectures in Russian, one must learn the Russian language to a level allowing him to easily understand a Russian-speaking lecturer; it is especially necessary to know terms and specific vocabulary.

About sixteen percent of respondents suggest that a Chinese lecturer takes part in the lecture of a Russian specialist and translates and explains what the specialist says, or that a Russian specialist gives lectures in Chinese.

In the opinion of 6.66 % of respondents, a Chinese subject teacher should explain everything right before delivering the Russian lecture.

The remaining students responded as follows:

– it is better if professionally-oriented lectures are read only in English (4.44 %);

– it is necessary that a lecturer speaks in Russian and immediately translates into English (4.44%);

– professionally oriented lectures should not be read in Russian (4.44 %);

– a Russian subject teacher should explain more in simple words so that one could better understand him/her (4.44 %);

– Russian language is to be taught at high school in China (4.44 %);

– in order to have less problems with the Russian language, it should be studied in Russia, and Russian lectures should be read in China only after that (4.44%).

Survey among 4th -year students of St. Petersburg State Electrotechnical University 'LETI'. In order to reveal problems faced by Chinese students during their joint programs, 4th-year students (former XZTU students doing a 3+1 year exchange education program) were invited to complete a questionnaire at the St. Petersburg State Electrotechnical University 'LETI'.

Twenty-four students of the Faculty of Industrial Automation and Electrical Engineering (FEA) took part in the survey: 18 men and 6 women from 21 to 22 years of age.

Table 2. **Survey results of 3rd-year students at XZTU and JPU**

№	Question	Answer	Maximum number of answers, %
1	How much from the lecture in Russian did you understand?	30-50 %	81.11
2	Have you listened to field-specific lectures in your native language, read by Russian lecturers?	Yes/Partially	63.33
3	Did you understand terms used by the Russian lecturer?	Partially/No	86.66
4	What was the most difficult to understand?	Terms/everything	52.22/36.66
5	For a better understanding of lectures it is necessary ...	To provide a written text of the lecture with translation into Chinese.	68.88
6	How do you better understand professionally oriented lectures?	When a lecturer speaks English	90.0
7	Was it interesting for you to listen to the lectures in Russian?	Partially	63.33
8	Understanding a lecture in Russian is easier when ...	A teacher uses a presentation.	81.11
9	Should a Russian language teacher explain terms and grammatical constructions that will be used in a field-specific lecture in advance?	Certainly	86.66

The questionnaire included 10 multiple choice items, and items 6 and 7 allowed choosing several options (Tab. 3).

The purpose of the survey was to reveal problems students encountered while preparing and writing their graduation theses

Table 3. **Survey among 4th-year students of a joint XZTU and 'LETI' program**

№	Statement	Answer options	
1	2	3	4
1	Russian language course should include...	A	more hours for studying professional language
		B	more hours for studying common Russian language
		C	equal number of hours for studying professional language and common Russian language
2	For Chinese students to better understand a Russian 'LETI' teacher who lectures at XZTU, a Russian language teacher should provide field-specific materials …	A	on engineering
		B	within the framework of a specific lecture course
3	Should Russian language teachers provide public speaking training so that students could more easily defend their graduation theses at 'LETI'?	A	Yes
		B	No
4	Should teachers of the Russian language provide training regarding the right format and layout of a thesis and how it's abstract should be written?	A	Yes
		B	No, this should be done by subject teachers
		C	This should be done by both Russian language teachers and subject teachers
5	For general language classes at XZTU, teachers should provide as much material as possible to improve such skills as ...	A	reading and writing
		B	listening and speaking

End of table 3

1	2	3	4
6	Studying at 'LETI', Chinese students find it difficult to ...	A	understand field-specific lectures
		B	communicate with their academic adviser
		C	write a thesis in Russian
7	Communicating with their 'LETI' academic adviser, Chinese students find it difficult to...	A	understand him/her and talk with him/her during consultations
		B	e-mail him/her
		C	formulate their point of view
8	Do you easily understand terms related to your academic work?	A	Yes, I do
		B	Not really
		C	No, I hardly do
9	Are you well versed in the subject of your academic work?	A	Yes, I am
		B	Not really
		C	No, I am not
10	Rate your knowledge of Russian academic language style.	A	Not bad
		B	Good enough
		C	Very good

(GT): communicating with their academic adviser, preparing a written text and speech to defend their work; mastering professional parlance.

