Formation of Future Teachers’ Professional Competence on the Basis of Polylingual Approach: The State Analysis

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Abstract

Nowadays the institutions of higher education are facing new challenges, the which aim is to provide highly qualified specialists who have mastered not only professional knowledge, but also ready for intercultural multilingual communication, solving problems independently, teaching subjects in two or more languages. For teacher training, we need a polylingual multicultural environment, design and implementation of new technologies. In addition, content and language integrated learning will contribute to it, which is one of polylingual approaches. Therefore, the aim of our study is to analyze the state of formation of future teachers’ professional competence on the basis of polylingual approach. According to the developed diagnostic techniques, professional competence consists of three components: motivational, cognitive and operational. On the basis of these components there are highlighted criteria, indicators and levels characterizing the formation of the future teacher’s professional competence on the basis polylingual approach. The study presents the results of verifying experiment.

Keywords: formation, professional competence, polylingual approach, CLIL

1. Introduction

Kazakhstan is a multinational, multicultural state, which education system today is aimed at implementing ideas of the citizen’s polylingual education. Because only the society can successfully develop and fit well a number of leading countries of the world that is able to create for the citizens a decent standard of quality and modern education.

Therefore, no coincidence in the adopted national cultural draft “Trinity of languages”, there is paid a great attention to the development of three languages: Kazakh as the national language, Russian as the language of interethnic communication, and English as the language of successful integration into the global economy. The President of the Republic of Kazakhstan, Nazarbayev (2007) stressed that “…the acquisition of three languages for modern Kazakhstani is a prerequisite of their own well-being”.

F.H. Kirgueva (2010) notes that “only language learning as a subject in the classroom is not enough for communication in the language. Therefore, the transition to polylingual education, which in most schools of Western and Central Europe, the USA, Canada, in the 60-70-ies of the 20th century, it was considered a very promising direction in the study of languages, has become an objective necessity now”.

Under these conditions, the institutions of higher education are facing new challenges, which aim is to provide highly qualified specialists who have mastered not only professional knowledge, but also ready for intercultural communication, critical and creative thinking, culture, foreign languages speaking.

It is necessary to create polylingual multicultural environment for future teacher training, for social and academic mobility of young people willing to teach subjects as in their mother tongue, and in other foreign languages. In other words it is necessary to create and develop modern scientific and educational centers with international participation, to design and implement new technologies, to organize extension courses in Kazakhstan.

New requirements for the level of training define new approaches to the organization and implementation of the educational process. The rapid changes in the field of educational services demand the same mobility, so every teacher should improve professional skills, introduce innovative educational technologies, and use the best
practices of leading universities in the world.

2. CLIL Approach

One of such approaches is the Content and Language Integrated Learning (CLIL), which gives the opportunity to integrate language with content (Ball & Lindsay, 2010; Lasagabaster, 2008; Marsh, 2002; Lorenzo, Casal & Moore, 2009), to expand general education environment by a functional approach to second language learning. The specificity of this approach is “a foreign language is used as a tool in the learning of a non-language subject in which both language and the subject have a joint role” (Marsh, 2002:58). In this case, the emphasis is on the content of specific texts, and on the necessary subject terminology. When this language is integrated into the curriculum, and the need for immersion to be able to discuss the thematic material significantly increases the motivation of the use of language in the context of the subject.

Content and Language Integrated Learning is a teaching method in which some subjects are taught in foreign languages. Thus, the teaching of students in the native and foreign languages is single whole.

Teaching takes place in two languages so that in learning situations using language appropriate to the situation and learning objectives. By the CLIL methodology L2 can be used in all classes in all disciplines except the native language (Laletina, 2012).

David Marsh (2003) states that «Content and language integrated learning (CLIL) refers to any dual-focused educational context in which an additional language, thus not usually the first language of the learners involved, is used as a medium in the teaching and learning of non-language content». According to the author, this approach allows to learn and teach on two subjects at the same time, though, it can be focused on both language and non-language subject.

