Model of communicative competency formation of college students in bilingual education conditions

Modelo de formación de competencias comunicativas de estudiantes universitarios en condiciones de educación bilingüe

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ABSTRACT:
In this paper, the attempt to disclose meaningfully the influence of bilingual education on the process of formation of learners’ communicative competency was made. The model of a bilingual educational process of communicative competency formation based on realising the following set of organisational and pedagogical conditions was described: a degree of formation of sustainable motivation for studying a foreign language through the variety of forms of extracurricular activity and participation of all learners in different extracurricular events; establishing bilingual environment in the educational process and extracurricular activity of students, consistent sociocultural development of learners involved not only in the language environment, but also in the space of studied humanitarian disciplines; implementation of interdisciplinary integration in the education process of a college; active usage of Internet technologies and Internet resources as a natural multicultural environment and as an instrument of simulating real situations of cross-

RESUMEN:
En este trabajo, se intentó divulgar de manera significativa la influencia de la educación bilingüe en el proceso de formación de la competencia comunicativa de los estudiantes. Se describió el modelo de un proceso educativo bilingüe de formación de competencias comunicativas basado en la realización del siguiente conjunto de condiciones organizativas y pedagógicas: un grado de formación de motivación sostenible para estudiar un idioma extranjero a través de la variedad de formas de actividad extracurricular y la participación de todos los alumnos en diferentes eventos extracurriculares; el establecimiento de un ambiente bilingüe en el proceso educativo y la actividad extracurricular de los estudiantes, el desarrollo sociocultural consistente de los estudiantes involucrados no solo en el entorno del lenguaje, sino también en el ámbito de las disciplinas humanitarias estudiadas; implementación de integración interdisciplinaria en el proceso educativo de una universidad; uso activo de tecnologías de Internet y recursos de Internet como un entorno
cultural interaction. A set of organisational and pedagogical conditions of realising the model of communicative competency formation based on bilingual education was determined and experimentally approved. Criteria were justified, indicators and levels of formation of learners’ communicative competency in the educational process of the college were developed. 

**Keywords:** bilingual education, communicative competency, personality, educational process, multilingualism, professional education, self-knowledge

### 1. Introduction

Multicultural bilingual education by means of native and foreign languages represents an important constituent of modernizing purposes and the content of national educational systems in different countries (State program of education development in the Republic of Kazakhstan for 2011-2020, 2011). Existence of bilingual (Canada, Israel, Finland, Ireland) and multilingual states (the Russian Federation, the Republic of Kazakhstan, Switzerland, Belgium, Luxemburg, India), a huge growth of the number of people knowing at least two languages, internationalization of education, migration processes, dynamic development of bilingualism are factors which have transformed it into reality of the modern time (Chernichkina 2007a).

New standards of the secondary vocational education, built on the competence approach, provide not so much a set of certain disciplines as acquisition by learners of demanded competences, capabilities to gain and to apply knowledge independently, to use abilities, skills and personal qualities in the professional activity.

The relevance of the research results from the challenges of post-industrial society development, the members of which have a wide range of communication in the professional field, on the one hand, and active restructuring of the bilingual education system, renewal of culturological bases of the educational programme and perfection of the methodological system of teaching, on the other hand.


The ideas of communicative competency of a future specialist in the conditions of modernizing modern education were reflected in the research of many scientists (I.A. Zimniaia, E.V. Bondlevskaia, E.F. Zeer, A.V. Khutorskoi, A.A. Mirolubov et al.)

Analysis of scientific, scientific and methodological literature showed the presence of developed models of forming both communicative and bilingual competencies (L.E. Alekseeva, E.V. Parikova, E.V. Roshchina, O.Kh. Khaustov et al.), but models of communicative competency formation of learners-bilinguals at the level of secondary vocational education only begin to be developed.

Thus, analysis of the degree of scientific readiness of the questions of communicative
competency formation in the conditions of bilingualism allows establishing that at the modern stage of development of scientific studies and real practice, a number of objective contradictions reveal themselves quite clearly: between acknowledgement of the need of students’ communicative competency formation and insufficient readiness of conditions for training such specialist in the college educational process; between the relevance of practices of pedagogical support and its inclusion in the process of students’ communicative competency formation, as well as unreadiness of its conceptual frameworks and mechanisms.

The indicated contradictions determined the problem of research, which consisted in development and justification of the model of forming communicative competency of college students-bilinguals in conditions of bilingual education and determination of organisational and pedagogical conditions providing realisation of this model.