About forty-two percent of students believe there should be more academic hours of general language skills compared to professionally oriented language ones, and the same percentage of respondents preferred a 50:50 balance between classes of general language skills and professionally-oriented ones.

In the opinion of 79.16 % of respondents, for a better understanding of a professionally oriented lecture course, materials provided at Russian language classes should be associated with a specific course of lectures rather than engineering as a whole.

About eighty-eight percent of students believe they need to master public speaking, so that they could defend their graduation thesis in Russian. For this purpose, students need activities aimed at improving speaking skills in the academic and professional spheres.

The majority of Chinese students (66.66 %) suggested that not only subject teachers, but also teachers of the Russian language should instruct on thesis formatting and layout as well as writing abstracts.

Chinese students living and studying in Russia for a year showed that Russian language teachers working at XZTU should focus more on teaching speaking skills and listening. 87.5 % of respondents are convinced of this.

Chinese students studying at 'LETI' believe that it was difficult for them to understand field-specific lectures (75 % of respondents); there were communication failures with academic advisers (66.66 %); the most challenging one was writing a thesis because of insufficient knowledge of academic style of the Russian language (54.16 %).

As for terminology, only 12.5 % of students understand terms related to their academic work; 79.16 % of students experience difficulties understanding the terminology of their GT.

In the opinion of 58.33 % of respondents, they are well versed in the subject of their academic research. 41.66 % of students do not understand the purpose and tasks of their work very well.

From our point of view, it is particularly notable that only 12.5 % of respondents consider their knowledge of academic style of the Russian language to be sufficient.

Survey among Russian language teachers participating in joint programs. The purposes of a survey among Russian language teachers were to reveal issues they face when teaching general language skills and professional parlance to Chinese students;

to find out their argumentation for selecting educational materials and consider RFL teaching methodology in the framework of joint programs. The survey was conducted in 2016 and 2017. The respondents were 12 Russian teachers working on the following joint programs:

– 3+1 years (Xuzhou University of Technology and St Petersburg State Electrotechnical University 'LETI'),

– 2+2 years (Sino-Russian Institute affiliated with Jiangsu Pedagogical University and Emperor Alexander I St. Petersburg State Transport University),

– 2+2 years bachelor program (Jiangsu Pedagogical University and Peter the Great St. Petersburg Polytechnical University).

The respondents were 3 men and 9 women. Their experience in teaching RFL was from 3 to 25 years, and experience in joint programs was from 1 year to 6 years.

To cover a wide spectrum of information from the respondents concerning their work in joint programs, the survey offered open-ended questions. The results are described below.

At Jiangsu Pedagogical University, Russian language teachers follow course books offered by the Chinese university. Also, Russian language specialists participating in the joint program of XZTU and LETI from 2014 to 2016 taught Russian language either by course books recommended by the Chinese and Russian chairs of the Russian language, or they could choose whichever they preferred.

Academic style is taught only by language specialists sent from Russian universities. As a rule, course books are developed at Russian language departments of these universities. Russian language teachers at LETI also design their own materials for specific lecture courses.

Fifty-five percent of Russian language specialists working in China teach general language skills. Academic workload of Russian and Chinese RFL teachers is different in the framework of joint programs. Depending on the curriculum, the average Russian language workload is 20 hours per week.

Consider an example of academic workload distribution among Russian and Chinese teachers of the Russian language (Tab. 4).

Therefore, Chinese teachers have more class hours and they teach such aspects as grammar and reading (texts studied are of social and socio-cultural context), and the explanation and comments are given in Chinese.

Seventy percent of respondents lead groups of up to 30 students, 15 % work with groups of up to 25 ones, and 15 % deal with groups consisting of 50 people. According to the teachers, the optimal number of people in a group should be no more than 15 people for an effective teaching process.

