COMPETENCE-BASED EDUCATION –
A COMMON EUROPEAN STRATEGY

T. Lobanova, Yu. Shunin

Information Systems Management Institute
Ludzas Str. 91, Riga, LV-1003, Latvia

The article gives a brief review of competence-based professional higher education today and its underlying principles. Following this overview is an appraisal of literature that illuminates the heritage of competence-based education and contains current writings that offer further understanding of the research subject matter. This section analyses and distinguishes the concepts “competence” and “competency”, identifies and defines integral structure and contents of the communicative language competence, substantiates the choice of the key competences necessary for everyone, and function-orientated competences, which in their unity stipulate the successful adaptation and self-realization of a young specialist in the modern fast changing world. At the end of the article the authors offer an innovative exploitation of the Systemic approach contributing to the development of a Systemic linguo-didactic model, its theoretical grounding with definitions of key concepts. The model implies context-dependent management of the educational activities based on the analysis of semantic changes in data relations – contextual concordance of relations within an intelligent system.

Keywords: communicative language competence, Systemic approach, Systemic linguo-didactic model

1. Introduction

In the last years “competences” cause a lot of interest among practitioners of higher education and vocational training and come to the foreground of educational goal-setting. Authentically assessing competence-based education today requires a worldview that includes multiple beliefs about the purpose of education and a capacity to draw a connection between what results from these purposes and the impact those results have on the individual, the society and the world.

Nowadays education in a broad sense has been considered as the investment in the development of the society. The governments and the wide public are concerned about adequacy of quality of education and training and economic and social profitability of the means invested in education. The question of educational contents corresponding to tomorrow’s demands has become a vital issue in educational reforms all over the world. Importance of flexibility, adaptability, mobility, creativity of education and life-long learning in the global, changing world is the focal point of modern national and international discussions concerning higher education and vocational training.

In the light of Bologna agreements assuming the academic and professional recognition of the state diplomas within the European space, graduation of qualified specialists, capable of life-long learning and performing professional work in conditions of multicultural environment, the problem of professionally-orientated communicative language competence development acquires a special meaning [1–4].

Competence-based professional higher education is not a tribute to fashion to introduce new words and concepts, but the objective phenomenon in higher education caused to life by social and economic, political and educational conditions. First of all, it is a reaction of professional education to the changed social and economic demands and to the innovative processes which have appeared together with the global market economy. The labour market shows the whole gamut of new requirements which are insufficiently considered or not considered completely in educational programmes for young specialists. These new requirements are not connected rigidly with any particular discipline; they are trans-disciplinary in character and are notable for their universality. To ensure young adults education which corresponds to these requirements means not as much changing the content of education as pedagogical approaches and methodologies. Such requirements some authors call ‘basic skills’ (Duke S., Oscarsson B., Baidenko V. I.), others treat them as sub-professional basic qualifications (Novikov A. M., Izarenkov D. I.), or key competences (Wildt J., Rychen and Salganik, Van der Blij M. and Boon J., Zimnyaya I. A., Zeer E. F.).

Nowadays it is obvious that subject knowledge and skills do not comprise a full range of educational results necessary for the development of a socially mature person who is capable of political and economic management and full self-realization in the society. The search for the answer to the question what competences besides the abilities to read, write and count are important for the contemporary young
specialist to actively participate in social life and to meet the challenges of the present and the future has become a focal point in the analysis of this scientific research where various aspects of competence-based approach to education are presented: as a condition for successful adaptation of each person in the modern fast-changing world (Jonnaert Ph., Barnett R., Jarvis P., Cox R., Light G., Rychen D. S., Weinert F., Koče T., Tilıa I., Maslo I., Shishov S. E., Zimnyaya I. A., Izarenkov D. I., etc.) as a necessity of further reorganization of higher education based on the concept of dialogue of cultures (Isaacs W., Senge P., Schein E. H., Bohn D., Bibler V., Leontyev A. N., Passov E. I.) and transformations in higher education in the direction of international communications (Nunn R., McKay, Kasper G. and Kellerman, Bachman L. and Palmer A., Light G. and Cox R., Koče T., Baidenko V. I., etc.).

Data of researches are especially significant from the perspective of developing future specialists’ personal and creative qualities, their key and professionally-orientated competences which provide graduates with better chances for successful adaptation and self-realization in conditions of new information technologies, life-long learning and self-development (Light G., Cox R., Koče T., Zimnyaya I. A., Shishov S. E., Baidenko V. I., etc.).

Although cognitive skills and abilities gained through traditional higher school programmes are the important results of education, still, the choice of competences can hardly be reduced only to these frameworks [5]. This is just one aspect of the difficulty to be considered. As theory and practice of hiring young specialists proves, such non-cognitive aspects as practical skills, attitudes, motivation, value preferences and ethics, which are not necessarily achieved and developed in the field of formal education, play an important role. Furthermore, such terms as competence, competency, key competences and skills, are ambiguously treated at their use.


However, despite a wide use of concepts ‘competence’, ‘competency’, in scientific literature, the given notions, in opinion of many scientists (Jonnaert Ph., Nunn R., Weinert F., Schneckenberg D., Wildt J., Tilıa I., Zimnyaya I. A., Kuzmina N. V., Baidenko V. I.), are not explicitly distinguished, therefore a question of differentiation of these terms still remains topical.

In a number of works the concept ‘competency’ is defined as intellectual and personal ability of an individual to practical activities, and ‘competence’ as a contents component of the given ability in the form of knowledge, skills and aptitudes (I. A. Zimnyaya, M. G. Evdokimova, etc.).

In I. A. Zimnyaya's opinion, ‘competency always displays the actual competence’ [6]. B. D. Elkonin believes that ‘competency’ is a degree of a person’s involvement into activity [7]. S. E. Shishov considers the category of competence as a general ability based on knowledge, values, aptitudes, enabling to establish relationship between knowledge and situation, to reveal a procedure (knowledge and action), suitable for a problem.

I. Tilıa defines competence as an individual combination of abilities and experiences stipulated by opportunities to gain these [8].

According to Weinert, in the light of terminological and conceptual disorder connected with the concepts ‘competence’, ‘skill’, ‘professionalism’ and so on, it is necessary to develop an explicit definition of the concept ‘competence’ [9].

Weinert tries to lay a bridge between a psychological-pedagogical concept, on the one hand, and a sociological concept on the other. He defines ‘competence’ as a ‘slightly specialized system of aptitudes, abilities or skills necessary for achievement of a specific goal. It can concern both the individual abilities and the distribution of abilities within a social group or establishment [9].

The young of the 21st century should be ready to carry out various functions as students, specialists-professionals, citizens, family members and consumers, to act and be able to find their bearings inside and outside the real complex contexts and to face numerous complicated problems, showing critical thinking, systemic thinking and to make responsible decisions. Therefore Rychen D. S defines competence as an ‘ability to successfully meet the complex requirements in a certain context’ [3].

It seems that the theoretical uncertainty of the considered concepts depends on the English terms “competence” and “competency” which are often translated as synonymous, in a double meaning. Different interpretations in the use of the concepts are also caused by their ambiguous treatment in social, psychological, pedagogical, and linguistic aspects.

Moreover, in non-language-related higher education, there are no systemic pedagogical researches describing the content of professionally-orientated communicative language competence and conditions
Education technologies

for its development in respect to professional, cognitive, linguistic, communicative, socio-behavioural, socio-cultural, ethical, strategic, and personality-directed components. Therefore, investigation of the concept ‘competence’ and the terms connected with it is central in the research of competences, their definition, selection and inclusion into the educational language programme for the students of non-language-related departments.