According to Coyle et al. (2010), CLIL methodology in the institutions of higher education is associated primarily with the wide use of English as the “dominant” language of teaching in European universities. Based on Coyle, Hood and Marsh’s classification (2010: 24-25) there are models C1-3 for tertiary education:

Model C1: Plurilingual education. With integrated learning more than one language is used in different years of study and in teaching of different subjects. Graduating training according to such a model student acquires professional knowledge in several languages. Such a model is a prestigious form of education, which is designed to attract the most motivated and talented students from different countries.

Model C2: Adjunct CLIL. “Language teaching runs parallel to content teaching with specific focus on developing the knowledge and skills to use the language so as to achieve higher-order thinking”. Language teaching is connected with specific fields, language teachers are part of the structural special units, and their role is external support in specialist training. Students mastering speciality acquire the ability to use CLIL language for their specialty job.

Model C3: Language-embedded content courses. Training programs are developed from the point of view of development and language skills.

The training is engaged by both content-teachers (subject-matter teachers) and language teachers (language specialists) (Ball and Lindsay, 2010; Lorenzo et al., 2009; Moore, 2007). Student, even with a poor knowledge of language instruction is supported during the entire learning process, which makes it possible to master as subject as language of instruction. Model is suitable for teaching students with different linguistic and cultural backgrounds.

Model C1 is realized only in the universities with concrete specialization (e.g., business and management), and models C2 and C3 are the most common. Due to its geographic position in South Kazakhstan region with a predominantly Kazakh-speaking population has its own characteristics of teaching language and contents. Therefore it is advantageous to implement a mixed model of total and partial immersion in the language of instruction with the general and special support for the development of students’ language competence. However first of all it is necessary to analyse the problem state in Kazakhstan, the formation level of future teachers’ professional competence on the basis of polylingual approach, their readiness for polylingual approach.

3. The Problem State Analysis

So, to determine the formation level of future teachers’ professional competence on the basis of polylingual approach, it is necessary to analyse the state of the formation.

Formation of future teachers’ positive attitudes to the professional activity, to polylingual approach flows under the influence of social relations in general, and the social environment where their activity is directly related.
Part of that environment is the university system and its relations. The primary means of polylingual training here is adequately organizational educational work.

Achieving the dialectical unity and interaction between invariant basic education and its variable part is an important means of overcoming the contradictions between the existing system of teacher training and the needs of developing professional education system. Variable component reflects linguistic culture; multilingualism is the value of pedagogical culture. Hence the task of future teacher training on the basis of polylingual approach is directly related to the improvement of the entire system of student training in university. In this case, we assume that the system of instruction in the institution of higher education is an interconnected complex of functionally correlated components that provide targeted acquisition by students content-related knowledge and skills learned in some reasonable manner on the basis of adaptive behavior of the trainees and training.

Result of the components interaction of the complex should be personality of the teacher ready for professional activity by means of Kazakh, Russian and foreign languages, able to solve pedagogical problems on principles of polylingual education.

With regards to our problem, we used a pedagogical experiment that reveals the character of pedagogical activity of the future teachers, their level of knowledge according to the research theme, complex of abilities and skills of social interaction organization, implementation of polylingual approach by means of Kazakh, Russian and foreign languages in the pedagogical process (verifying experiment);

Verifying experiment allowed us to collect primary data characterizing the initial state of the object. Verifying experiment was carried out on the base of M.Auezov South-Kazakhstan State University (Shymkent city), H.A. Yassawi International Kazakh-Turkish University (Turkestan city). There were participated students of pedagogical specialties from M. Auezov South-Kazakhstan State University and A. Yassawi International Kazakh-Turkish University. Sample size is 586 students, 312 of them are in the experimental group, 274 are in the control group. At various stages of the experimental work 60 language teachers and content-teachers also took part.

4. Diagnostics Methods

In the study, we developed diagnostic methodology of formation of the future teacher’s professional competence on the basis polylingual approach; we defined evaluation criteria, indicators and levels of professional competence formation.

4.1 Components of the Model

According to the developed model professional competence consists of three components: motivational, cognitive and operational.

4.1.1 The Motivational Component

The motivational component performs a regulatory function in the structure of formation, expresses a conscious attitude of the student to polylingual approach, his motivation and desire to master the general language and professional competences.

