CONCEPT OF PERSONALITY'S COMPETITIVENESS IN CONTEMPORARY PEDAGOGY

Irena Katane, Ilze Kalniņa

Latvia University of Agriculture, Latvia E-mail: Irena.Katane@ilva.lv

Abstract

Global level various processes make us questions: where and in what way can we search the possibilities for sustainable development of society and how can we promote its competitiveness in the context of globalization and integration processes? The new ecological, synergetic paradigms in pedagogy enable to study a personality as a self-developing, self-organizing and self-evaluating system which develops during educational process, plans and forecasts; constructs and accumulates its own experience; which is able to choose and to be responsible for the consequences of its own actions under the conditions of modern changeable environment.

Methodology of Research. During last three years (2005 – 2007) a subject of our research was new meaning of concepts in pedagogy: competitiveness, competitive personality and marketable specialist in the context of human viability in the changeable environment. It bases and builds on scientific sources which represent: 1) evolutionary and cultural pedagogy; 2) developmental, ecological and applied psychology; 3) human ecology, including educational ecology. The methods of theoretical research: the analytical evaluative studies of scientific literature; content analysis of documents; reflection of experience.

The ecological and synergetic approaches enable to draw the conclusion that nowadays human as an individual of society, personality must learn to live and change in the interaction with the changeable environment, including changeable social, educational, economic, career environment etc. aspects. Therefore concept of competitiveness is becoming pedagogical category, which changes its traditional meaning during last fifteen years. Nowadays it is very important to work out theoretical background pertaining to the new content of competitiveness in pedagogy, analysing the concept in the context of recent changes which take place in the modern society and education as well. In this article new concept of competitiveness is substantiated in the following contexts and aspects: 1) various educational paradigms: liberal-rational, ecological and synergetic paradigm, 2) several approaches: functional, biometrical and structural approach.

Key words: changeable environment; competitiveness of personality; educational paradigms; marketability of specialist; sustainable development of society.

Introduction

The dynamics of socio-economic activity increase becomes a global problem. Material values start to dominate over the spiritual ones, including moral values. The balanced and sustainable environmental (economic, natural, social environment) development becomes an imperative nowadays. We can draw a parallel analogy with the problem to be considered in pedagogy: all-round

and harmonious development of a personality. There are views expressed in Latvia more and more often that the intellectual development of modern youth is more rapid than the moral development, and that can be dangerous. Ego-centered and consumer's thinking and actions start prevailing, the values orientation of modern youth changes that is mostly the result of priority changes not only in relation to the society on the whole, but also regarding education.

Global level various processes make us questions: where and in what way can we search the possibilities for sustainable development of society and how can we promote its competitiveness in the context of globalization and integration processes? Our society will be competitiveness if each its individual will be competitive personality. Thus *competitiveness* becomes one of the basic categories not only in economy, but also in pedagogy. In pedagogy a personality is considered to be a value, which, by virtue of its qualities and competencies acquired during the lifetime, including lifelong and lifewide learning/education, must become a competitive and respectable personality, and a marketable, competent specialist. It is important to study and understand the new meaning of this concept that significantly differs from the old paradigm of competitiveness and stereotypes of human thinking.

Therefore the *objective of research*: to substantiate the competitiveness as one of the contemporary pedagogical categories, which has significantly changed its conceptual meaning at the turn of the 20th century and the 21st century.

Methodology of Research

One of scientific problem of research at Institute of Education and Home Economics is *ecology of human development*, including development of a competitive personality in an educational environment. Therefore it was very important to work out theoretical backgroud for our experimental research. During last three years (2005 – 2007) a subject of our research was new meaning of concepts in pedagogy: competitiveness, competitive personality and marketable specialist in the context of human viability in the changeable environment. It bases and builds on scientific sources which represent: 1) evolutionary and cultural pedagogy; 2) developmental, ecological and applied psychology; 3) human ecology, including educational ecology. *The methods of theoretical research:* the analytical evaluative studies of scientific literature; content analysis of documents; reflection of experience.

Results of Research

The results of our research show that the concept *competitiveness* emerges in the modern pedagogy and the global level educational space, especially in the post-soviet educational and scientific space, for example, in Russia. There are contradictions in the interpretation of the conceptual meaning of the term *competitiveness*. The interpretation of this concept is not unambiguous, because it is used within the contexts of different paradigms. There appeared a necessity for the studies of the history, how the term emerged in education and pedagogy. Results of our research testify that there are various approaches for substantiation of *competitiveness* concept in pedagogy.