At the international level, the work in the field of competences began in 1990 under the aegis of the Organization of Economic Cooperation and Development – OECD with the International interdisciplinary programme DeSeCo (Definition and Selection of Competencies: theoretical and conceptual foundations) [10]. The work started with the analysis of the results of three main researches in the field of competences which have been realized in the context of OECD: the project of interdisciplinary competences (the Cross-Curricular Competencies Project), the international research of literacy of adults (IALS – International Adult Literacy Survey), and the project of the human capital (the Human Capital Project). Also some minor projects have been briefly considered: the International Programme of the Estimation of Pupils (PISA), Literacy and Skills of a Life of Adults (ALL – the Adult Literacy and Life-skills), the International Association of the Estimation of Educational Achievements (IEA – the International Association for the Evaluation of Educational Achievement), Civil Education (CivED), and the Third International Research on Mathematics and Natural Sciences (TIMSS). Some of the central themes of programme DeSeCo are beyond the listed researches. For example, the concept that education is not a result in itself but a means to be prepared for life.

In reality, in the world community there is a consent concerning the importance of such competences as social, communicative, literacy (including skills in processing information, solving problems, critical thinking, possessing native and foreign languages, systemic thinking and life-long learning competence) necessary for successful participation in social life. Besides, in some countries values have become an aspect of special attention.

The fact, that at a global level among the countries there is a lot in common, does not mean that it can automatically lead to defining the most significant key competences in all countries, and will not allow extrapolating key competences found in one particular country to all other countries. However, the most often mentioned competences or components considered by majority of countries represent a valuable list of areas of special interest.

2. The Essence of the Concept ‘Competence’

DeSeCo defines competence as a ‘system of internal mental structures and abilities assuming mobilization of knowledge, cognitive skills, practical skills, and also social and behavioural components such as attitudes, emotions, values and ethics, motivations for successful realization of activity in a particular context’ [10].

Conceptualisation of the concept of competence accepted by DeSeCo, is entire in the sense that it has integrated and connected external demands, individual characteristics (including ethics and values) and context as essential elements of competence presentation. However, considering individual characteristics, such an important element as individual peculiarities has been overlooked. It is impossible not to take into account that a person is, first of all, a subject of social development and, what is more important, an active subject of self-development, including self-education. Internalising social experience is always deeply individual. The same social situations are differently perceived and experienced by various persons. Accordingly, social experience which has been gained from objectively identical situations will be very individual.

Higher education institution as a social institute should prepare a graduate for life. And life as a circuit of consecutive objectives and responsible choices does not imply only academic knowledge. A. A. Rean and N. V. Bordovskaya argue that development of a person as a subject of activity necessarily includes the factors which form a socially-mature person:

- development of intelligence,
- development of positive thinking, positive attitude,
- development of autonomy, responsibility,
- development of motivation leading to self-development, self-realization.

Educational results are, in fact, measurable, demonstrated by students (graduates) knowledge, skills and abilities after the accomplishment of an educational process, which can be expressed by means of competence.

It is necessary to emphasize that the terms ‘competence’ and ‘skill’ should not be treated as synonyms. Skill is defined as an ability to execute complex action and /or cognitive action with ease,
Education technologies

accuracy and adaptability to changing conditions, while competence is defined as a complex system of abilities, encompassing cognitive skills, attitudes and other non-cognitive components. In this sense competence is considered as a holistic concept. Competence is a systemic, holistic concept and therefore cannot be reduced only to cognitive areas. Therefore the concept ‘competence’ and ‘skill’ are not synonyms [3].

Thus, taking into consideration trans-disciplinary educational perspectives, external demands, individual characteristics, peculiarities and context as an integral element of competence realization, it is possible to illustrate a unified model of structural composition and content of competence by means of function-orientated competence (Fig. 1). We focus on a functional approach since competence is viewed to ensure an individual the ability to cope with complex demands and tasks in multiple social contexts and situational practices.

![Figure 1. Functional orientation and structurally-componential content of competence](image)

As we see from the model, functional orientation of competence and context or social situation for its realization can vary. However, the internal structure of competence will be comparatively permanent. Therefore, it is possible to conclude that competence, from the point of view of its structural composition, is an objective characteristic (Fig. 1).

However, functional orientation (need, demand for a certain set of abilities) will define the internal content of structural components of competence, which will be exclusively personal (subjective). Thus, from the point of view of its content, competence is a subjective characteristic. The Systemic view brings together a formulation of one uniting principle that represents the source of all understanding – *a synthesis*.

To proceed from the theoretical analysis of numerous concepts and taking into account the definition accepted by DeSeCo, it is possible to define the concept of competence from the Systemic perspective as follows: *Competence is an objective characteristic determined by integral personal system of mental intelligence and abilities, assuming a synthesized unity of as follows:*

- knowledge and acumen,
- cognitive skills and strategies,
- practical aptitudes and abilities,
- as well as social and behavioural components comprising
  - attitudes,
  - emotions,
  - values and ethics,
  - motivations

*functionally orientated towards positive result achievement in a certain context.*

Thus, any competence can be represented as a system of synthesized cognitive and practical skills, knowledge, motives, values and ethics, attitudes, emotions and other social and behavioural components which in their integrated unity can be mobilized for effective, productive functioning in any particular context.

It seems to be not very correct to apply the term ‘professional competence’ as the concept is too extensive and does not reflect its substantial essence, since one competence is not able to satisfy the needs of any profession. It is more expedient to speak about a set of function-orientated competences, necessary for successful performance of this or that professional task, which might constitute an *integrated professional competence module.*
2. ‘Competence’ Development and ‘Competency’ as a Personal Systemic Characteristic

Definition of competence cannot be limited to only a simple description of expected actions or behaviour. Competence can be viewed as an organizing activity characteristic, since it presupposes not just the application of knowledge to a certain situation but includes the ability to organize personal activity for successful adaptation to situational peculiarities. And in this respect competence can be understood as a dynamic, organizing the structure of activity characteristic allowing a person to adapt to various situations on the basis of gained experience and practice.

Competence is not restricted only to acquisition of knowledge and skills. It is formed and revealed through activities (acts of performance) as ‘ability to make actions in various contexts in adequate, responsible form integrating a combination of knowledge, skills and attitudes’ [11].

The definition offered by van der Blij is notable because it consistently integrates the basic components necessary for theoretical modelling of the concept of development and monitoring the development of competence in the context of higher education (Table 1).

Engaging the basic components of development, the model visually exposes characteristic preconditions (characteristics available at present) of an active individual, a contextual level of activity performance and a situational contextual level of standards for the adequate (corresponding) behaviour determined by a social consensus (consent).

<table>
<thead>
<tr>
<th>Components</th>
<th>Characteristics</th>
<th>Levels of Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual dispositions</td>
<td>Abilities, aptitudes, motivations, attitudes, values, ethics, emotions</td>
<td>Psychological – Pedagogical theory</td>
</tr>
<tr>
<td>To act in</td>
<td>Complex, undefined, not routinized, dynamic</td>
<td>Action theory</td>
</tr>
<tr>
<td>Context-bound situations</td>
<td>Appropriateness, responsibility</td>
<td>Sociological theory</td>
</tr>
<tr>
<td>According to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consensual standards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The characteristics represent a set of corresponding influential factors in competence for the process of activity performance. A cyclic process in which these factors are interrelated in the process of competence development and where each stage is dependent upon the previous one, can be best of all illustrated in the form of a ‘ladder’, i.e. ascending steps (Fig. 2).
The process begins with perception of information. The information by means of semantic ties assimilates, accommodates and adapts in mental structures and leads to the second step i.e. to knowledge. If this knowledge is applied in a certain context, it can reach ability step (mental ability). Ability should be combined (at the fourth step) with a certain attitude which presupposes a value and motivational orientation and is finally realized in the activity performance.

If at the fifth step the activity is adequate to the required level (standard) then this adequate action leads to competence. It is necessary to emphasize that adequacy demands knowledge of strategies. At the sixth step competence combined with a certain responsibility for the ‘product’ of activity will provide professionalism. And at the final step sufficient experience and a situational practice will lead to competency.

As we see, a variety of resources will be mobilized in activity for competence realization on the way to competency achievement. These resources have a structured function both in relation to activity and in relation to a person, thus, forming a dialectic interaction. Thus, there is no border between internal and external aspects of experience.