As a criterion we identify “student’s presence of needs to master the professional competence on the basis of polylingual approach.” Indicators of this criterion are the following:

- Awareness of the value of polylingual approach to teaching curriculum subjects;
- Interest and desire for mastering professional competencies in terms of teaching curriculum subjects on the basis of polylingual approach;
- Impulse to the development of general language and professional language competences.

4.1.2 The Cognitive Component

The next component of the formation of future specialists’ professional competence is the cognitive component, which implies the future teachers’ presence of system of pedagogical, special, methodological, polylingual knowledge necessary and sufficient for the formation of professional competence. As a criterion we distinguish “knowledge of polylingual approach and its use in teaching curriculum subjects”, which is expressed in the following indicators:

- Knowledge of the essence, characteristics of polylingual approach;
- Knowledge of the professional content of the subject in Kazakh, Russian and foreign languages;
- Methodological knowledge of the implementation of polylingual approach in the subject teaching.
4.1.3 The Operational Component

The operational component ensures the formation of future teachers’ abilities and skills for practical experience. As a criterion we highlight “mastery of competencies implementing polylingual approach in the subject teaching”, which are indicators:

- Ability to plan and organize the teaching process on the basis of polylingual approach;
- Ability to apply methodological and technological tools in the implementation of polylingual approach;
- Ability to analyse and diagnose performance evaluation of polylingual teaching of the subject.

Thus, the formation of the future teacher’s professional competence on the basis of polylingual approach presented by the following criteria and indicators (see Table 1).

4.2 Levels of the Model

Analysis included in the structure of each of the criteria and indicators of formation of future teachers’ professional competence on the basis of polylingual approach led to the highlighting of four levels: low, medium, sufficient and high. At the heart of this graduation there is a certain amount available in the future teacher’s formation: the fewer the indicators, the lower the level of formation of professional competence on the basis of polylingual approach.

4.2.1 The Low Level

The low level of formation of the future teacher’s professional competence on the basis of polylingual approach is characterized indifferent interest and low awareness of the value of polylingual approach to teaching curriculum subjects, passive attitude to the learning of the professional content of the subject in Kazakh, Russian and foreign languages; indifference to the possibility of implementing polylingual approach in the teaching of the subject. There are absent abilities to plan and organize the teaching process, and apply methodological and technological tools in the implementation of polylingual approach. Methodological knowledge of the polylingual approach implementation in teaching of a subject is superficial, not systematic.

4.2.2 The Medium Level

The medium level involves the mastery by students in an incomplete of knowledge of the professional content in Kazakh, Russian and foreign languages, having ideas about polylingual approach; lack of understanding of the essence, characteristics of polylingual approach implementation in the teaching of a subject; episodic use of methodological and technological tools in the implementation of polylingual approach; the lack of analysis and diagnostics for evaluating the effective polylingual teaching of the subject; changeable interest in mastering the professional competencies in terms of teaching subjects on the basis of polylingual approach.

4.2.3 The Sufficient Level

The sufficient level has good knowledge about the nature of polylingual approach, especially its implementation in the teaching of the subject, the importance of a stable interest polylingual approach to teaching curriculum subjects, mostly able to plan and organize the learning process on the basis of polylingual approach, but not always apply the methodological and technological tools in implementation polylingual approach, the ability to analyze and diagnose performance evaluation polylingual learning of the subject formed at a sufficient level.

4.2.4 The High Level

The high level reflects a strong desire to develop general language and professional language skills, firm conviction in mastering by students the professional competencies in terms of teaching subjects on the basis of polylingual approach. Cognitive component of this level is presented with deep knowledge of essence and characteristics of polylingual approach, professional content of the subject in Kazakh, Russian and foreign languages, which generally causes implementation of polylingual approach in the teaching of the subject, as well as the availability of knowledge and skills in a real educational experience activity, organization and implementation of methodological and technological tools in the implementation of polylingual approach.