2. The essence of used concepts

In the main part of this research, the theory of bilingual education from the positions of the competence approach was considered; the current state of the problem of communicative competency formation was presented; the essence of the concepts “competence”, “competency”, “communication”, “communicative competency”, “bilingualism” was disclosed; the learner-bilingual’s peculiarity and the structure of bilingual communicative competency were considered; the main components of the model of forming communicative competency of learners’ bilingual personality were revealed; criteria and levels were identified; the indicators of the degree of communicative competency formation were developed.

The competence approach is actualized in education and, accordingly, common European skills’ standards are adopted, which base on training the people who not only know, but apply their knowledge Iu.L. Semenova (2012). V.I. Baidenko (2003), E.F. Zeer (2005), O.E. Lebedev (2004), A.V. Khutorskoi (2003) et al. were involved in studying the competence approach.

In the research, competence acts as a component of a human quality determining the capability and readiness of a subject to perform a certain group of actions in the field of a certain form of activity, but the competency – as a complex of competences, that is mastery of knowledge and experience necessary for effective activity in the given subject area (Myltseva 2006).

In the paper, the emphasis was put on communicative competency as a complex of “knowledge, abilities and skills necessary for understanding others’ and for generation of one’s own programmes of verbal behaviour adequate to purposes, fields, situations of communication. It includes: knowledge of basic concepts of discourse analysis (discourse knowledge) – styles, types, ways of connecting sentences in a text, etc.; abilities and skills of text analysis, namely communicative abilities – conversational abilities and skills applied to different situations of communication” (Miroliubov 2004).

Reliance on various approaches allowed identifying the following constituents in the structure of communicative competency: 1. speech competence; 2. language or linguistic competence; 3. sociocultural competence; 4. compensatory competence; 5. educational and cognitive competence (Miroliubov 2004).

Based on the analysis of approaches of U. Weinreich, V. Butskam (1993), I.A. Zimniaia (2003), L.V. Shcherba (1957), V.V. Safonova (2010), E.D. Suleimanova (2001), let us determine the definition of bilingualism as ... proficiency in two and more languages and an ability to switch adequately from one language to another depending on the purpose of communication; formation of speech mechanisms allowing a human being to use two language systems for communication”; and presented in proportional or symmetrical bi- or multilingual linguistic competences (Vershinina 2008).

The structure of communicative competence of both a bilingual and a monolingual is similar and consists of: language, speech, sociocultural, compensatory, educational and cognitive components. However, in the first case, language and speech competences and partially sociocultural competence include monolingual communicative and speech knowledge and
abilities (for instance, an ability to read in a foreign language and to understand the text). When in the second case, there are integrative bilingual abilities (for example, to be able not only to read in a foreign language and to understand the information, but also to tell the information to others, for example, in the native language). A communicative advantage of a bilingual as compared to a monolingual is conditioned by the surrounding the former with two languages and two cultures and an opportunity to extend the communicative space by self-realisation, which is reflected in a more complex nature of communicative competency of a bilingual. In the research, the scope and freedom of choice of communicative means by a bilingual as a consequence of availability of a varied repertoire of communicative patterns of behaviour as compared to a monolingual are considered as a distinctive characteristic. The third difference reveals itself in a greater flexibility and dynamism, which is connected with the frequency of switching the code, which provokes an “increase” of the power and “doubling” of recipients (two linguocultural communicative spaces of self-realisation) and, consequently, gives more opportunities to a communicant-bilingual in finding that behaviour pattern which will correspond more adequately to one’s communicative style and communicative intentions, as well as a specific situation of communication (E.K. Chernichkina (2007b), A.I. Ulzytueva (2012)).

3. Development of the model of communicative competency formation of college students-bilinguals in bilingual education conditions

Based on the revealed theoretical provisions, basing on the purpose, tasks and the object of the research, the authors developed the model of communicative competency formation of college students-bilinguals in bilingual education conditions (Pogozheva 2012). As a complex system, it is represented by interconnected structural elements and blocks: purposeful, motivational, content, procedural, technological, criterion-evaluative, resultative ones (Table 1).

A number of theoretical approaches acted as a methodological basis of the model of bilingual communicative competency formation, developed in this research: sociocultural, linguoculturological, ethno-cultural, competence and personality-activity approaches. The motivational block characterises internal prerequisites of mastering communicative competency by learners-bilinguals, expressed in sustainable motivation, desire to learn a foreign language, learner’s need to communicate in a foreign language, the need for cognitive activity, acquisition of new knowledge, in a desire to implement interpersonal and intercultural communication.