‘From the point of view of situational cognition, a person and his activity in a certain contextual situation is the most essential resource for teaching’ [1; p. 677].

As we have already emphasized, competence is a dynamic, objective characteristic which is strongly rooted in experience and situational practice. Through activities in various situations a person constructs competency, according to Ph. Jonnaert, ‘the competent handling of a situation’.

Consequently, competency is a cumulative personal quality. Thus, competency as a personal quality is developed through socialization, through contextual situations, and through socialization leads to personification of activity and to individualization of a person in this activity.

Inferred from this is that competency is a personified manifestation of integral competences evolved in social experience and situational practices, which is necessary for successful/fruitful accomplishment of an activity.

Taking all the aforementioned into account, we can conclude that concepts ‘competence’ and ‘competency’ should not be mixed up, since competence is an objective characteristic, while competency is a subjective quality and hierarchically they are noticeably distinguished.

It is necessary to note that socialization is not contradictory to individualization. More likely on the contrary, in the process of socialization and social adaptation a person reveals his individuality. If to consider sociality as a congenital property of a person, the process of social adaptation should be considered not only as actively-adaptive, but also as actively-developing.

Competency, as a realization of a need for self-development, self-actualisation, is a basic component of a social mature person. The idea of self-development and self-realization is extremely significant for many modern humanistic psychological-pedagogical concepts concerning a person (Maslow A., Rogers C. R., Koče T., Zimnaya I. A.). It gets a special importance in modern conditions of educating young specialists.

Competence is not a static characteristic. Since it is inseparably connected with socialization – communication and joint activities of people, the process of its development goes on during the whole life as life-long learning and self-education, as aspiration to self-development and self-realization in the fast changing world. Professional successes, achievement of professional blossoming, and also professional longevity have already been confirmed by lots of experimental data.

3. The Essence and Characteristics of Communicative Language Competence

So, we have made the conclusion that competence is developed only through activity in contextual situations. Now on the basis of the theoretical analysis and proceeding from its structurally-componential content, we will try to define the nature and the essence of communicative language competence.

The communicative competence as a linguistic term applied to a learner of a second language and reflecting the level of his/her proficiency, for the first time was put under discussion at the beginning of 1970s – by J. Habermas in 1970 and then D. Hymes joining in the discussion in 1971 and later S. J. Savignon in 1971. The term was first mentioned by D. Hymes as a reaction to inadequately adapted distinction between the concepts of ‘competence’ and ‘performance’ introduced by Noam Chomsky in 1965.

D. Hymes believes that we should be concerned with performance, which he defines as the actual use of language in a concrete situation, not an idealized speaker-listener situation in a completely homogeneous speech community. Therefore the term presupposes language learning through the communicative approach. The central theoretical concept in communicative learning is ‘communicative
competence’ [13]. He deems it necessary to distinguish two kinds of competence: linguistic competence that deals with producing and understanding grammatically correct sentences, and communicative competence that deals with producing and understanding sentences that are appropriate and acceptable to a particular situation. Thus, Hymes coins a term ‘communicative competence’ and defines it as ‘knowledge of the rules for understanding and producing both the referential and social meaning of language structures’ as the ability to use language in a social context, observing corresponding socio-linguistic norms. Developing his theory of language teaching and learning, he considered language as social behaviour as well as integration of language, communication and culture. The core of his theory constitutes a definition of what the user of language has to know to be a competent communicator in a social language group.

Simultaneously, communicative approach developed in Europe and America. Language was considered as a ‘meaningful potential’, and ‘a contextual situation’ as the main condition to understanding the language system and the principles of its functioning.

British scientists in the field of applied linguistics – D. A. Wilkins, Ch. Candlin, H. Widdowson – gave greater significance to functional and communicative potential of language.

According to Widdowson, for example, to know a language means much more than just to understand, speak, read and write sentences. ‘We do not only learn how to compose and comprehend correct sentences as isolated linguistic units of random occurrence, but also how to use sentences appropriately to achieve communicative purposes’ [14]. According to Widdowson, the idea that once competence is acquired, performance will take care of itself is false. He states that six or more years of instruction in English does not guarantee normal language communication. He suggests that communicative abilities have to be developed at the same time as the linguistic skills; otherwise the mere acquisition of the linguistic skills may inhibit the development of communicative abilities. His idea seems to be influenced by Hymes’ thought that learners acquire not only the knowledge of grammar, but also the knowledge of appropriateness, that is, they acquire knowledge of socio-cultural rules such as when to speak, when not to speak, what to talk about with whom and in what manner, at the same time as they acquire knowledge of grammatical rules. Widdowson distinguishes two aspects of performance: ‘usage’ and ‘use’. He explains that ‘usage’ makes evident the extent to which the language user demonstrates his knowledge of linguistic rules, whereas ‘use’ makes evident the extent to which the language user demonstrates his ability to use his knowledge of linguistic rules for effective communication. He also distinguishes two aspects of meaning: ‘significance’ and ‘value’. Significance is the meaning that sentences have in isolation from the particular situation in which the sentence is produced. Value is the meaning that sentences take on when they are used to communicate (Widdowson H., 1979). Thus, acquisition of linguistic competence is involved in use. Widdowson suggests that grammar must be based on semantic concepts and must help a learner to acquire a practical mastery of language for the natural communicative use of language.

Canale M. and Swain M. [15] believe that the socio-linguistic work of Hymes is important for development of a communicative approach to language learning. Their work focuses on the interaction of social context, grammar and meaning (more precisely, social meaning). However, just as Hymes says that there are values of grammar that would be useless without rules of language use; Canale and Swain maintain that there are rules of language use that would be useless without rules of grammar. They strongly believe that the study of grammatical competence is as essential as is the study of socio-linguistic competence. Furthermore, they point out that no detailed attention has been devoted to communicative strategies that speakers employ to handle breakdowns in communication. Examples of communication breakdowns include false starts, hesitations and other performance factors, avoiding grammatical forms that have not been fully mastered, addressing strangers when unsure of their social status, and keeping the communicative channel open. They consider such strategies to be important aspects of communicative competence that must be integrated with other competences. Canale and Swain define the communicative competence as integrating at least three main competences:

- grammatical competence (knowledge of lexis, rules of morphology and syntax, grammar rules for constructing sentences). The grammatical competence is important to know how to choose and accurately express literal meaning of utterances;
- socio-linguistic competence (knowledge of socio-linguistic rules – the correspondence of the language in use to its non-linguistic context and knowledge of discourse rules). The knowledge of these rules, in opinion of the authors, is decisive for interpretation of statements and catching of their meanings, especially, when a transparency is not observed between literal meaning of the statement and the communicative intentions of the speaker;
- strategic competence (the verbal and non-verbal communicative strategies promoting successful communication in case of insufficient grammar competence).
In 1984 Johnson K. and Littlewood W. considered acquisition of the communicative competence as a process of development of skills and abilities including cognitive and behavioural aspects. Krashen S., however, denies ‘practicing’ language skills when learning a language. He considers that language comes only through its communicative use (communicatively) and makes distinction between ‘language learning’ and ‘language acquisition’ [16].

Later review of the communicative competence was made by L. Bachman. He divided the communicative competence into two comprehensive groups: organizational, including grammar and discursive/textual competence, and pragmatic, including socio-linguistic and idiomatic competence [17].

The communicative approach to teaching language has led to a widespread belief, that the communicative competence should become the aim of language learning and the basic classroom practice, paying attention to linguistic, social, cognitive and individual variables in language acquisition [18].

However, despite a sufficient level of scrutiny and a variety of approaches to the concept of the communicative competence, it is necessary to agree with many scientists, that the modern treatment of the concept from the point of view of preparing young specialists for adaptation in the multicultural environment needs to be revised [1, 19].

In a new millennium when changes in all spheres of life are accelerating in geometrical progression, the communicative language competence development cannot be considered as the one for specific purposes. Higher schools should prepare specialists not just supplying them with professional knowledge, but also encouraging them for self-development and self-realization in a global, multicultural environment, implementing all available resources, including language.