In general, the level of formation of the future teacher’s professional competence describes his readiness for professional activity, formation of abilities and skills, practical experience, creatively to apply them in real teaching activities on the basis of polylingual approach.
Table 1. Criteria and indicators of formation of the future teacher’s professional competence on the basis of the polylingual approach

<table>
<thead>
<tr>
<th>Components</th>
<th>Criteria and indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivational</td>
<td>1. student’s presence of needs to master the professional competence on the basis of polylingual approach</td>
</tr>
<tr>
<td></td>
<td>1.1 awareness of the value of polylingual approach to teaching curriculum subjects;</td>
</tr>
<tr>
<td></td>
<td>1.2 interest and desire for mastering professional competencies in terms of teaching curriculum subjects on the basis of polylingual approach;</td>
</tr>
<tr>
<td></td>
<td>1.3 impulse to the development of general language and professional language competences;</td>
</tr>
<tr>
<td>Cognitive</td>
<td>2. knowledge of polylingual approach and its use in teaching curriculum subjects</td>
</tr>
<tr>
<td></td>
<td>2.1 knowledge of the essence, characteristics of polylingual approach;</td>
</tr>
<tr>
<td></td>
<td>2.2 knowledge of the professional content of the subject in Kazakh, Russian and foreign languages;</td>
</tr>
<tr>
<td></td>
<td>2.3 methodological knowledge of the implementation of polylingual approach in the subject teaching;</td>
</tr>
<tr>
<td>Operational</td>
<td>3. mastery of competencies implementing polylingual approach in the subject teaching;</td>
</tr>
<tr>
<td></td>
<td>3.1 ability to plan and organize the teaching process on the basis of polylingual approach;</td>
</tr>
<tr>
<td></td>
<td>3.2 ability to apply methodological and technological tools in the implementation of polylingual approach;</td>
</tr>
<tr>
<td></td>
<td>3.3 ability to analyze and diagnose performance evaluation of polylingual teaching of the subject;</td>
</tr>
</tbody>
</table>

5. Discussion

On the basis of survey, observation, individual interviews, testing analysis, studying the written works of students (mini-essays, creative tasks), reporting documentation on pedagogical internship, school documentation, the method of generalized independent characteristics and self-evaluation of future teachers, the level of formation of professional competence on the basis of polylingual approach—we have found that in general, there is some discrepancy between the theoretical and practical training of students from the experimental and control groups, lack of training for polylingual approach, including mastery of professional competence in the aspect of teaching subjects on the basis of polylingual approach.

5.1 Characteristics of the Future Teachers’ Motivation

We conducted a survey among students of pedagogical specialties, which allowed us to determine their attitudes to polylingual approach, motivation and desire to master the general language and professional competences. Determining the manifestation of the motivational component, we assumed that for formation of the professional competence on the basis of polylingual approach future teachers must have, in addition to subject knowledge, active position in life, motivation, which depends largely on the attitude to the objectives, content and object of activity. According to the results of the survey, individual interviews, we fill in Table 2.
Table 2. Characteristics of the future teachers’ attitude to pedagogical activity on the basis of polylingual approach

<table>
<thead>
<tr>
<th>No.</th>
<th>Proposed questions</th>
<th>Possible answers in (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>1</td>
<td>Do you think it is necessary to teach a school subject in the second (Russian/Kazakh, English) language?</td>
<td>10.6</td>
</tr>
<tr>
<td>2</td>
<td>Have you studied in school, some subjects in the second (Russian/Kazakh, English) language?</td>
<td>4.6</td>
</tr>
<tr>
<td>3</td>
<td>Is it effective, in your opinion, to learn the subject in the second (Russian/Kazakh, English) language?</td>
<td>9.8</td>
</tr>
<tr>
<td>4</td>
<td>Why is it necessary to teach some school subjects in the second (Russian/Kazakh, English)?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to work abroad</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>- to communicate with foreigners</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>- to learn language</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>- to learn the professional and scientific terms</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>- for future career</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>Are you interested in learning subjects in the second (Russian/Kazakh, English) language?</td>
<td>18.4</td>
</tr>
<tr>
<td>6</td>
<td>Do you try to master professional knowledge in the second (Russian/Kazakh, English) language?</td>
<td>13.3</td>
</tr>
<tr>
<td>7</td>
<td>Are you engaged in developing language skills?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- I learn advanced Kazakh language</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>- I learn additional Russian language</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>- I attend English language courses</td>
<td>37</td>
</tr>
<tr>
<td>8</td>
<td>Are you engaged in self-learning professional courses in the second (Russian/Kazakh, English)?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Yes, I learn a subject (maths, chemistry, biology and others) in English</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>- No, don’t</td>
<td>87.2</td>
</tr>
</tbody>
</table>

The obtained data describing students’ attitudes to professional and pedagogical activities on the basis of polylingual approach showed that a high level of professional and pedagogical orientation is presented not much. And for this level is characterized by a strong desire to develop professional language competencies, firm conviction in mastering by students the professional competencies in terms of teaching subjects on the basis of polylingual approach. That is, the pedagogical interest in this activity should express a positive attitude, desire to learn two or more languages, to teach the subject in Kazakh, Russian and foreign languages.

