Consecutive teaching of language: a continuous pedagogical model

La enseñanza consecutiva de un idioma: un modelo pedagógico continuo

SALKHANOVA Zhanat 1; ABAYEVA Zhamilya 2; MURHAMADIEV Khafiz 3; ZHAPPAR Karligash 4 & DEMEYBEKOVA Karligash 5

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1. Introduction

Modern language education is associated with the emergence and development of the anthropocentric paradigm, which understands language as a product of society and a means of thinking and which highlights concepts such as “man in the language,” “linguistic and...
cognitive consciousness,” “multilingual educational space,” “subject of intercultural communication,” “linguistic and speech personality,” “secondary linguistic personality,” etc.

This anthropocentric paradigm is particularly relevant in countries with a multiethnic, multilingual population. One such nation is Kazakhstan, where multilingualism is related to national ethno-cultural values and which has instituted a state-wide “Trinity of Languages” program. In 2007, President Nursultan Nazarbayev first proposed this program by saying, “Kazakhstan should be perceived throughout the world as a highly educated country whose population uses three languages. They are: Kazakh, the state language, Russian, the language of interethnic communication, and English, the language of successful integration into the global economy” (Nazarbayev, 2007).

As a result of this program, which is being introduced in phases from 2010 to 2030, linguistic and pedagogical research has examined multilingual education and the development of pedagogical models and educational technology. Such research has focused on several educational stages and aims to help students develop parallel language skills in three languages: Kazakh, Russian, and English (Chan Din Lam, 2013). This study builds on this pre-existing research to further Kazakh educational policy.

The transition to variational education in Kazakhstan, and the world as a whole, has led to an increase in pedagogical freedom and allowed teachers and scientists to take advantage of innovative approaches, technologies, and techniques. However, as of yet few studies have examined how to take advantage of these innovations to develop consistent pedagogical models at all stages of education, including primary education, colleges, and universities. This study attempts to remedy that by including the principle of learning continuity, which combines the basic stages of learning into a holistic educational process ensuring the development of students’ knowledge, skills, and abilities. This continuing education model, while not applicable to all subjects, provides a novel way of effectively teaching those studied “continuously,” or at all levels of the educational system regardless of students’ age or professional characteristics. Such disciplines include, for example, computer science, history, mother tongue, state language, and foreign language.

Language and language competency are core competencies students in both primary and secondary schools are expected to acquire and an integral part of college or university students’ professional development. In this regard, we believe that language training at different levels of the educational system can and should be based on the continuing education model, taking into account the peculiarities of students’ needs at each developmental stage and aimed at the overall formation, improvement, and development of multilingual communicative language competence.

2. Literature review

A number of existing works that present a comprehensive study of the issues surrounding continual education (Zhuk, 2016; Bodalev, 2005; Brudny, 2002; Dorozhkin, 2017; Gaisin, 2000; Kazbekova, 2018; Legenchuk, 2015; Potashnik; 2000). In addition, Kazakhstani researchers have examined problems with continuity in general and polytechnic secondary and higher education (Jadrina, 2004; Musin, 2000; Naukenova, 2006; Nurahmetov, 2005; Yelyubayeva, 2006) and others have examined continuity within the field of linguodidactics (Pavlova, 2016; Salkhanova, 2017; Zhumabekova, 2016). Finally, various monographs address the philosophical and didactic aspects of language succession (Dryden, 2003; Gershunsky, 2002; Kusainov, 2008; Silander, 2019).

We share the opinion of scientists that the principle of continuity in the conditions of formation of the system of continual education is updated and comes into interaction with such aspects of education as: continuity between school and vocational education, continuity of secondary, higher, postgraduate education, continuity of education and self-education. In the works of researchers continuity is assessed as a positive factor in the training of a particular discipline in terms of a certain stage of the educational ladder: in the structure of the school, College, University.

However, the question of continuity as a key principle of the educational process, uniting all stages of the modern educational model, remains insufficiently investigated. In contrast to
3. Methods

Our study relies on developing training, the activity theory of teaching and development, and the formulation and solution of educational problems. To this end, we rely on a descriptive-analytical comparison of pedagogical, psychological, and didactic concepts; socio-pedagogical monitoring of students’ actual educational activities, including attendance, analysis of their classes, and data collection; and aspect analysis of the relevant scientific and educational literature.