Therefore during the epoch of ‘global communication’ it is vital to speak about the communicative competence for international communication. And the talk is not as much about adaptation in the country of the target language where the future specialist, probably, will never get to. More likely, it is necessary to speak about numerous opportunities of interaction and communication on the ‘third’ party where professional, social, political and other interests of the broad audience of people representing various socio-cultural heritages (backgrounds) encounter, for example, business negotiations, in-trainings, professional and cultural exchange programmes, international symposiums, conferences. Such kind of communication requires acquisition of a variety of communicative strategies. Therefore ‘communicative competence’ from the point of view of the theory of language teaching and learning (Hymes D., [13]) is necessary to reconsider in reference to studying the English language for international communication [19]. Nunn emphasizes that the norms accepted in one country can be absolutely unacceptable in another.

Hence, considering unpredictability of contextual situations in which our graduates will be using the English language, it becomes absolutely clear that learning a language which can be used in restricted situations in the country of the target language is absolutely unacceptable. What makes ‘acceptability’ for international communication cannot be limited to the frameworks of one language [20]. However, meanwhile there is no a single, global language culture so far.

Nevertheless, the main function of language is to ensure interaction and communication and acquisition of linguistic knowledge remains the most essential part of any language learning. Phan Le Ha in 2005 has formulated: ‘Language is a part of identity of the one who is capable to use it, and competence reflects a degree of language possession’.

At the same time, the analysis of modern publications on language teaching methods shows that some confusion and discrepancy in the use of ‘communicative competence’ concept can be observed. Some researchers, as A. Zernetskaya for example, treat components of the communicative competence as separately, independently existing competences – competence of writing, competence of reading, competence of listening and competence of speaking on the basis that for their realization different kinds of speech activities are engaged. It is not taken into consideration that the basis for all these operations provides language and thinking.

Moreover, the aim as the basic component of communication is excluded. Sometimes there is no precise unitary use of ‘competence’ and ‘skills’, no broadly accepted concepts of systemic and individual, personal character of competences.

Thus, considering our worked out definition of the concept ‘competence’, the theoretical analysis of the concept ‘communicative competence’, its structurally-componential content, and professional perspectives of young specialists as well as external demands, it is possible to model the definition of the concept of communicative language competence.
Communicative language competence is an integral personal system of cross-cultural verbal and non-verbal communicative strategies stipulated by linguistic communicative abilities, professional knowledge, skills, vitally-gained experience, attitudes and specific characteristics of an individual to achieve mutual understanding and communicative purposes in situations of direct and indirect communication.

We consider that such a vision of the concept will permit justifying its componential structure – a combination of key and special (function-orientated) competences necessary for a young specialist in the future, to determine the content of the educational process and to ensure the necessary conditions for its realization through personality-directed Systemic approach.

4. Definition, Selection and Substantiation of Communicative Competences

Componential Contents

Now when we have defined the term ‘communicative language competence’ it is necessary to select and prove its componential contents to have a clear understanding of what to learn and what kind of knowledge, skills and human qualities will be necessary for the young specialist in the 21st century.

The structure of the key competences offered by various authors differs rather noticeably not only in their quantitative, but also in their qualitative and conceptual aspects. Some researchers define them as ‘basic competences’ and consider them as ‘interim’ skills, i.e. work with a computer, using databases and databanks, knowledge and understanding of ecology, economy and business, financial knowledge, commercial streak, skills to transfer technologies from one areas into others, skills of marketing, legal knowledge, intellectual property protection, normative conditions of enterprises’ functioning, various patterns of ownership, presentation skills of technologies and production, knowledge of foreign languages, sanitary-medical knowledge, principles of survival in competitive conditions and possible unemployment; psychological readiness for change of profession or a field of activity and others.

Others use concept ‘basic skills’ as ‘personal and interpersonal qualities, abilities, skills and knowledge which are expressed in various forms in diverse situations of work and social life’. The authors include communicative skills and abilities, creativity, ability to reflexive thinking, adaptability, ability to work in teams, ability to work independently, responsibility and self-esteem.

Key competences are not determined by arbitrary decisions about what personal qualities and cognitive skills are desirable; they are discovered by the analysis of external demands and by careful consideration of students’ needs to provide them with a stance that gives firm grounding and an ability to coordinate their actions with high-speed changes in the world in a highly synchronized fashion. This demand-led approach asks what students need in order to cope with and function well in society as they find it. What competences they need to acquire and to hold down a job.

However, competence is also an important factor in the ways that individuals help to shape the society, not just to cope with it. Thus, as well as relating to key features and demands of modern life, competences are also determined by the nature of our goals, both as individuals and as society.

First, students need to be able to use a wide range of tools for interacting effectively with the environment: both physical ones such as information technology, and socio-cultural ones such as the use of language. They need to understand such tools well enough to adapt them for their own purposes – to use tools interactively.

Second, in an increasingly interdependent world, students need to be able to engage with others, and since they will encounter people from a range of backgrounds, it is important that they are able to interact in heterogeneous groups.

Third, students need to be able to take responsibility for managing their own lives, situate their lives in much broader social contexts and act autonomously. These categories, each with a specific focus, are interrelated, and integrally form a basis for identifying and mapping key competences. The need for students to think and act reflectively is central to this set of competences. Reflectivity involves not just the ability to apply routinely a formula or method for confronting a situation, but also the ability to deal with change, learn from experience and think and act with a critical stance.

Thus, keeping in view the analysis of the external requirements shown by a labour market, interdisciplinary perspectives of education, Professional standards and also priorities of students’ needs, the following six competences have been selected as potentially significant for the future self-realization of each student. A system of integral key competences (based on the definitions of DeSeCo, [10]) and
**education technologies**

*special (function-oriented) competences* (based on the definitions of ‘Common European Framework of Reference for Languages’, 2004) has been worked out (Fig. 3).

<table>
<thead>
<tr>
<th>Key competences</th>
<th>Special (Function – orientated) competences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autonomous</strong></td>
<td><strong>Linguistic</strong></td>
</tr>
<tr>
<td><strong>Interactive</strong></td>
<td><strong>Strategic</strong></td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td><strong>Pragmatic</strong></td>
</tr>
</tbody>
</table>

*Figure 3. Structurally-componential contents of the communicative language competence*

We focus on a functional approach since it is viewed to ensure students the ability to cope with complex tasks and requirements of multifaceted life. According to this viewpoint competences are structured around demands and tasks. Fulfilling complex demands and tasks requires not only knowledge and skills but also involves strategies needed to apply the knowledge and skills, as well as appropriate emotions and attitudes and effective management of these components.

We adopt a pragmatic conceptual approach restricting the competences with criteria which are more explicit, plausible and scientifically acceptable.

Within each kind of competence we allocate a certain constituent group (a cluster) of abilities (including knowledge and skills) without which this or that kind of competence cannot be realized. These clusters according to the character of the basic elements have determined the contents of the key and special (function-oriented) competences.

*Key competences*, according to DeSeCo, as necessary for each young man, provide an opportunity of effective participation and self-realization in a variety of educational contexts, professional and social areas, promote realization of educational potential of a person, which leads to highly significant personal and social results of education. Key competences are multifunctional. They are relevant not only to education or labour market, but also to the social networks, political processes, interpersonal relations and, most generally, to developing a sense of personal well-being. These competences are tools for the solution of challenges and fulfillment of the important requirements in a wide spectrum of educational, professional and social contexts.

*Autonomous competence* is an integrated personal system of knowledge (including professional and linguistic knowledge, skills, abilities), involving cognitive strategies needed to perform cognitive activities and apply the gained knowledge and skills to processing information, to adapting and transforming knowledge, to constructing personal knowledge and judgments. The autonomous competence includes two central interrelated ideas:

- development of identity on the basis of the acquired socio-linguistic knowledge; development of individuality, self-identity on the basis of intellectualisation; professionally-oriented language knowledge acquisition, development of cognitive skills, strategies and practical skills;
- performance of mental autonomy/independence as an active and reflective attitude towards life; reflectivity in organizing educational activities, research activities, autonomous work, in decision-making, in making meaningful choices/actions based on the development of social and behavioural norms – positive attitude, positive thinking, emotions, value priorities and motivations.