Competitiveness of Personality in the aspects of Various Educational Paradigms

The rapid changes of all the human activities, including education and science, at the turn of the 20th century and the 21st century are connected with the changes of individual's thinking at both global and state level. Since the change of thinking is an inert process, then the new scientific, social, educational paradigms emerged in Latvia, while the old paradigms had still remained. The variety of paradigms shows the development and constant changes of democratic society (Katane, 2007b). At the same time we should admit that the variety of educational paradigms inevitably causes contradictions in the interpretation of new concepts in pedagogy, including concept of competitiveness (Katane, 2007a; Katane et al, 2007a; Katane et al, 2007b).

Nowadays the concept of competitiveness acquires a new conceptual meaning and becomes more and more topical in the science of pedagogy. We can identify two conceptual trends to the interpretation and application of the new meanings of category competitiveness (Kalnina, & Katane, 2006; Katane et al, 2007a).

The first conceptual trend is closely related to the emergence of liberal-rational educational paradigm in the post–soviet, including Latvian, educational environment in the last decade of the 20th century. This paradigm is the determined totality of views of globalization, the policy of different intergovernmental organizations, social and economical situation in the country, as well as democratic ideas on the mission of education today. Within the context of liberal-rational paradigm, the education is a means for the sustainable development of society and at the same time also for the liberalization of labour market, and the guarantee for the wellfare of all the society, as well as every individual. Within the context of this conceptual approach we will quote some documents in relation to the concept of competitiveness.

In *The Lisbon Strategy* (The Lisbon Strategy ..., 2000) there is emphasized an idea that education should be considered as one of the main driving forces of progress. Education becomes the main precondition to make the European Union (EU) the most competitive and dynamic world's economy, based on the knowledge, which is able to achieve the continuous economic growth, more and better workplaces and closer social unity.

In the Conception on the Education Development for 2006–2010 (Pamatnostādnes .. , 2006) developed by the Ministry of Education and Science of the Republic of Latvia there is defined the educational aim of Latvia nowadays: to develop the balanced educational system that ensures the life—long formation of the democratic and socially integrated society, based on the knowledge; facilitates the improvement of the marketability of the population of Latvia and the national economy of Latvia, while integrating into the European educational space (..).

Taking into consideration the above mentioned, we can draw a conclusion that: 1) in accordance with the above conceptual approach the concept of competitiveness is connected with the concept of the marketability; 2) the marketability of the society can be ensured by developing and improving every individual's marketability. Thus one of the basic aims of modern education is to prepare the society, especially the new generation, for the life under the changeable social and economic and labour market conditions. The professional/vocational education has been assigned a particular significance within the implementation of this aim.

Our theoretical research shows that many scientists and educators (for example, Bevan et al, 1997; Floren, 1998; Борисова, 1996; Нохрина, 2000; Холодцева, 2004 etc.) try to transfer the category "marketability", defined in the sector of economy, to the educational sphere, adjusting it and using for the description of educational aims, priorities and existing processes, as well scientifically substantiating and adapting for the humanitarianism of pedagogy.

For example, N.Garafutdinova (Гарафутдинова, 1998) and E.Tarakanova (Тараканова, 2004) separately and independently in their publications have substantiated the structure and indications of the individual's/person's marketability. Both authors write that the definition of *the marketability of goods* should be used to define the individual's marketability. They write that the marketability of goods is determined by the totality of qualities, which enables to identify the advantegous diference of goods in comparison with other goods. The totality of the marketability qualities of goods consists of three groups of elements: *the technical*, *economical*, as well as *social and organizational indicators*. When relating these groups of parameters to the desription of the specialist's marketability, the scientists identify the following groups of parameters of the specialist as a professional's marketability.

- Technical speciality and specialization. The amount of aquired programs in hours. The conformity with the National Standard. The spheres and limits for the use of acquired speciality, the variety of the environment of the specialist's profesional activities, as well as the obtained document.
- *Economical* all the expenses, invested in the preparation of a speciālist, including also the expenses spent for the search for work and the increase of labour force mobility.
- Social and organizational the record-keeping of the social structure of consumers/

employers, as well as the record-keeping of the peculiarities of national and regional production organization.

Both scientists emphasize that the record-keeping of these elements will enable to increase the school and university graduates' marketability in the educational and labour market.