Analysis of the data in Table 2 allows noting that the level of formation of motivational component does not meet the goals and objectives of the problem. So, to the question “Do you think it is necessary to teach a school subject in the second (Russian/Kazakh, English) language?” 73.2% of respondents gave a negative answer. At the same time, the responses of the future teachers to the question “Have you studied in school, some subjects in the second (Russian/Kazakh, English) language?” Only 4.6% of the students said “yes”. And to the question “Is it effective, in your opinion, to learn the subject in the second (Russian/Kazakh, English) language?” 75.2% of future teachers were unable to unambiguously positive assessment. However, analyzing the answers to the question “Why is it necessary to teach some school subjects in the second (Russian/Kazakh, English)?” we found that only 18% of respondents consider the necessity of teaching school subjects in a second language for future career. Selection of the most occurring future teachers’ answers shows the following: 77% consider the need for this type of activity to
work abroad; 64%—to communicate with foreigners; 49%—to learn language; 45%—to learn professional and scientific terms. Consequently, as the data for statistical analysis shows, the majority of future teachers understand the importance of this issue, have an incomplete understanding of the importance of teaching school subjects in a second language. To the question “Are you interested in learning subjects in the second (Russian/Kazakh, English) language?” 18.4% of respondents expressed positive interest. Also in response of the future teachers to the question “Do you try to master professional knowledge in the second (Russian/Kazakh, English) language?” only 13.3% of students are interested in learning professional skills in a second language. At the same time, considering the answers to the question “Are you engaged in developing language skills?” only 15% of respondents learn advanced Kazakh language, 17% of students learn additional Russian language, and 37% of future teachers attend English language courses. When trying to determine the motivation for self-improvement, the students were asked “Are you engaged in self-learning professional courses in the second (Russian/Kazakh, English)?”. The vast majority of future teachers (87.2%) do not learn the subject on their own in the second language.

Thus, our questioning of future teachers revealed a number of problems, largely affecting the efficient formation of professional competence on the basis of polylingual approach:
- Lack of understanding of the importance of polylingual approach to teaching curriculum subjects;
- Underestimation of the motivating factors in mastering the common language and professional language competences;
- The lack of clear ideas about the possibilities of teaching school subjects in the second (Russian/Kazakh, English) language;
- Uncertain attitude to mastering professional knowledge in the second (Russian/Kazakh, English);
- Lack of desire to learn professional courses in the second (Russian/Kazakh, English) language.

Given that the majority of students in the learning process are faced with such difficulties, we believe that university teachers should pay more attention to the formation of a conscious, positive attitude of future specialists to professional competence on the basis of polylingual approach, as such a negative or neutral setting causes low levels of expression of motives for professional teaching activity, respective attitude to it.

5.2 Characteristics of the Future Teachers’ Knowledge

The next step is the analysis of formation students’ professional competence; we define the cognitive component—“knowledge of polylingual approach and its use in teaching curriculum subjects.”

In order to determine the level of students’ knowledge about the essence of polylingual approach, knowledge about its use in teaching curriculum subjects, we used methods: interview, analysis of testing, students’ written work.