Pedagogical experiment as the main method of research is carried out in order to confirm the effectiveness of the developed pedagogical model of parallel teaching disciplines of the language cycle. To this end, we observed 10–11 high school classes, 1–2 college courses, and 1–2 university courses. In accordance with state standards, students at each of these stages must study Kazakh, Russian, and English. Through this field study we hoped to measure the purposeful impact of the multilingual educational process, its effect on cognitive activity, and how it worked to improve communicative language competence in all three languages. We conducted this study from 2007 to 2017, and it included a total of 900 primary, college, and university students. For objectivity of experiment classes in city and rural schools, humanitarian and technical colleges, at law and mathematical faculties of universities were selected. The official consent from heads of educational institutions and participants of experiment was received, acts of introduction of pedagogical model are made.

The pilot programme consisted of three phases: 1) confirming the experiment design in order to identify students’ initial knowledge and the skills necessary to model speech activity, 2) conducting the study to verify the effectiveness of our model and learning technology, and 3) correcting our methods based on the difference between the experimental and control groups. As a result of this third step, we clarified the main provisions of our hypothesis, carried out statistical analysis, and formulated our conclusions.

This experimental worked involved the following steps. First, we determined the possibility and necessity of implementing a uniform pedagogical model in primary schools, colleges, and universities and introduced some relevant technology to help implement parallel training in language teaching. Second, we recognized the possibility of the organization of purposeful influence during the experiment on the system of continuous multilingual education, which allowed us to empirically check our results. Finally, we used questioning, statistical analysis, structuring, modelling, and solving educational problems.

Our results suggest that it is possible to redefine the levels of language proficiency into the following: receptive, reproductive, productive, and competence. The initial receptive level is characterized by total lack of language proficiency, knowledge, and skills. The reproductive level reflects basic, compulsory language skills and is a diagnostic description of the minimum requirements of training. It is this level that provides the foundation for all future learning and characterizes the absolute minimum permissible learning level. The third productive level represents advanced language skills above and beyond what is required. This is the level in which students assimilate the learning material at a productive level and can apply their knowledge in new situations; it requires certain creative activities. Finally, at the competence level students can and are willing to realize their education in practice. The competence level includes such concepts as literacy, education, culture, and mentality and represents the formation of the linguistic personality, in which the individual can fully realize the necessary linguistic knowledge, skills, and abilities in conjunction with their professional, social, and psychological needs.

The educational technology we selected in our study design is further subject to structuring. Through the use of technology, we seek to identify a system of semantic relationships
between the elements of a large didactic unit (section, module, theme) and to arrange the training material in the sequence that follows from this system of relationships. When designing the technology, the content and structure of educational material are presented in structural and logical schemes, network diagrams, matrices, graphs, etc. depending on training goals and the topic’s information capacity. Structuring the content in such a way allows the teacher to highlight its most significant supporting elements and to present connections visually through technology.

We selected program material taking into account the continuity of the learning process through high school, college, and university. One of the most important key grammatical topics of the morphological system in Kazakh, Russian, and English is verb forms. This topic is also one of the most difficult because of the diversity and complexity of its components. In addition, linguists and methodologists have noted some commonalities between the verbal systems of the three languages. These two factors led us to use this morphological category as the object and unit of our educational model.

As shown in Table 1, students’ initial language competence was low. Most students (76.80%) were in the receptive group, while only 16.60% were in the reproductive group and 6.60% in the productive group. This pattern is typical and repeats from year to year: secondary school graduates enter university with insufficient knowledge of the language cycle. While they may possess some skills in oral speech, they remain illiterate in writing and with only haphazard knowledge of theoretical material and no applied grammatical skills.