Today an individual’s autonomy is viewed as a central feature of modernity, democracy and individualism. Autonomy does not imply functioning in social isolation. The fact that people live by internalised social norms and in the context of relationships to others is not incompatible with autonomy. On the contrary, scrutinizing and reflecting on these norms and relationships is an integral part of individual growth and maturation of identity (mental autonomy, involving active and reflective approach to life). Autonomy assumes the ability of individuals to assert their own rights and interests, to think and act for their own sake, to initiate interactions with their physical and social environment, to form and conduct their own educational projection and develop strategies to attain goals. Reflective exercise of autonomy requires awareness and understanding of one’s environment: how it functions, how it evolves and how one fits into it. Autonomy implies the ability to manage and coordinate self-growth, self-realization, personal time, life circumstances, in other words, to play an active role in shaping personal environment and personal life.
The following abilities are necessary for this purpose:

- to take responsibility for personal actions and moods or emotions, to adequately represent oneself in the educational process, to manage personal educational activities showing realistic self-assessment and objectivity, to build one’s educational trajectory (including life-long learning) to develop oneself as a personality, to be responsible as a student, one’s own teacher, a participant of the educational process, a member of a team, a colleague etc.;
- to project and realize personal life plans to give life meaning and purpose in a changing environment, to set and reach the goals which have importance in life and are compatible with personal values, to build priorities, to effectively use all available resources;
- to act and make decisions within wider contexts – group, institutional, cultural or social contexts;
- to understand oneself and one’s relationship to others in this context, be able to recognize how one’s actions and decisions fit into this wider context;
- to be able to suspend judgements – to think before acting and expect long-term consequences of one’s actions.

Since knowledge, skills and strategies are not given as ready-made, but constructed and developed through activities and communication, the first necessary condition for their acquisition is dialogue. Dialogue, in its turn, is not completely public or exclusively personal and can be expressed as ‘inter-subjectively established social reality’.

A. Giddens adds that the use of language in speech is an activity or a form of life [21]. The central factor in teaching and learning activities in higher education is human communication, revealed in practicing knowledge and communication or, in other words, ‘exercising one’s “Self” and language in specific academic social situations’ [2]. Therefore the following integral communicative language competence has been defined as the interactive competence.

Interactive competence is an integrated personal system of knowledge and skills assuming employment of instruments/tools and resources that are relevant to meeting an active dialogue between individuals and their environment, as well as verbal and non-verbal strategies used for the achievement of (mutual) understanding, stipulated by the adequate perception of discourse or its production in situations of direct and indirect communication.

Interactive competence assumes an effective use of communicative tools and personal resources, the English language, for example, as well as knowledge, strategies, laws, information, new technologies according to requirements of a modern society for the solution of everyday-routine and professional tasks. The effective use of the English language as a communicative tool for an effective dialogue with one’s environment does not mean simply ‘possessing’ the language, but also realizing how the use of it might influence our ways of interaction with the environment. The central idea is identifying how the tools affect our interaction with the environment, how we become competent through our interactions with it and how we deal with transformation and change. We contact with the world through our cognitive, interactive and physical communicative instruments. These contacts shape our comprehension of the world and the competence of communication.

Following abilities are necessary for this purpose:

- ability to use the English language, symbols and texts for effective dialogue in various forms (written and oral, in the form of schedules, tables, etc.), to develop knowledge and awareness of the new forms of interaction, using new cognitions and new social practices in various situations of multifaceted life, to understand the relationships between people and their situations – readiness to help;
- ability to use knowledge, strategies and information for effective and reflective communication, to interpret behaviour and emotional information, to understand how emotions combine and progress through relationship transitions and language communication and be able to appreciate such emotional meanings, to manage knowledge and information and to use them as the basis for understanding and comprehension of reality to make responsible choices, decisions and to form judgments;
- ability to use (new) technologies for effective communication, which means not simply technical skills required for the use of technologies (for example, the Internet), but also acquisition of new possible forms of communications promoting fast adaptation to modern life.

In the broad sense, the reflective competent professional is a critical practitioner of knowledge and language as a social being. It finds reflection in the social nature of communication and the social nature of a person. From this point of view teaching – learning activities in higher education can be considered as social communications through practice of the language use. Our understanding of how we communicate
Social competence is an integrated personal system of knowledge, skills, verbal and non-verbal communicative strategies that provide the capacity to form, join and function effectively and democratically within complex, and socially heterogeneous groups.

Social relations are necessary for a sense of self, identity and one’s social meaning. Social competence assumes the development of a socially mature personality. It promotes the development and expansion of identity since residing and socializing in multicultural, mobile societies require skills of effective communication and cooperation with people who do not necessarily share the same language, the same history, culture and religion. Hence, the social competence requires a set of abilities.

Following abilities are necessary for this purpose:

- ability to establish good mutual contacts, which allows an individual to initiate, support and operate personal close relations, to be a member of a multicultural society, a colleague, a friend, a neighbour, an employer, which implies the development of such qualities as tolerance, empathy, ability to sympathize as well as positive thinking and positive vision of reality;
- ability to cooperate, which allows people to work together over a common problem or purpose, accumulating personal social capital in the form of basic constituents as tolerance, responsibility, leadership qualities and positive attitude;
- ability to cope effectively with conflicts considering them as an aspect of human relations, ability to manage them in a positive manner, and ability to compromise.

The key competences are multifunctional and have a trans-disciplinary character. They span knowledge of various academic disciplines and transverse various aspects of human existence. They are important, but insufficient from the point of view today’s complex requirements and challenges, as their presence is observed in all areas of activities including education, professional activities, political sphere and a family life.

To realize communicative intentions in international communications, a communicator integrates his key competences with more specific, language-related competences. Therefore special (function-oriented) competences serve as personal resources, ‘supporting scaffolds’ for the key competences with the purpose to ensure successful functioning in specific multicultural contexts of educational, professional and other social situations.

Special (function-oriented) competences are necessary as an important resource for self-realization in conditions of concrete multicultural contexts and situations.

Linguistic competence (according to ‘Common European Framework of Reference for Languages’, 2004) is an integrated personal system of linguistic knowledge and skills as well as cognitive strategies needed to perform certain actions with the knowledge and skills for adequate perception or production of grammatically correct functional structures (codes) in oral or written form. Linguistic competence assumes mobilization of all formerly acquired and stored in mind linguistic knowledge to be employed in a certain context. It is defined by majority of scientists as knowledge of, and ability to use all formal resources from which well-formed, meaningful messages may be assembled and formulated. Therefore, linguistic competence encompasses:

- lexical competence;
- grammatical competence;
- semantic competence;
- phonological competence;
- orthographic competence.

Lexical competence, consisting of lexical and grammatical elements, assumes knowledge of, and ability to use the vocabulary of the language, including general and professional lexicon, as well as the ability to distinguish lexical and grammatical elements in perception or production of messages. The student, who does not possess a sufficient amount of lexical knowledge and practical skills to perform cognitive actions with this knowledge, will not be able to neither adequately comprehend a meaningful discourse nor correctly produce utterances in oral or written form. Undoubtedly, general and special lexical knowledge is also vital for understanding or generating discourses.

Lexical elements include:

- fixed expressions, consisting of several words, which are used and learnt as wholes (forms of greetings, proverbs and sayings, phrasal idioms, intensifiers, phrasal verbs, compound prepositions, fixed collocations);
- Poly-semantics of separate words and parts of speech (a noun, a verb, an adjective, a participle).
Grammatical elements include articles, quantifiers, personal pronouns, demonstratives, question words and relatives, possessives, prepositions, auxiliary verbs, conjunctions and particles.