50 % of respondents believe that only general language skills should be taught during the 1st year. 40 % of Russian language teachers assume that if there is a total of 20 hours a week then there should be 2–4 hours of professionally oriented language

Table 4. **Distribution of hours in Russian as a foreign language in joint programs of the JPU and Emperor Alexander I St. Petersburg State Transport University, JPU and Peter the Great St. Petersburg Polytechnical University (2+2 years) for the 2016-2017 academic year**

RFL teachers	1st year			2nd year	
Russian		8 hours a week		6 hours a week	
	1st term	Listening	8 hours	Listening	4 hours
	2nd term	Listening	4 hours		
		Academic style	4 hours	Academic style	2 hours
Chinese		12 hours a week		14 hours a week	
	1st and 2nd terms	Grammar, Reading (by a course book published in Russia)	12 hours	Grammar, Reading (by a course book published in China)	14 hours

in the second term of the 1st year and no less than 4–6 hours of academic language during the 2nd year.

Fifty percent of respondents highly appreciated the universities teaching facilities, 30 % reported it was good adding that new academic buildings were outfitted with computers, photo and video presentation equipment and had language laboratories. The survey revealed that 80 % of teachers regularly use audio and video materials to train general language skills.

One hundred percent of Russian language teachers reported the main learning strategy of Chinese students was 'mechanical memorizing' based on multiple repetitions of grammatical forms, structures, patterns and samples. This is a method cultivated by Chinese teachers; therefore, students memorize new words without being able to use them. This explains a common scenario: *I understand everything but cannot say anything*.

Other learning strategies reported include:

– following rules (in specific trainings and exercises);

– comparing the rules of their native language and Russian language, English language and Russian language rules (often implicitly and sometimes explicitly);

– using supplementary materials (dictionaries – more often electronic ones – lists of words, grammar guides, writing samples, texts for reading and videos);

– using Russian in communication tasks: writing to a friend, using Internet (information search and communication in social networks), watching video clips, music videos and movies in the Russian language.

According to most Russian teachers, succession from Chinese counterparts is very important as both sides are interested in positive results of cooperation. In practice, however, securing the succession is rather difficult due to teachers' tight schedule.

Russian teachers welcome preliminary negotiations regarding academic workload, designing joint curriculum, working according to a unified course book. Working in close cooperation, joint effort may turn out to be fruitful if Chinese teachers explain theoretical issues of Russian grammar and Russian teachers help develop skills engaging the material studied in situation-based dialogues.

Respondents named the following management issues pertaining to the academic process within the framework of joint programs:

1) there is no coordinated curriculum that should be designed by Russian and Chinese universities taking into account recommendations of the teachers who participate in such programs (e.g. regarding criteria used for selecting examination materials and requirements for exams that will directly influence the lives of students later on);

2) there is no unified Russian language course book for Chinese and Russian teachers to use;

3) existing course books are not perfect in terms of methodology;

4) there are too many students in groups;

5) the number of professional parlance hours was halved and, as a result, 30 % of Chinese students failed in their professional language examination in the 2016-2017 academic year and therefore could not be qualified to study at a Russian university;

6) the lack of motivation of students (most students are not planning to further study in Russia and are not going to use the Russian language at work);

7) poor level of grammar and speaking skills;

8) students are not prepared enough for academic listening of field-specific lectures read by Russian subject teachers visiting Chinese universities for a short period due to the inferiority of curriculum and small amount of hours for studying Russian academic style.

Survey among subject teachers. In order to prepare recommendations for improving the quality of teaching Chinese students within the framework of joint programs, a questionnaire was designed for Russian subject teachers reading lectures in the Russian language at Chinese universities. The questionnaire included 10 items with 2–5 answer options. Teachers were invited to rate students' knowledge of

basic disciplines, Russian language and, in particular, terminology etc.