<table>
<thead>
<tr>
<th>Communicative competence criteria</th>
<th>Receptive group</th>
<th>Reproductive group</th>
<th>Productive group</th>
<th>Competent group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>Control</td>
<td>Experiment</td>
<td>Control</td>
<td>Experiment</td>
</tr>
<tr>
<td>Students have parallel theoretical knowledge of grammar in three languages</td>
<td>76.80%</td>
<td>80.10%</td>
<td>16.60%</td>
<td>13.30%</td>
</tr>
<tr>
<td>Students have the ability to use theoretical knowledge in typical situations</td>
<td>67.40%</td>
<td>70.70%</td>
<td>23.30%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Students have practical implementation knowledge and skills in typical and new situations</td>
<td>67.80%</td>
<td>79.80%</td>
<td>32.0%</td>
<td>20.20%</td>
</tr>
<tr>
<td>The average distribution coefficient by levels (in %)</td>
<td>74.50%</td>
<td>79.50%</td>
<td>20.00%</td>
<td>15.50%</td>
</tr>
</tbody>
</table>

The experimental base for our study was the parallel training of Kazakh, Russian, and English in educational institutions. We then conducted statistical analysis of students’ knowledge of...
Russian, presented graphically. To indicate language development at the various levels, we used the coefficient of performance as calculated by the formula:

$$CP = \frac{CA}{TT} \times 100$$

where CP = coefficient of performance, CA = the number of correct answers (correctly solved steps of the algorithmic problem), and TT = the total number of tasks. We used a six-point evaluation: 6 = CP is greater than or equal to 90%, 5 = KU is greater than or equal to 80%, 4 = CP is 70%, 3 = CP is less than 60%.

We also determined the speed at which students finished an educational task using the following formula:

$$S = \frac{t}{V}$$

where S = is the speed of execution, T = execution time, and V = the volume of material to digest. We also used a six-point evaluation system to measure the second criterion. A student’s average score for each criterion is determined by the ratio of the sum of points for each indicator to the number of indicators: students were deemed “competent” if their average score was 5.5–6, “productive” if the average score was 5, “reproductive” if the average was 4–4.5 points, and “receptive” if the average score was 3–3.5 (Tables 1–2).

### Table 2

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<td>Students have parallel theoretical knowledge of grammar in three languages</td>
<td>13.40%</td>
<td>20%</td>
<td>40%</td>
<td>53.40%</td>
</tr>
<tr>
<td>Students have the ability to use theoretical knowledge in typical situations</td>
<td>16.60%</td>
<td>30%</td>
<td>36.60%</td>
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<td>The average distribution coefficient by levels (in %)</td>
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<td>21%</td>
<td>15.60%</td>
</tr>
</tbody>
</table>

### 4. Results
There are two types of continuity in modern education: methodological and general didactic. Our study considers the latter, which reveals the developmental direction of the main components of the learning process: goals, content, methods, and means. In relation to the principles of systematicity and consistency, this direction is a category of higher order.

Development is due to the continuity between the existing and the new. Denial of the existing and transition to the new does not mean its complete elimination; otherwise it would be impossible to develop. Thus, dialectical negation is always connected with the preservation of positive elements achieved at the previous stage of development. It is important not only deny negative process the negative process, but also to preserve it in order to develop new qualities. At the same time, the teacher’s ability to present new abstract knowledge as a continuation of familiar, well-known material, thereby increasing students’ practical skills, is of great importance. Such an approach is seen in the teaching of many technical and human sciences.

We first applied this principle of continuity to students’ Russian language learning. Students begin learning Russian in primary school (Grades 1–4) through four types of activities: listening, speaking, reading, and writing, all of which are used to varying degrees. During this stage, students are introduced to the most elementary concepts of linguistics and grammar, such as consonants and vowels, sounds, and syllables, through listening and speaking. The teacher, meanwhile, acts to lead and guide student learning. Gradually students begin to apply what they have learned through listening and speaking to reading and writing. The second level of language training coincides with basic secondary school (Grades 5–9). It is during this period that students are provided with the scientific foundations of linguistics and the main grammatical concepts and linguistic categories. Students study phonetics, vocabulary, morphology, syntax, punctuation, and spelling as interrelated and interdependent components of the same system. During this stage, a student turns from the object of study to the subject, while the teacher becomes a partner and mentor on the way to knowledge. The third level of language training is carried out in high school (Grades 10–12), This involves the systematization of knowledge acquired over the past 9–12 years of study and its transformation into a foundation for the student’s continuing education in college and university. Finally, the fourth level of language training occurs during master’s and doctoral studies and is associated with professional education. Its main purpose is the formation of professional competence and research skills.