In the study, students were asked to answer questions promoting to identify their knowledge of the specifics of polylingual approach, characteristics of polylingual approach implementation in the teaching of the subject. Analysis of the responses showed that students are not sufficiently informed about characteristics of polylingual approach implementation in teaching of the subject, they do not have sufficient theoretical knowledge, pedagogical internship has shown that many of them find it difficult in the practical application of existing knowledge (see Table 3).
Table 3. Characteristics of the knowledge of future teachers, leading to formation of professional competence on the basis of polylingual approach

<table>
<thead>
<tr>
<th>No.</th>
<th>Manifestation character of cognitive component criteria</th>
<th>% of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1.</td>
<td>They recognize and understand the essence of polylingual approach</td>
<td>27</td>
</tr>
<tr>
<td>2.</td>
<td>They master professional terminology in the second (Russian, English) language</td>
<td>28</td>
</tr>
<tr>
<td>3.</td>
<td>They master curriculum content in the second (Russian, English) language</td>
<td>19</td>
</tr>
<tr>
<td>4.</td>
<td>They know the characteristics of immersion to teach curriculum subjects and language teaching</td>
<td>12</td>
</tr>
<tr>
<td>5.</td>
<td>They know the methodology and technologies of content and language integrated learning</td>
<td>13</td>
</tr>
<tr>
<td>6.</td>
<td>They master methods of diagnosis and assessment of student performance on the basis of polylingual approach</td>
<td>15</td>
</tr>
</tbody>
</table>

Due to the fact that it is marked most students have superficial knowledge or knowledge of the separate elements of polylingual approach that characterize the essence of polylingual approach implementation it is a significant percentage of students who do not master professional terms and curriculum content in the second (Russian, English) language (respectively, 28% and 19%) or hesitate in the appropriateness of teaching subjects and language learning through immersion (respectively, 12%), 13% of students know the methodology and technologies of content and language integrated learning, and only 15% of future teachers master diagnostic procedure and assessment of student performance on the basis of polylingual approach.

On this basis, we assume there is a relationship between students’ belief in the need for polylingual approach in the teaching of the subject and the level of the future teachers’ knowledge of professional school subject content in Kazakh, Russian and foreign languages. All this allows us to conclude that it is necessary to work not only logically as in parallel on the acquisition of knowledge by students of professional content of the subject and the development of their interest in the general language and professional language competencies.

5.3 Characteristics of the Future Teachers’Skills

An important criterion in the structure of formation is “mastery of competencies implementing polylingual approach in the subject teaching.” As a result of studying the state of formation of this criterion, we found that students’ knowledge and skills in the organization and implementation of polylingual approach in the teaching of the subject and the formation of their professional competencies are low (see Table 4).

Table 4. Characteristics of formation of skills of the future teachers in the formation of professional competence on the basis of polylingual approach

<table>
<thead>
<tr>
<th>No.</th>
<th>Manifestation character of the operational component criteria</th>
<th>% of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1.</td>
<td>They are able to plan the teaching process on the basis of approach polyligual</td>
<td>17</td>
</tr>
<tr>
<td>2.</td>
<td>They are able to organize the teaching process by the methodology of content and language integrated learning</td>
<td>14</td>
</tr>
<tr>
<td>3.</td>
<td>They master the methodology of content and language integrated learning</td>
<td>11</td>
</tr>
<tr>
<td>4.</td>
<td>They are able to use technological tools in the implementation of the approach polyligual</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>They are able to diagnose the progress and results of content and language integrated learning</td>
<td>8</td>
</tr>
<tr>
<td>6.</td>
<td>They are able to analyze and evaluate the results of the subject teaching in a second language.</td>
<td>7</td>
</tr>
</tbody>
</table>
6. Results

Analysis of the obtained data indicates that students are not well trained to implement polylingual approach, including the teaching of the subject in Kazakh, Russian and foreign languages. A small number of students master competencies that implement polylingual approach in the teaching of the subject, including: 17% of students are able to plan the teaching process on the basis of polylingual approach; 14% know how to organize the teaching process by the methodology of content and language integrated learning; 11% master the methodology of content and language integrated learning; 13% can use technological tools in the implementation of polylingual approach; 8% are able to diagnose the progress and results of content and language integrated learning; 7% are able to analyze and evaluate the results of the subject teaching in a second language.

So, based on the analysis of empirical data we have characterized the main criteria of formation of professional competence on the basis of polylingual approach. Our data indicate that their lack of formation that affects the predominantly low level manifestation of formation. As reasons for the low level of formation of the future teacher’s professional competence on the basis of polylingual approach should be noted: weak formation of teachers’ internal behavior, here is unexpressed desire to develop general language and professional language competencies, a clear focus in terms of the teaching of subjects on the basis of polylingual approach. As a consequence, the lack of systematic knowledge in the field of professional content of the subject in Kazakh, Russian and foreign languages, not understanding the essence and characteristics of polylingual approach, not formation abilities and skills to ensure the implementation of polylingual approach in the teaching of the subject.