The survey was conducted in January 2018. It involved 20 teachers working in joint programs initiated by Xuzhou University of Technology (XZTU) and St. Petersburg State Electrotechnical University 'LETI'; Sino-Russian Institute affiliated with Jiangsu Pedagogical University (JPU) and three universities: Emperor Alexander I St. Petersburg State Transport University (PSTU), Peter the Great St. Petersburg Polytechnical University (SPPU), Plekhanov Russian University of Economics. The respondents were 15 men and 5 women aged between 25 to 67 years. The experience of teachers was from 2 to 42 years. The survey was anonymous.

Seventy percent of the surveyed teachers have participated in joint programs for more than three years. The total number of lectures and practical classes conducted by Russian teachers in Chinese universities varies between 20 and 40 hours over a 2 or 3 weeks period of staying in China. Students are partially familiar with the topics of lectures read by Russian teachers in China. These topics are not included in the curriculum at a corresponding Russian university.

The results of the survey conducted among subject teachers allowed to formulate a number of important methodological provisions.

The main goal of teaching specific subjects in joint programs is to ensure the successful adaptation of Chinese students to academic and professional communication with Russian speaking teachers in the field of knowledge that is related to the future profession of students. The goal creates a number of tasks to be solved:

– introduce concepts on the discipline studied and give their definition in Russian,

– teach students to perform mathematical transformations, solve mathematical and other problems,

– answer teacher's questions (during lectures, examinations and tests).

The knowledge of Chinese students on the subject taught in Russian within the framework of the joint program was assessed as "satisfactory" (50 %) and "good" (50 %).

The knowledge of Russian by Chinese students of the 2nd and 3rd-years of XZTU and JPU was assessed as "satisfactory" and "unsatisfactory". From the point of view of teachers, 4th-year students participating in joint programs do not speak Russian well enough.

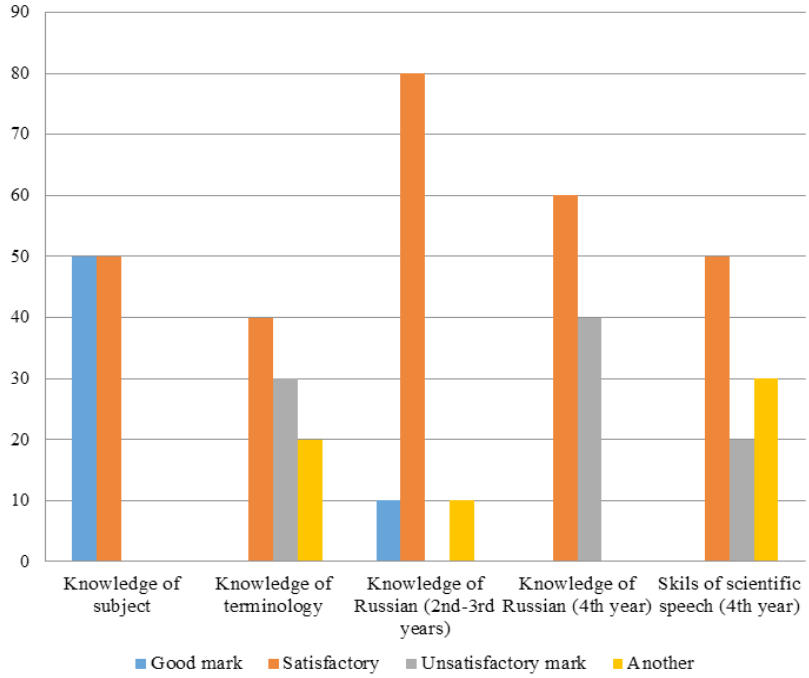
Teachers consider students' knowledge of Russian terminology used in lectures on specific disciplines as "satisfactory" (40 %) and "unsatisfactory" (30 %). 20 % of respondents believe that Chinese students were not familiar with the terminology before listening to the lecture course and, after it was over, they did not have any difficulties understanding and using the terms. This means that 3rd and 4th – year students coming to Russian universities should be offered more opportunities to enhance their knowledge of terminology and practical skills allowing them to use the terms in their own statements in academic and professional environment (Fig. 1).