Each of these four stages is quite clearly structured and has specific content; however, each requires continuity, or what has been learned in the previous stage. This implies that continuity should be considered at all stages of pedagogical development, including in lesson preparation, calendars and thematic plans, and in determining technologies as well as in the teaching itself, whether in lessons, lectures, seminars, or practical classes, and in pedagogical evaluation and control. In this context it is expedient to develop common models and pedagogies that rely on continuity and can be implemented in a phased manner at all levels of education from preschool to post-graduate education. This pedagogy and its associated learning technology should be universal and applicable to teaching not only a native language, second and third languages as well. Finally, it should rely both on continuity and personality oriented learning.

Recent pedagogical research has seen the emergence of variable educational institutions and the development of new technologies based on principles of democratization and humanization and assuming a multilevel evaluation of results (Gershunsky, 2002). The existing curricula for basic secondary school subjects include two levels of training: compulsory and possible. In secondary special and higher educational institutions, a third level is added: creative development. In our model (Salkhanova, 2017), we designate these same levels are initial, basic, and advanced. We then use these models to develop and test a theoretical and conceptual pedagogy for the development of communicative language competence (Figure 1).

Figure 1
Theoretical and conceptual model of communicative language competence development
As a result of this model and technology, including the use of flowcharts to portray grammatical algorithms as learning tasks, restructuring the relationship between teacher and students as equal subjects, allowing student to be more independent, and enhancing learning activities to increase motivation, students improved their cognitive interests and their knowledge, skills, and abilities gradually began to improve.

Our results also revealed that language proficiency is somewhat dependent on objective factors related to the main language of instruction, the presence or absence of the language environment, students’ level of basic knowledge, and students’ social and professional orientations. Urban students, for example, showed a higher level of Russian than Kazakh and
English while more rural students were fluent in Kazakh but had very low proficiency in Russian and English. Likewise, students at the humanitarian law college showed equal proficiency in Kazakh and Russian, while students at the technical college of energy and electronic technologies are fluent in Russian but show only reproductive-level proficiency at Kazakh and English. University students showed a productive level of knowledge in Kazakh and Russian and a reproductive level in English.

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5. Conclusion

Kazakhstan’s educational policy prioritizes education as a continuous process. Likewise, this article focuses on education as a step-by-step process showing continuity from elementary school to post-graduate education. Our findings show that complexity, technology, diagnostics, interactivity, independence, cooperation, focus on the expected results, and cognitive activity are crucial in developing such continual training in language education.

The article presents a theoretical and conceptual model of communicative language competence development that involves the parallel teaching of several languages at all levels, taking into account continuity and how this affects language competence. We also develop various technology suggestions in order to further communicative and speech strategies based on the theory of speech activity, personality oriented and communicative approaches, and the development of technological methods to ensure learning outcomes.

Based on these findings, we present the process of language learning and the formation and development of communicative competence as a single task with several components (conditions of the problem) distributed in stages. Therefore, subject material is logically structured in a cyclic form, where each stage of training is an integral part of the cycle. If we consider language cycles at the levels of education, it is logical to allocate four main stages: orientation (primary school), information and diagnostic (primary school), modelling (the final stage of secondary school), and integrating (vocational education in college or university).

Each stage is characterized by differences in goal-setting, the contents of basic knowledge, the types of educational tasks, the educational tasks, the form of a control slice, and the general formulation of training. The organization of training on a technological basis involves certain requirements in teachers’ procedural skills and the development of innovative mechanisms in teacher activities and class design, since the type of pedagogical activity creates the conditions for students to achieve the desired result. Technological creativity is a purposeful, systematic, thoughtful development of new components of professional activity in to teachers’ technological integrity arising a technological approach.

Of course, this article does not cover all aspects of the continuing education system. We focused on teaching three languages on the material of one grammatical topic "Verb". By analogy, you can develop a system of multi-level tasks for the study of nouns, adjectives, numerals, which take place in all languages. The scope of our study can be expanded to include not three, but four or five languages, the most popular in our country. For example, Chinese is becoming more widespread in Kazakhstan, as China is a territorial neighbor and economic partner of the Republic of Kazakhstan. Our country has a multi-ethnic composition of the population, so in place of the Kazakh language as a native language can be considered Uzbek, Uighur, Tatar, Ukrainian, Korean and other languages of the peoples historically living in Kazakhstan. Prospects for research may also be associated with the development of new
technologies and techniques, for example, the development of computer programs using the capabilities of information systems, the creation of a database of educational data, common or similar in the grammars of several languages studied in parallel.

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