The content block determines the content of the study, describes a didactic programme of bilingual education taking into account interdisciplinary integration; kinds of activity connected with formation of learners’ communicative competency. Interrelation of curricular and extracurricular activities facilitates acquisition by learners of new ways of actions and experience of communicative activity, variety of language means of getting into contact; the students learn to pick up and to develop the thought of the confabulator, to inquire about and to obtain more specific information, to understand and to assess the verbal behaviour of a speaker, to analyse one’s information, to understand the content and a communicative intention of the speaker as fully as possible, which facilitates formation of tolerant cognition, interpenetration and mutual enrichment of languages, interconnection of cultures, customs, and traditions of a different ethnos.

The procedural block includes organisation and management of the pedagogical process. The stages of organisation of the pedagogical process include arrangement of learning activity which is characterised by such stages as arranging learning activity (1), establishing feedback in the educational process (2); conducting monitoring (3). Inside each of the stages, a system of pedagogical process management is planned.

In the arrangement of learning activity (1), there are two management processes, which include managing independent work of the learners and managing a group form of learning; establishing feedback in the educational process (2) occurs by making up the portfolio of a
student and an individual path of learning; conducting monitoring (3) consists of five subprocesses, namely the analysis of the results of ongoing monitoring of learners’ progress, analysis of the module test of learners’ progress, putting down the rating-admittance to the exam, an examination on a discipline, establishing rating of each learner by the results of the examination.

In the arrangement of the learning activity (1), two management processes, which include managing the independent work of learners and managing the group form of arranging the learning process, are distinguished. Establishing feedback in the educational process (2) occurs by making up a portfolio of the student and an individual path of learning; conducting monitoring (3) consists of five subprocesses, namely analysis of the results of the ongoing monitoring of learners’ progress, analysis of module testing of learners’ progress, putting down the rating-admittance to the examination, an examination on the discipline, calculating the rating of each learner by the examination results.

The technological block includes selection of modes of study, methods of teaching and testing, as well as means of organising the educational process. To form communicative competency of college students in bilingual conditions, the forms (traditional classroom lessons, independent work, work in small groups, extracurricular activity, participation in projects, forums, conferences) were used; methods (intensive, audio-lingual, methods of projects) (Ushakova 2006), means of college students in conditions of bilingual education (communicative technologies, multimedia and Internet resources, authentic materials) and modern technologies were selected. As the research results show, development of the elements of the technological block (a so-called learning package of the discipline) must be complex and aim at the education results. This condition provides creation of objective methodology of assessing students’ achievements, which is realised in the criteria, evaluative and resultative blocks of the model of communicative competency formation of bilinguals.

The criteria and evaluative block presents criteria (cognitive, motivational and affective, behavioural), indicators and levels (admissible, functional, creative) of formation of learners’ communicative competency.

The resultative block contains analysis of results of learners’ communicative competency formation. Proceeding from the purpose of this research, the creative level of learners’ communicative competency formation acts as a result.

Table 1
A model of communicative competency formation
To prove the effectiveness of the suggested model, a system of necessary and sufficient criteria of communicative competency formation was developed: cognitive (mastery of bilingual communicative and speech knowledge and skills, knowledge of norms, rules, laws of communication, humanistic principles and values of communication; psychological peculiarities of a human being; a formation degree of knowledge and abilities in the field of communicative technologies, multimedia and internet resources, authentic materials).
4. The content of the experimental work

At the stage of experiment preparation, the necessity of revealed organisational and pedagogical conditions for realisation of the design of learners’ communicative competency formation was justified; scientific and methodological filling of the simulated process was proposed, which provided formation of future specialists’ competency under study; analysis and assessment of the process effectiveness of bilingual communicative competency formation under given organisational and pedagogical conditions were realised.

Pilot testing was realised in natural conditions and included conducting ascertaining, forming and control stages.

At the ascertaining stage of the experiment, control and experimental groups were formed and empirical research methods were used: 1) conducting a series of exercises to assess the degree of communicative abilities’ formation (students’ utterances, compositions in native and foreign languages), 2) filling in the evaluation sheet “Level of communicative manifestations” by the teacher according to the results of the previous stage and observations of communicative activity at the lessons (questionnaire, method of pedagogical observation), 3) assessment of the communicability level (test by V.F. Riakhovskii), 4) test map of communicative activity (by A.A. Leontev), testing (CMT (communication and managerial talents) test), 5) questioning learners using “Self-diagnostics of communicative abilities” to identify difficulties in communicative activity.