Grammatical competence assumes knowledge of, and ability to use a system of principles governing the assembly of elements into meaningful organized sentences. This ability includes recognizing, understanding and expressing meaning by means of well-formed sentences in accordance with the rules of morphology, syntax, grammatical semantics of sentences and phonology.

The grammatical competence assumes ability to organize:
- Elements: morphemes, affixes, words;
- Categories: number, a case, gender, concrete/abstract, countable/uncountable, voice (active, passive), tenses (present, past, future), aspect (continuous, perfect);
- Classes: nouns, verbs, adjectives, adverbs, participles, etc.
- Structures: simple, compound and complex words, regular and irregular verbs, phrases (noun phrase, verb phrase, etc.), clauses (main, subordinate, co-ordinate), sentences (simple, compound, complex).

The ability to organize sentences to convey meaning is a central aspect of communicative competence.

Semantic competence assumes knowledge of, and ability to control and organize meaning. In lexical sense, it is conveying the meaning of words, including connotation, relation of words to general context, synonyms/antonyms, hyponymy, collocations, etc. In grammatical sense, it is conveying the meaning of grammatical elements (morphemes and affixes), categories (number, count-ability, time, and active/passive voice), and structures (complex and compound words, phraseological units, simple, complex and subordinate clauses. In pragmatic sense, it is conveying meaning through logical sequencing of sentences, expressing assumptions, indirect statements.

Phonological competence assumes knowledge of, and ability to recognize, perceive and produce distinct, meaningful sounds (phonemes), including consonants and vowels, assimilation of sounds, phonetic composition of words and sentences, including tones and intonations of a voice, rhythm, sentence stress and other characteristics carrying meaning.

Orthographic competence assumes knowledge of, and ability to distinguish, perceive and produce symbols of which written texts are composed (letters in the printed and italic form, spelling of words, logographical signs and rules of punctuation).

Strategic competence is an integrated personal system of knowledge and skills to solve (unexpectedly occurred) communicative problems, to organize and purposefully regulate a line of communicative verbal and non-verbal actions selected for the achievement of communicative goals in a certain context and in specific conditions especially if there is insufficiency in linguistic and socio-cultural knowledge.

Pragmatic competence is an integrated personal system of knowledge of principles according to which messages are:
- organized, structured and arranged in coherent messages (thematically, logically, stylistically) – discursive competence;
- used in oral and written form to perform a certain communicative function – functional competence;
- sequenced according to interactional and transactional communicative design (question – answer; statement – agreement/disagreement; request/offer/apology – acceptance/refusal; greeting – response) – design competence.

In the field of the English language teaching-learning there is an open question of intelligibility and linguistic competence. Achievement of understanding in many cases depends on pragmatic abilities. Sometimes achievement of understanding occurs among people not only using various linguistic norms but also having absolutely different levels of linguistic competence. At the same time pragmatic fiascos are suffered frequently by people possessing perfect linguistic competence. J. Moeschler, for example, argues that in some cases linguistic competence can make pragmatic understanding difficult.

5. The Systemic Approach to Communicative Competence Development

Implementation of the Systemic approach in pedagogy was restricted until 60–70-ies of the last century due to the fact that the pedagogical aspect of the Activity theory had been underdeveloped. In addition, the System theory was understudied to be adapted to pedagogy. The Systemic approach deprived of the activity basis, the systemic model of the educational process and the quantitative analysis of its resultant outcomes was unproductive. With the advent of the pedagogical activity theory,
Education technologies

the systems analysis for managing educational results and an easy access to computer technologies nowadays, the Systemic approach has gained its new content [23].

The Systemic approach presupposes activity-based language teaching-learning, since language has not only to be learned, but it has to be practiced and internalised through the experience of implementation. From the Systemic perspective, language education is both individual and collective; it is scientific and spiritual, knowledge and imagination-based, society-and-student-centred. Pedagogical aspect, to be consistent, shows up in a multitude of expressions. Classrooms may be organized with one student working alone, two students working together, small groups working together, with or without a teacher, students addressing peers and the teacher, tutoring, etc. A variety of communicative activities, which foster language acquisition and play a significant role in perpetuating a behavioural pattern, can be employed to create a lively educational language environment such as role plays, simulations, business games, problem solving, case studies, etc.

In language teaching-learning, it was of paramount importance for us to single out the basis of the educational process which would ensure its qualitative preciseness. It has become a communicative language activity of teacher and students as a process through which potential resources of communicators are realized, including their general intellectual resources, personality development, their attitudes, motivations and values.

A model for interactive construction of meaning, developed in the present research reflects five stages in interactive construction of meaning: lead-in, elicitation, cooperative explanation, accurate reproduction and creative performance.

The lead-in stage includes identifying the topic to be taught and selecting/creating contexts it occurs in. During this stage the context is introduced including the new language and the meaning, as well as the key concepts about the context are explained to students in order to understand the meaning and use of the new language.

The elicitation stage (based on discovery technique) includes identifying how much of the new language/meaning the students can produce (pair work).

Figure 4. Interactive construction of meaning

Accurate Reproduction:
- Practicing a number of new models to construct and produce the meaning (individual and pair work)
- Gaining confidence that the meaning, use and form of the language are comprehended (individual, pair, group work)

Cooperative Explanation: problem solving
- Designing models of the new language patterns
- Constructing the meaning (class work)

Elicitation: discovery technique
- Identifying how much of the new language and the meaning of key concepts the students can produce (pair work)

Lead in: COMPAS
- Identifying the topic to be taught
- Selecting contexts it occurs in

Exposure to the Professional World
- Certification (TOEIC)

Creative performance:
- Gaining confidence that the meaning, use and form of the language are comprehended (individual, pair, group work)

Context

A model for interactive construction of meaning, developed in the present research reflects five stages in interactive construction of meaning: lead-in, elicitation, cooperative explanation, accurate reproduction and creative performance.

The lead-in stage includes identifying the topic to be taught and selecting/creating contexts it occurs in. During this stage the context is introduced including the new language and the meaning, as well as the key concepts about the context are explained to students in order to understand the meaning and use of the new language.

The elicitation stage (based on discovery technique) includes identifying how much of the new language/meaning the students are aware of. It is a very important stage: it gives the teacher information upon which to act; it is motivating for the students and actively involves their learning competences. We get the students to look at a text or listen to a tape and find the examples of grammar or language structures we are interested in and ask them to discover how the language works. The teacher needs to know whether the students have understood the new meaning and are able to produce the new language so that to organize our teaching accordingly.
When the teacher asks the students what they have found and discusses the language with them, we have reached the cooperative explanation stage. This is the stage where the students’ problem-solve to design models of the new language and learn to construct the meaning. Since the teacher is talking with the students rather than to them, the process appears to be more egalitarian and less dictatorial.

If the teacher finds that the students can produce the new language, it would be wasteful and demotivating for them to spend a lot of time at the explanation stage. We may move straight to the accurate reproduction stage to eliminate these problems, if they can produce the new language, but with minor mistakes. This stage focuses on practicing a number of models to construct and produce the meaning. The emphasis is on accuracy (on how accurately students construct and produce the meaning).

If the students know the new language but need a bit more practice in producing it, we may move directly to the creative performance stage, which is actually a referential learning stage (this is indicated by the dotted lines on Figure 4). This stage aims at gaining confidence that the meaning, use and form of the language are really understood. If the students are able to produce their own utterances, they can feel confident that their presentation has been a success.

Proceeding from the aforementioned, it is possible to conclude that the final point of a cycle reflects a certain level of communicative language competence – the ability to comprehend, construct and implement grammatically correct meaningful language units – utterances – in written or spoken form. Thus, every final organization of cognitive structures in a cycle differs from the initial one [23, 24].