As for the Russian language, 30 % of teachers believe that more academic hours should be allocated for teaching professional parlance rather than general skills. Another 30 % believe that general skills are preferable while 40 % of respondents consider equal number of hours to be the optimal distribution of hours.

None of the respondents who attended GT defense of the 4th year Chinese students consider their level of academic language to be good enough.

More than 90 % of teachers highlighted the importance of a propaedeutic course on professional parlance dedicated to a specific course of lectures.

Most respondents (90 %) noted that in order to optimize the process of preparing Chinese engineering students participating in XZTU–'LETI' joint program, engineering teachers should consult Russian language teachers and participate in designing syllabi in academic language. All the subject teachers believe that cooperation with Russian language teachers is necessary: consultations, designing course books for professional parlance. However only 30 % of respondents are actually co-authors of such course books.



F i g. 1. Assessment of knowledge of Chinese students by teachers of special disciplines

Discussion and Conclusion

According to Luo Xiaoxia, the current state of the methodology for teaching Russian in China is characterized by the following features:

1) growing interest not only in terms of the latest teaching methods, but also in the traditional ones;

2) desire to integrate different teaching methods;

3) use of modern teaching technologies (software programs, electronic and multimedia textbooks, distance courses, etc.);

4) desire of the Chinese teachers of the Russian language to improve their qualifications [16, p. 21].

Consider each of the statements declared.

There is no doubt in the powerful potential of traditional learner-centered approach based on the psychological concepts. Practice proves that the conscious-practical approach to education takes into account psychological patterns of mastering foreign language skills like no other, and therefore this method allows obtaining stable positive teaching results. In case when teaching a foreign language is focused on practical application, consciousness is manifested in the fact that student's mind focuses not on the form but on the content, then speech in a foreign language shows a productive and creative nature[3].

Many Chinese universities are actively using modern multimedia, but Russian language teachers still follow the traditional "blackboard" approach, which, according to Chinese researchers, does not work for the effectiveness of the learning process [17, p. 109]. A significant share of classroom time is spent on explanation, translation and note-taking. The disadvantage of the grammar-translation method is that students receive copies of knowledge that are quickly forgotten and cannot be transferred to speech practice. Teachers need to integrate various teaching methods: audiovisual, project, interactive teaching methods, etc.

[3] Belyaev B.V. [Essays on the Psychology of Teaching Foreign Languages]. 2nd ed. Moscow: Prosveshcheniye; 1965. (In Russ.)

We cannot fully agree with Luo Xiaoxia's statement that the use of computer technology in Russian language lessons hinders teaching quality improvement. The author underpins his point of view by the fact that universities in China teach students mainly the receptive types of speech, and not the productive one. Our long experience shows that, firstly, Chinese students (both linguists and non-linguists) are very enthusiastic about learning the material that can be used in speaking and writing in Russian. Secondly, students have a high level of technological (computer) competence and media competence: they constantly communicate in social networks, exchange video and audio files, perform exercises presented in electronic form.

We would like to draw attention to two more areas in the Chinese teaching methodology of the Russian language, which were not noted by Luo Xiaoxia: professionally oriented learning and ethno-didactical problems.

Concerning the professionally oriented training of foreign students, this aspect is actively studied not only by teachers of the Russian language, but also by teachers of other foreign languages, for example, English [18; 19]. Most researchers believe that course books for engineering students should put a special focus on terminological vocabulary semanticized through visualization. Learned vocabulary is drilled in exercises when students correlate a term with its definition, the term and its designation, the name of a device and its function, replace a sign with a corresponding term and vice versa, etc. Besides, on the basis of conclusions by some authors [20; 21] that "auditory word recognition is better for high-frequency than low-frequency words" we consider an organization of terminological vocabulary to be optimal if the frequency factor takes into account not only word frequency in engineering texts, but also the frequency of a given word-building pattern.