In the research, it was demonstrated that by the results of the ascertaining stage, predominance of the low level of forming the competences, belonging to the structure of the communicative competency, was typical for experimental and control groups (Table 2).

The results, obtained at this stage of the experiment, confirmed that learners of both control and experimental groups had high motivation to learn a foreign language and to communicate both in the native and German languages. Bilingual communicative competency is not a new formation, and its formation requires development of a specific instructional content, which has activated the work on creating a set of organisational and pedagogical conditions, which have been realised during a forming stage.

<table>
<thead>
<tr>
<th>Group</th>
<th>Cognitive criterion</th>
<th>Motivational and affective criterion</th>
<th>Behavioural criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>F</td>
<td>C</td>
</tr>
<tr>
<td>CG - 1</td>
<td>53,6</td>
<td>38,3</td>
<td>8,1</td>
</tr>
<tr>
<td>CG - 2</td>
<td>54,0</td>
<td>42,0</td>
<td>4,0</td>
</tr>
<tr>
<td>EG - 1</td>
<td>53,6</td>
<td>40,9</td>
<td>5,5</td>
</tr>
<tr>
<td>EG - 2</td>
<td>57,6</td>
<td>30,3</td>
<td>13,1</td>
</tr>
</tbody>
</table>

At the forming stage of the experiment, a structural and functional model of communicative...
competency formation was realised, and a set of organisational and pedagogical conditions of its effective functioning were provided:

1. evolving positive motivation to learn a foreign language and to form communicative competency happened through the use of various forms of extracurricular activity and participation of learners from experimental groups in different extracurricular events, as well as giving pedagogical support to the learners of the experimental groups and elaborating an individual path of their development;
2. establishing bilingual environment in the educational process and in students’ extracurricular activity, consistent sociocultural development of learners when studying all humanitarian disciplines (through increasing humanitarian knowledge: attending performances, participation in projects, contests, scientific conferences), and not only languages, were realised owing to organisation of bilingual education;
3. interdisciplinary integration in the college educational process was implemented through consolidating the efforts of teachers of humanitarian disciplines, joint interdisciplinary projects, preparation of reports of interdisciplinary nature by students, development of the lessons’ system, holding conferences, formation of all kinds of communicative competency. The primary aim of the disciplinary approach was to analyse how the same topic had been presented in different cultures, how the Russian language, the Kazakh language and a foreign language interacted during formation of all kinds of communicative competency;
4. the practice of using interactive methods of training and Internet resources, as a natural multicultural environment and as an instrument of simulating real situations of cross-cultural communication, was one of the most important conditions of learners’ communicative competency formation.
5) application of innovation information (a projector, an interactive board, multimedia, online lectures, web technologies, video conferences) and communicative technologies (pedagogical communication technology, discussions, information and communicative technologies, web-quest technology, “thought factory”, education technology “Case method”), use of project activity, holding communicative discussions for activating life experience of learners.

5. Results of the experimental work

At each stage of the experimental work, the authors conducted pedagogical monitoring of the process of communicative competency formation of college students. Analysis of the activity results in the experimental groups showed expediency of introducing developed organisational and pedagogical conditions into the educational process of the college to enhance the level of formation of all components of communicative competency. In accordance with the chosen formula of assessing average indices of formed qualities constituting the content of components of students’ communicative competency, summary indicators of communicative competency formation of college graduates were determined (Table 3).

<table>
<thead>
<tr>
<th>Group</th>
<th>Cognitive component</th>
<th>Motivational and affective component</th>
<th>Behavioural component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Levels of communicative competence development</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>F</td>
<td>C</td>
</tr>
<tr>
<td>CG – 1</td>
<td>15,1</td>
<td>64,8</td>
<td>20,1</td>
</tr>
<tr>
<td>CG – 2</td>
<td>14,8</td>
<td>63,8</td>
<td>21,8</td>
</tr>
<tr>
<td>EG – 1</td>
<td>6,6</td>
<td>60,2</td>
<td>33,2</td>
</tr>
<tr>
<td>EG - 2</td>
<td>-</td>
<td>56,1</td>
<td>43,9</td>
</tr>
</tbody>
</table>