The term *marketable person and/or specialist* was used and scientifically substantiated in pedagogy as well. This term emerged in the education at higher educational establishments and professional/vocational education. For example, Russian scientists L.Mitina (Митина, 2003) and S.Schirobokov (Широбоков, 2000) write regarding the context of the aims of teacher education nowadays that a teacher is a competitive person, if this person is a marketable specialist in the labour market, who is able to self–actualize under the changeable social, including labour enviroment conditions of a particular profession.

The second conceptual trend is related to *the humanistic*, *ecological* and *synergetic paradigm* in pedagogy and education.

According to the ecological paradigm, one of the basic aims of a modern school is the promotion of an individual's development in the interaction with the environment. In the beginning the ecological paradigm manifested in the integration of the context of environmental education into the context of modern educational programs. It enables the pupils to acquire the education on the environment, in the environment and for the environment within the purposefully directed pedagogical process. Environmental education is not only the obtaining of new information, but also the process of ecological education, where the development of an individual's values and attitudes system is promoted in relation to the environment and oneself within this environment by developing the responsibility for one's own decisions and actions (Disinger, 1993; Naess, 1973; Sterling, 2002).

At the end of the 20th century the concepts of *balanced development* and *sustainable development* emerged in human ecology, including educational ecology/ecology of education as well. Nowadays these concepts used within the context of *environmental*, *society* and *educational* development (Breidlid, 2004; Bruntland, 1987; Hill, 2000; Lakatos et al, 2003).

Alongside with *sustainability* concept there emerged a new concept of *human viability* in the pedagogy and human ecology at the turn of the 20th century and the 21st century. The term of viability in the beginning was characteristic only to biology, anthropology and medicine. In pedagogy a viability of child, adolescent, youth in the modern society had been substantiated scientifically and studied by several scientists: M.Guryanova (Гурьянова, 2005), I.Ilyinsky (Ильинский, 1995), E.Pomerantza and B.Roberts (Roberts & Pomerantz, 2004) etc.

For example, I.Ilyinsky (Ильинский, 1995) writes that viability is an individual's skill to: develop successfully under the complicated social and cultural environment; become an individuality; develop the approach to the meaning of life; self–identify and actualize one's talents, turning them into the abilities, including creativity, and at the same time transforming one's environment, making it more favourable for oneself and suitable for life, but without destructing and destroying it.

In her turn, M.Guryanova (Гурьянова, 2005) writes that viability is a personality's integrative feature; the totality of values orientation, the uniqueness and peculiarities, various abilities, basic knowledge and skills of a personality, which enables the viability to function successfully and to develop harmonious within the dynamically changing social environment. The scientist emphasizes that an individual's viability, first of all, manifests in his/her moral-psychological and social-professional readiness to live and act in always new realities of life. The viable personality possesses significant potential of competitiveness, readiness for the successfull activities to achieve remarkable results and one's goals of life.

The concept of viability is remarkably related also to the synergetic approach in pedagogy and education (Katane, 2007a). The meaning of synergetic paradigm in modern education has been substantiated by the founders of synergetic: H.Haken (Хакен, 2004) and I.Prigozine (Пригожин, 1991) and developers of its conceptions, for example, E.N.Knyazeva and S.P.Kurdyumov (Князева & Курдюмов, 2004). They have described the synergetic paradigm as a transdisciplinary paradigm, which enables to relate the theory of chaos and the non–linear developmental regularities of open systems to the self-development of alive systems in the changeable, heterogeneous environment.

The synergetic paradigm in pedagogy enables to study a personality as a self-developing,

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self-organizing and self-evaluating system that functions in the sphere of education learns to live, plan and forecast; constructs and accumulates its own experience; that is able to choose and to be resposible for the consequences of its own actions under the conditions of modern changes. The synergetic approach enables to draw a conclusion that nowadays an individual must learn to live and change in the interaction with the changeable environment (Katane, 2007a; Katane, 2007b).

Club of Rome: Aurellio Peccei (Gnazzo, 2007), the founder of the world's non-governmental organization of scientists, emphasized an idea that the search for the model of the world's developmental management should be based on the cognition that an individual must learn to manage him/herself. The self-regulation should be conscious, comprehended and target-oriented. A.Peccei indicates that an individual is in dilemma: either to change as a personality under the changeable environment (..), or he/she is doomed.

Thus we can see: when based on the ecological and synergetic approach in pedagogy, the concept *competitiveness* acquires slightly different meaning than it is interpreted rationally - form the aspect of the liberal paradigm. The competitiveness is substantiated and defined within the context of *viability under the changeable conditions* (for example, Андреев, 1998; Андреев, 2006; Парыгин, 1994; Попов, 1990; Шаповалов, 2005 etc.).