As a result of the present research, the following presumption can be made: if the initial stage of a cycle is characterized by student readiness to solve cognitive and practical tasks, the focus of the final stage is on skills and strategies acquisition, their further implementation and transference onto other contexts and disciplines, generating new cognitive strategies, which promotes the appearance of new personal emergent qualities and ensures the conditions for successful adaptation within the following new cycle.

Inferred from this is the author’s assumption that each cycle is a new systemic organization where modified interrelationships and interdependences of aims – motives – content – means – results are reproduced again on a new level. Thus, educational process which carries a cyclic character has a form of a spiral plan corresponding to the system of homeo-kinetic plateaus in the Systems theory (Fig. 6).

In the research, each cycle of communicative language activity is viewed as an organized, purposeful process, in the course of which a student is engaged in performing actions as a social agent, implementing a range of competences, both key competences (directed mostly to personality development) and function-directed, communicative language competences at his disposal to reach communicative goals. The monitoring of these cycles of communicative activities by the participants leads to reinforcement or positive modification of their competences. This process is conscious and at the beginning of a cycle the participants are aware of the expected results [25–27].

The research has proved that communicative competence development undergoes the following process: in the course of increasing complexity of communicative tasks, demanding the corresponding increase in language complexity (the content of communicative activity) and different kinds of thinking – creative, logical, critical, systems thinking, due to differentiation and individualization of the study process, the system components (mental/cognitive structures) and the ties between them restructure. New qualities of the system components emerge which form new ties between them. These new ties expand the network of the communicative language system. Restructurisation of semantic ties in cognitive structures results in appearance of a new system (network) with new emergent qualities and characteristics and, as a result, new behavioural patterns. Restructurisation implies ‘reorganization of knowledge – conceptual changes’ – i.e. ‘mental/cognitive changes as a result of deeper understanding and awareness’ [28].

The process is reproduced within the following new cycle, thus, forming a spiral plan. At this new level, students already show interest in the process of cognition. They are attracted by new knowledge acquisition; they try to find new ways of solving communicative problems, being actively involved into creative processes and demonstrating practical acumen. As a result, the ties between motives and means become harmoniously coordinated.

Changes in the character of motives and means cause the awareness of social meaningfulness of communicative language competence development, the responsibility for one’s actions, for the results, for self-learning. Changes in behavioural patterns shape up professionally significant qualities – the ability to interact, to co-operate, to make positive mutual contacts, to find constructive solutions to conflict situations showing empathy, tolerance and positive thinking, to make responsible decisions and to communicate effectively.
As a result of the present research, the following statement can be made: communicative language activity in the process of its cyclic, spiral development acquires new qualities. Restructurisation and modification of the former mental/cognitive system result in the emergence of a new one, of a higher intelligence level. In this way the development of communicative competence transforms from the reproductive to the creative level (Fig. 4).

Still, as the research has revealed, the development of means is effective only provided they are adequate to the motives. Therefore it is of paramount importance to foster positive motivation and cognitive interest in students.

As practice proves, in the process of language teaching-learning, motivation very much depends on the culture of teacher-student communication and, namely, on the language complexity that a teacher (mentor) chooses to encourage students’ interactive construction of meaning. We consider that the foundational factor in constructing meaning is not as much the content of the incoming educational information, as the process of its communication. If there is no adequate language contact between the two systems (a learning system, that is, a group of students, and the management system, that is, the teacher/mentor), however rich and interesting the content might be, it would never get the desirable positive result. The language of a learning system (students’ communicative language competence) and the language of the management system (complexity and amount of educational message) are the crucial characteristics, which determine the choice of the necessary level of contact.

Well-coordinated language input, according to S. Krashen [16], should contain language that the students already ‘know’ as well as language that they have not previously heard; in other words, the input should be at a slightly higher level than the students are capable of using, but at a level that they are capable of understanding to cause students make discoveries and make sure that language learning occurs. In this case it is possible to speak about the learning system’s structural stability since with the increase of educational language information semantic ties in cognitive structures and the inferential ties between communicative activity components set to rights, become well-arranged and orderly. This is beneficial for communicative competence development and for student motivation.

Uncoordinated managerial influence will remove the learning system from the boundaries of stability, leading to a functional disbalance, to communicative activity failure and, eventually, to educational information collapse (Fig. 6.). The reasons for uncoordinated managerial influence might include a mentor’s low tone of voice, which is impossible to hear in a large auditorium, or the language abounding in specific terminology, which is incomprehensible and there will be no grounds for semantic ties formation and construction of meaning and, consequently, learning will not occur. The reason might be an excessive amount of educational information within limited boundaries of a lecture, which is physically impossible to comprehend, or if a mentor shows disinterest in students as personalities, he is just ‘doing his job’. All these factors negatively affect communicative language development and are strongly de-motivating [29, 30].

Figure 5. Communicative competence development under the systemic approach
The functional structure of the communicative language activity reveals the complexity of interdependent inferential ties between its participants and defines the development of communicative competence in time and space. The development of these ties allows identifying the ways for educational process improvement, to ensure the purposeful functioning of the system and the meaningful activity of teacher and students in the educational process. The developed structure helps to set educational goals and predetermine the final results, which is only possible to obtain following the functional structure of communicative language activity.

Figure 5 shows a graphical presentation of communicative competence development under the systemic approach demonstrated by the author to the target students in a concrete educational situation. The model has been viewed to help the students visualize the development of basic communicative abilities depending on the influence of internal and external factors where the continuous lines represent the ways of basic abilities development and the dotted lines – reflect the influence of various factors on this development.

Thus, in the interactive process of communicative activities new abilities appear – emergent abilities, which reinforce communicative language competence and contribute to its development (see Fig. 5 – arrows inside the circles).

It is necessary to emphasize that the essence of mechanisms showing the emergence of new abilities can be demonstrated only by means of models created within the framework of the systemic approach. For example, the cybernetic approach does not assume any emergent properties of a system as these ‘new’ properties have to be additive.

In the research, the foundational factor is the educational process as an interactive process of communication and meaning making. As we have already emphasized, getting the level of language complexity right is crucial for the process. It is possible to illustrate this idea by presenting a few sentences taken at random from different scientific articles:

- The second repercussion of epistemological pandemonium is the management of the university itself.
- The stochasticity of quasi-singular substance precipitate adequately correlates with consistence anisotropy.
- Endocasts have been taken to indicate that some phenomena in human ontogeny are recapitulating in hominid phylogeny.
- The messages seem rather confusing. The given examples show how difficult it could be to talk to a layman on professional topics. It is even more difficult for an unprepared student to listen and comprehend such things that would never find any response in mind.

What means ensure successful intersystem communication? First of all, it is the language of management, the language of communication with a learning group.

Goldowsky B. and Newport E. J. in their discourse about language complexity have come to the conclusion that ‘...a limitation on the ability to perceive or remember the full complexity of linguistic input may have unexpected benefits’, because ‘for any structure in the language there is a filter that produces optimal learning of that structure. If you start with very limited capabilities and then mature, you will have each size of filter in turn, and therefore have the chance to learn each structure in the language at the time appropriate for that structure – and you end up learning the entire language optimally’ [32].

As a result of his scientific experiments, Jeffrey Elman points out that acquisition of language is significantly facilitated by arranging the acquisition device (a recurrent neural net) in such a way that its ‘working memory’ is small at the outset of learning, and grows incrementally during the learning process. ‘Specifically, successful language learning may depend on starting small’ [33].

Our systemic approach to language acquisition takes into consideration managerial language complexity, the level of student communicative competence and educational information amount, as decisive factors in communicative competence development. The systemic linguo-didactic model of communicative competence development, created by the author (Fig. 6.), utilizes the learning from the theories of systems and the notion of homeokinetic plateau (L. von Bertalanfy, [22]) which, actually, reflects different levels of communicative language competence/development or sequenced changes of the system’s conditions.