The research results of the initial and final levels of development of cognitive, motivational and affective, behavioural components of communicative competency are presented in Table 4.
Table 4

Data on formation of learners’ communicative competency at the beginning and at the end of the experiment, %

<table>
<thead>
<tr>
<th>Group</th>
<th>Levels of communicative competency development</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Admissible at the beginning of the experiment</td>
<td>at the end of the experiment</td>
</tr>
<tr>
<td>CG-1</td>
<td>54,7</td>
<td>12,6</td>
</tr>
<tr>
<td>CG-2</td>
<td>55,0</td>
<td>13,2</td>
</tr>
<tr>
<td>EG-1</td>
<td>56,8</td>
<td>6,7</td>
</tr>
<tr>
<td>EG-2</td>
<td>44,5</td>
<td>-</td>
</tr>
</tbody>
</table>

Statistical processing of the final calculation of test results showed essential differences in the levels of communicative competency formation of learners-bilinguals of the experimental groups as compared to the learners of the control groups.

There were changes in distribution of respondents by the levels: by the creative level, the final result in the control groups was 15,5%, in the experimental groups - 27,4%; by the functional level, the final result in the control groups was 26,4%, in the experimental ones – 23,5%.

In the experimental groups, as a result of realising the model and creating certain organisational and pedagogical conditions, changes in the distribution of respondents by the levels took place: the creative level in EG-1 increased up to 31,9%; in EG-2 – up to 44,9%; the functional level in EG-1 increased up to 61,4%; in EG-2 – up to 55,1%.

The admissible level of communicative competency formation reduced noticeably in experimental group EG-1, but in experimental group EG-2 (as a result of the carried out pilot testing), all the students-bilinguals achieved the functional and creative level of communicative competence, which justified once more the communicative advantage of learners-bilinguals as compared to learners-monolinguals, revealing itself in a more conjugate character of one’s communicative competency, in the freedom and speed of choice of communicative means.

The data on the dynamics of component development of communicative competency of students belonging to the control and experimental groups, obtained as a result of confirming and control stages of the experiment (at the beginning and at the end of the experiment), are presented in the summary diagrams (see Figure 1, 2).

**Figure 1**
Results of communicative competency formation in control groups CG-1 and CG-2 at the beginning and at the end of the experiment
The process and the results of the pilot testing confirmed that communicative competency formation facilitated actualization of personal qualities (striving for self-education, goals formation, striving for integration) of learners. The learners of the experimental groups demonstrated a high level of cognitive activity (communication and interaction on the Internet, on-line education), mastery of bilingual speech, sociocultural, compensatory, linguistic, educational and cognitive competencies.

The differences of experimental training results were validated using Student’s t-criterion for independent samples, which included the results of the same group of respondents before and after the experiment. Effectiveness of integration of the developed model was confirmed during experimental validation and its integration in practice in two colleges of Kazakhstan by obtaining statistically significant differences in the levels of learners’ communicative competency formation between control and experimental groups.

6. Discussion

The highlights of the research and its results were discussed at the international conferences (Pavlodar, Almaty, Astana, Moscow, Novosibirsk, Barnaul), in seminars of the Republic (Ust-Kamenogorsk, Pavlodar); were partially published in a number of scientific papers in journals “Filosofia obrazovaniia” (Education Philosophy) (Novosibirsk), “Obrazovanie. Nauka. Innovatsii: Iuizhnoe izmerenie” (Education. Science. Innovations: South dimension) (Rostov-
7. Conclusion
Findings based on the research results have allowed suggesting the following practical guidelines:
influence of bilingual education on the process of learners’ communicative competency formation provides mastery by the learners of the standards and values of world culture by means of native and foreign languages; a foreign language acts as way of comprehending the world of special knowledge, learning from cultural, historical and social experience of different countries and nations;
bilingualism can serve as an additional productive factor of “acquisition” of successive languages;
the model of communicative competency formation of college students in bilingual education conditions presented by the interconnected structural elements and blocks promotes successful formation of learners’ communicative competency and functions under a set of organisational and pedagogical conditions;
the main provisions and findings contained in the research justify the effectiveness of the developed model and are a proof of sufficiency of a set of selected conditions for learners’ communicative competency formation in the college educational process.
The obtained research results, drawn conclusions are not claimed to solve comprehensively a complex and multisided problem of bilingual education of college students. They can serve as a basis for its further scientific study with regard to realisation of problem succession at different educational levels: a school, a college, a higher school.

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