When developing course books on Russian academic language for Chinese engineering students, it is necessary to establish foundation on cognitive and learning strategies used by students while studying a foreign language. There is an interesting position of I. B. Bobrysheva connecting the specificity of learning and cognitive activity of a bearer of a particular culture with the sign system used by a given ethnic group [22, p. 36]. The author comes to a conclusion that semantics of a Chinese character is broad and inaccurate. Apparently, this fact causes difficulties in understanding phrases containing terms by making Chinese students start looking for metaphorical connections instead of logical ones.

Zhao Yujiang believes that in order to optimize teaching Russian language to Chinese students, their persistent ethno psychological characteristics should be taken into account: mnemonic abilities, intuition, visual-motor memory type, visual perception channel, use of analogy and contextual guess, etc. [23]. As our study showed, Chinese engineering students rarely opt for contextual guess when trying to understand terminological vocabulary and prefer translation into their native language.

From our point of view, it is necessary:

– to show new words or terms in a wider context (in a phrase, sentence);

– to ensure that a new word or term is repeated at least five times (pronounce, write, read);

– to read professionally oriented texts regularly without using a dictionary so that students are able to retell a given text after reading it just once.

– Russian terms should be given with a Chinese translation at the beginning of the educational program, and, during the last years, terms should be explained in both Chinese and Russian language;

– to enhance short term memory for being able to better memorize and repeat numbers;

– to offer 2 texts in listening classes: a written text and an audio recording on the same topic;

– to provide homework, regardless of the complexity of the material being studied;

– to provide a list of terms, nominative or question text plan;

– to provide exercises aimed at enhancing the skill of comprehending formulas;

– to prepare keys for vocabulary and grammar exercises;

– to design phonetic exercises aimed at memorizing terms and abbreviations (preferably, it should be repetition in chorus after a teacher);

– to do word quizzes to consolidate and monitor terms studied.

One effective activity for developing communicative skills among Chinese students is working in pairs or in teams. R. M. Felder & R. Brent formulated the criteria of cooperative learning (CL), when students work in teams on structured learning tasks:

1) positive interdependence;

2) individual accountability;

3) face-to-face interaction;

4) appropriate use of interpersonal skills;

5) regular self-assessment of group functioning [24, D-31].

This allows making up for the lack of communication in the language when learning outside a Russian-speaking environment. As a rule, Chinese students live and study in one place, i.e. a campus, where they study during the day at academic buildings. Homework can be done in any available room where students are allowed to study together. Therefore, performing tasks in pairs or in groups is not an issue.

To increase the motivation of Chinese students, it is necessary to use authentic audio recordings, video fragments of modern feature films, video blogs. In creative tasks, it is necessary to use techniques to stimulate the interest of Chinese students in studying Russian.

Here is a list of pressing issues of teaching students participating in joint Sino-Russian programs:

– preparing students to adaptation to study within the Russian higher education system;

– using ethno-oriented teaching methods;

– creating environment encouraging the active participation of students;

– consolidating students' communication competences in academic, professional and social environment;

– introducing innovative technologies in the educational process;

– creating guidelines and course books that meet challenges of the present day.

Higher education is an area that greatly influences the formation of a society, therefore division and differences in educational systems hinder the unity of countries. In the context of the free movement of workers, goods and capital, there is an issue of comparability of academic competences, without which the movement of highly skilled personnel is impossible.

Modern students increasingly understand that education is a natural method for self-realization of an individual and paves the way for achieving a certain position in society.

Chinese engineering students participating in joint Chinese and Russian university programs would develop communication competence more efficiently if:

1) the learning process helped to create the model of subject and language co-competences that are built taking into account the ethnopsychological characteristics and communicative needs of students;

2) 1st- year students were offered simple field-specific texts in Russian and exposed to terminology;

3) exercises were based on Russian video lectures on professional subjects;

4) academic and professional skills were harmoniously paired up with those of social sphere;

5) additional sources of information in Russian were actively involved (Internet, media, etc.).

In our opinion, there is every reason to assert that joint Sino-Russian training programs for engineering personnel in China have excellent prospects.

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Lyudmila G. Yun – data collection; data analysis; writing the draft of the article; analysis and drawing the conclusions.

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