On the basis of various global processes that have started in the human environment, including the educational environment, at the end of the 20th century and are continuing in the 21st century, one of the topical research issues in pedagogy is an individual's viability and competitiveness within the modern multicultural environment (Dirba, 2006).

Nowadays the necessity to formulate the essence of competitiveness becomes important in pedagogy. We will mention some examples of the substantiation of competitiveness concept.

Various Approaches for Substantiation of Competitiveness in Contemporary Education

The questions arise: How can we evaluate, whether the personality is competitive? Is she/he able to live and self-actualize under the circumstances of changing environment? How can we measure and/or evaluate that?

Russian academician V.Andreyev (Андреев, 2006) implemented a new concept: *concurrentology* and characterized it as the research trend in pedagogy on an individual's/personality's competitiveness.

Our research shows that there are several approaches to the substantiation of competitiveness in pedagogy: 1) functional approach: competitiveness is substantiated by describing the manifestations of personality's competitiveness, as well as readiness for various actions, including interaction with the external environment; 2) biometrical approach: competitiveness is characterized as a totality of personality's several qualities (individual features, competencies, other qualities), where these qualities serve as the indicators of competitiveness; 3) structural approach: there is a structural model of competitiveness provided, emphasizing several components and subcomponents, including indications/qualities of competitiveness, therefore it is combined approach, where we can find above mentioned approaches.

Functional approach. Russian scientist A.Kirsanov (Кирсанов, 2000) provided the functional characterization of competitiveness by defining competitiveness: competitiveness is socially oriented system of personality that comprises abilities, features, qualities, which: 1) characterize potential possibility of this personality to achieve progress in studies, professional or non-professional sphere of life, 2) determine adequate behavior of an individual under the changing circumstances; 3) ensures internal harmony, self-confidence and confidence about the others. According to scientist L.Mitina (Митина, 2003), who studies the problems related to the competitiveness of a personality since the beginning 1990s, there are at least three spheres of the development of competitiveness: 1) sphere of activities, 2) interaction with the external environment, including communication with other people, 3) personality's self-development, including self-awareness and self-determination. Speaking about the sphere of activity, it is important that modern young people would gather different activity experience within the educational process and as a result of these activities – the catalogue of formed and developed skills (A.Leontyev's term; Леонтьев, 1975) would be as wide as possible. According to O.Potyemkina (Потемкина, 2004),

competitiveness manifests in activities. One of the spheres of these activities is the professional development of a specialist and the choice of one's own career, planning, forecasting of future and promotion of career development. Modern youth needs to acquire new socio-economic and professional experience. In order to become a competitive personality, it is very important that young people acquire adequate views about themselves and Professional environment: their abilities, interests, needs, and aims in their lives and self-actualization opportunities in the particular environment. The youth Professional self-determination, when choosing the future profession is a very responsible task. In Latvia the career education helps to fulfill this task. This education is being integrated into the formal and informal educational content of schools. Within the process of career education the young people start to understand and study: 1) their abilities, interests, needs, aims of their lives and their correspondence to the chosen profession; 2) supply of educational environment within the context of their professional aims; 3) the motives, why they have chosen particular professions. The youth of schools must know that due to the scientific progress the world of professions is very dynamic and changing: more and more new professions emerge and many old professions "die". Many professions are topical only for 5 - 15 years (Muchinsky, 2003; Зеер, 2006; Климов, 1996).

Thus we can draw a conclusion that youth's competitiveness largely depends on the choice of career.