The model implies context-dependent management of the educational process based on the analysis of semantic changes in data relations (the paradigm of concordance of data relations or the paradigm of contextual management). Since the increase of the language complexity goes on as a continuous process, the system at every moment of its existence experiences a state of ‘disbalance’ – homeokinesis (the term introduced by the founder of the General Systems theory – fon Bertalanfy, [22]).
The main principle of this cognitive process is to ensure stability – a state of homeokinetic ‘plateau’ or concordance between assimilation and accommodation of educational language information, the idea which Piaget J. [34] introduced into the pedagogical science and called it ‘balancing’ (Fig. 6).

![Diagram of systemic linguo-didactic model](image)

**Figure 6.** Systemic linguo-didactic model of communicative language competence development stipulated by increasing language complexity with incorporated **Learning Curve Model** of forecasting of study result [31–32]

The language of intelligent management (i.e. the level of complexity of communicated educational information) is the factor that ensures a relative stability of the plateau and, thus, promotes communicative language competence development within the zone of proximal development (ZPD) from the beginning of a study course to its end (Feedback fields B1-B2, B3-B4, B5-B6). To the right of B2 and B4 there are the areas where the system shows signs of losing its former properties having acquired new ones. These new properties – knowledge, skills, abilities, competences – cause ‘global inner restructurisation’ affecting emotional domain, including behaviour, and transform the system into a new state of intelligence. In other words, the appropriate managerial language, which is adequate to the learners’ current decoding abilities, enables the learning system to remain within the boundaries of the informational homeokinetic plateau (boundaries of the system stability A1-A2, A3-A4, A5-A6 – within the ‘zone of proximal development’. This is the area where managerial functional elements can be amended in case the system experiences any deflections or deviations from the purposeful predetermined results. The teacher’s instructional events, personal resources and technical resources serve as ‘scaffolds’ to support the process [35]. As a result of the acquired knowledge and the global inner restructurisation, a new system with new qualities and characteristics appears, a system of higher intelligence level, with a higher level of communicative language proficiency. The process is reproduced again and again at a new level of the educational cycle (plateau).

Every new level of communicative competence development incorporates the results of the previous level. In this way the development of communicative language competence corresponds to the ‘spiral plan’ that is useful for constructing knowledge in higher education.

Uncoordinated managerial influence will remove the learning system from the boundaries of stability, causing a functional disbalance and, eventually, informational collapse. In this case, the learners will not be able to adapt to the purposeful functioning of the total system. As a result, the whole system might be destroyed. In some cases the scattering of the learning system might be observed (Feedback fields B3-B4, B5-B6). Some of more successful students due to self-management skills (self-education) can acquire a reasonable amount of knowledge and move upwards to a higher intelligence level. Less successful ones will just become marginal candidates. To the left of A1 there is an ‘indifference’ area,
where students do not perceive the mentor’s educational message in case the language complexity is not adequate to the learner’s comprehension.

A study course can be implemented intensively, within limited time frames, promoting a rather fast transition from one level of the educational cycle/plateau onto another. It concerns fast in-training professional (profile) courses generally considered as English for Specific (or Occupational) Purposes (A1-A6).

If we speak about a pedagogical process, we assume an extensive course with much wider time frames, significantly bigger educational information amount and far-reaching educational goals (the field of global restructurisation B1-B6).

The process engages not only the development of communicative language competence as one of the aspects of mental/cognitive intelligence, but also general human competences of language learners, including existential competence (the sum of individual characteristics, personality traits and attitudes which concern self-image, and one’s view of others and willingness to engage with other people in social interaction), and also their ability to learn.

The Systemic approach to communicative language competence development is not only about learning the language, but also about understanding oneself as a user of the language how this ‘knowing’ can contribute to one’s being heard, understood, perceived and honoured in the world of multiple racial, ethnic, economic, social, educational, religious, etc., expressions.

The Learning Curve reflects not only the current level of student achievement, but also the purposeful level of communicative language competence, which can be achieved.

It is a dynamic view on a student’s potential of learning, a certain ‘cognitive map’ of a learner, aiming to develop the general intelligence and a wide spectrum of integral competences making up communicative language competence, via trans-disciplinary modules. The Learning Curve model gives the possibility to coordinate the dynamism of communicative competence development helping students become skillful manipulators, synthesizers and creators of their own knowledge [31, 32].

The model has been supported by a worked out Competence-Oriented Modular Programme for Autonomous Students (COMPAS) to ensure conditions for communicative language competence development. It is a typical, chronologically applicable set of educational modules, which allow starting the educational process at any level of competence, as well as, coordinating the interim results and the quality of student achievement after each module, to guarantee each learner tangible, efficient results in language acquisition. The modules utilize the materials of the TOEIC test – Test of English for International Communication, an internationally recognized standard that documents perspective employees’ English proficiency for many organizations around the world, and students’ language proficiency seeking admission to colleges and universities where education is in the English language.

The TOEIC test has been accepted as a criterion-referenced test for language learners as both a diagnostic and the final measurement test for the students of control and experimental groups. TOEIC practice tests are totally congruent with the competences (key competences and function-oriented competences) selected by us as potentially significant for the future self-realization of every student. The tests cover the English language as it is used internationally in business, commerce and industry as well as in various social settings, thus, promoting the interdisciplinary synthesis of knowledge and skills. They help teachers specify clear educational aims and objectives to provide significant influence over content selection with a high degree of authenticity, promote individualization of learning and motivation and ensure objective measurement scale of students’ progress.

What practical results the implementation of the linguo-didactic model Learning Curve and the accompanying COMPAS programme has given in the experimental group: the overall communicative language competence of students increased by 20%, which proved to be 16% higher than in the control group where students were taught according to the traditional study programme.

In parallel with the positive changes in students’ language competence, the corresponding changes in their motivation and behaviour could also be observed. In fact, the achieved positive results in the experimental group can be directly correlated with the students’ increased motivation. Motivation as a major designator of emotional intelligence has positively changed in the experimental group and has shown up in love of learning, empathy, self-awareness, optimism, even in the face of failure, seeking creative challenges and commitment. The English language has now been viewed as a necessity for self-realization in a multicultural environment by 77% of the students (formerly – 48%). In the control group, motivation has changed very insignificantly, if any; 49% of the students have considered the English language as a necessity for self-realization in a multicultural environment (formerly – 44%).

From this vantage point, the educational process is viewed as a dynamic, integral system. The interconnectedness and interdependency of the cycles of student development from conception to
graduation are viewed through the lens of the mental/cognitive, linguistic, emotional and spiritual intelligences and their integration. Systems philosophy brings forth a reorientation of thought and worldview.

Conclusions

The Systemic approach to language education, as a systemic approach to anything, requires a commitment to be inclusive on many different levels. For the individual it embraces the ‘whole’, the physical, mental/cognitive, emotional, spiritual, etc., domains of what it means to be a human being. When our physical intelligence is recognized for its fundamental contribution to our lives, we honour its wisdom and relate to our bodies with respect and partnership. When our mental intelligence, and the primary role of language in it, is seen as a natural expression of being human, the knowledge to be gained is encouraged in its natural discovery and trust that is inherent in the learning process. When our emotional intelligence is seen as our relational bridge making multiple connections continually, meaning making becomes animated, vital and more easily embodied. When the environment in which education occurs is created by our spiritual intelligence, that is, seeing oneself in relation to a larger world, feeling connected to oneself, others, a society/culture and nature, the knowing would be of a different order. These personality traits, attitudes and temperaments are parameters which have to be taken into account in language learning and teaching.

We can judge about the efficiency, effectiveness and success of the educational process only by the final result, by students’ level of achievement. If one of the individual results is lacking behind, it will pull backwards the success of the whole group and, eventually, show a lower functional level of the learning system.

The educational process is distinguished by its functional mobility and flexibility, which allows at any time to introduce a regulating factor by changing any functional element of the process. Comparing a predetermined purposeful result with an actual interim result, the system can rearrange its activities at any stage, at any time to amend individual intermediate deflections or deviations to avoid the destruction of the whole system.

References

8. Tiļļa, I. Socially cultural organization systems. Riga: RaKa, 2005. (In Latvian)


Received on the 21st of July, 2008