Methods of determining the state of formation of future teachers’ professional competence on the basis of polylingual approach are the same both in the control and experimental group. The results of this work are shown in Table 5 and 6.

Table 5. Levels of formation of future teachers’ professional competence on the basis of polylingual approach in the experimental group

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Levels</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>312 students</td>
<td>I low</td>
<td>151 (48.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>II medium</td>
<td>112 (35.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III sufficient</td>
<td>49 (15.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV high</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As we can see from Table 5, the high level of formation of the experimental group students’ professional competence on the basis of polylingual approach is absent; the majority of students have low, medium, and sufficient levels (respectively, 48.4%, 35.9% and 15.7%).

Table 6. Levels of formation of future teachers’ professional competence on the basis of polylingual approach in the control group

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Levels</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>274 students</td>
<td>I low</td>
<td>132 (48.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>II medium</td>
<td>96 (35.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III sufficient</td>
<td>41 (15.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV high</td>
<td>5 (1.8)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As we can see from Table 6, the high level of formation of the control group students’ professional competence on the basis of polylingual approach is presented by 5 students, which is 1.8% who graduated from special schools with advanced language learning. The main part of the students is presented with low, medium and sufficient levels (respectively, 48.2%, 35.0% and 15.0%).

The results of quantitative and qualitative analysis of the outcome of verifying experiment conducted on the base of M. Auezov South-Kazakhstan State University (Shymkent city), H.A. Yasawi International Kazakh-Turkish University (Turkestan city) are shown in Table 7, and we also offer a diagram (Figure 1).
Table 7. Comparative data of initial levels of formation of the future teachers’ professional competence on the basis of polylingual approach (in %)

<table>
<thead>
<tr>
<th>Groups</th>
<th>Sample size</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>low</td>
</tr>
<tr>
<td>The experimental group (EG)</td>
<td>n₁=312</td>
<td>48,4</td>
</tr>
<tr>
<td>The control group (CG)</td>
<td>n₂=274</td>
<td>48,2</td>
</tr>
</tbody>
</table>

As we can see from Table 7 that at the verifying stage of experimental work 48.4% of the students in the experimental group showed the low level of formation of professional competence on the basis of polylingual approach, 35.9% - the medium level, 15.7% - the sufficient level. The high level is absent.

A similar pattern is observed in the control group. So, 48.2% of students have the low level, the medium one is 35.0%, the sufficient level is 15.0%, only 1.8% showed the high level.

As in the experimental group there are no students who have demonstrated the high level of formation of professional competence on the basis of polylingual approach.

![Figure 1](image1.png)

Figure 1. Initial levels of formation of the future teachers’ professional competence on the basis of polylingual approach

7. Conclusions

Data analysis of the verifying experiment allowed us to draw the following conclusions:

- Levels of formation of the experimental and control groups students’ professional competence on the basis of polylingual approach are presented by low, middle, sufficient and high levels;
- The similarity of data characterizing the expression of the studied education of students in the experimental and control groups shows the influence of the quality of psycho-pedagogical training in the institutions of higher education on the formation of professional training by means of Kazakh, Russian and foreign languages;
- The existing system of psycho-pedagogical training in university leads to the formation of predominantly insufficient levels of professional competence in the implementation of pedagogical activity in the studied aspect.

Thus, the analysis of the problem state shows that polylingual approach is one of the most effective mechanisms of formation of future teachers’ professional competence. Meanwhile, the study and analysis of the real state of the problem shows a low level of students’ motivation to master professional competence on the basis of polylingual approach.

Efficiency of the formation process of future teachers’ professional competence is largely due to the mastery of knowledge and skills in terms of content and language integrated learning.
The decisive condition for the formation of the future teacher’s professional competence on the basis of polylingual approach is the inclusion of students in a variety of educational, creative, scientific and research activities in university pedagogical process, in the course of continuous pedagogical internship.

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References


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