Structural approach. Scientist V.Andreyev (Андреев, 1998; 2006) has substantiated the structure of competitiveness by emphasizing 10 elements of competitiveness: need and motive; applied activity; self-organization; intellect; volition; culture; moral; confidence; communicative element of psychological structure. L.Mitina (Митина, 2003) emphasizes three elements in the structural model of competitiveness: personality's progression; competences; flexibility: emotional, intellectual and activities. B.Parigin (Парыгин, 1994) emphasizes the following structural elements of competitiveness: 1) psycho-physical element; 2) element of values, faith, internal/ external prohibitions and restrictions; 3) professional element, including competences; 4) element of psychological readiness to participate in competition. A. Kirsanovs (cited in Шаповалов, 2005) in his turn writes that the competitiveness is a socially oriented personality's system, which includes the abilities, features, qualities that: 1) characterize the personality's potential possibilities to achieve progress in studies, in the professional or non-professional sphere; 2) determine the individual's adequate behavior under the dynamically changing conditions, and 3) ensure the inner harmony, confidence in oneself and others. V.Shapovalov (Шаповалов, 2005) indicates that the systematization of competitiveness features is both theoretical and also practical objective, according to the criteria of socio-cultural development and each individual's personal self-perfection. This Russian scientist emphasizes within the structure of competitiveness: 1) paradigmal-prognostic element: internal, subjective meaning and understanding of individual's competitiveness, manifestation of individual perspective of behavior; 2) informative-content element: totality of knowledge, related to "I-conception", establishment of strategy, choice of competitive behavior, decision making, self-evaluation, communicative and regulatory activities; 3) operational or activity element that consists of cognitive, communicative, regulatory etc. parameters, which determine competitive behavior, abilities and skills; 4) element of motivation and values that reflects personality's values orientation, progression towards the self-perfection, the necessity for self-actualization, self-confidence, self-expression, self-development; 5) volition and emotional element, which is a totality of features/indications, comprising responsibility, independence, initiative, self-confidence, compassion and self-control. As it was pointed out by the Russian scientist E.Ionina (Ионина, 2003), competitiveness of the young should be examined in two aspects: 1) the acquired professional competencies, and value and competitiveness in the educational and/or professional activities and 2) personal qualities that witness of readiness for life, self-development, and self-actualization in the conditions of changing social environment.

Biometrical approach. We will mention also some examples of biometrical approach to the characterization of personality's competitiveness. For example, V.Andreyev (Андреев, 1998; Андреев, 2006) in his works has developed his model of competitiveness, pointing out indicators that characterize competitive personality. He emphases that only the synthesis of

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several different features can ensure individual's competitiveness. Competitive personality should be: determined, heuristic, decisive, flexible, self-rigorous and particular towards others, independent, energetic, respected as an authority, optimistic, with practical experience, principled, communicable, with leader's abilities, innovative, intelligent, revolutionary, reformist. Russian scientist V.Shapovalov (Шаповалов, 2005) emphasizes the following essential indications of a personality's competitiveness: intellectual potential, self-actualization, adequate self-evaluation, self-education, communicability, internality, moral imperative, and ability to make responsible decisions, orientation towards adequate values, and readiness for professional self-determination. In her turn, O.Potemkina (Потемкина, 2004) emphasizes such indicators of competitiveness, when providing substantiation of personality's competitiveness: values orientation; motivation to work; peculiarities of professional's life (factor of experience) and reflection; readiness for self-perfection and self-development in the field of chosen profession by improving professional skills on an ongoing basis. Psychologist L.Mitina (Митина, 2003), when characterizing the competitive personality, first of all as a leader, points out the following particularly important features/qualities: independence, social venture (venture to express one's own point of view, which might be opposite to the majority's view etc.), ability to risk (venture to risk), confidence and adequate self-evaluation. According to B.D.Parigin's views (Парыгин, 1994), the competitiveness is a complex of peculiarities and personality qualities which characterize:1) its own resources (psycho-physical health, age, appearance, abilities, talent, intellectual level and energy reserve) and 2) morality aspects, that is, values hierarchy, faith system, the existence of prohibitions and personal restrictions. The main indications are: competences, psychological readiness to take part in competition and social experience. Scientist from the University of Omsk S.Shirobokov (Широбоков, 2000), who studied the problems of competitiveness, while he lived in the USA, when characterizing the students of pedagogy as future marketable specialists, points out the following indications of competitiveness: professional knowledge; level of communicative culture; aspiration for the improvement of professional skills; reflection ability.

On the basis of the results of theoretical research, we can offer our point of view, which is still at the stage of development: the competitiveness is a totality of an individual's integrative qualities that ensures his/her viability, including development, self-actualization and self-realizing under the changeable, heterogeneous environmental conditions. Nowadays the competitive personality is characterized by the following qualities/features: the components of personality orientation and direction; the analytically evaluative and systemic ecological thinking; the observation of moral-ethical principles; flexibility; creativity; various types of competences, including reflection competence, social and multicultural competences; overtness towards the cooperation with others; target— and success—oriented thinking and activities; the readiness to overcome difficulties and to risk; the ability to analyse, evaluate the surrounding environment and the being situation and choose a strategy of behavior; the ability to make decisions; the responsibility for the decisions made and the consequences regarding these decisions; the friendly attitude and activities toward an environment, including the social environment; the readiness to change the environment by maintaining it and not destructing; the readiness to change oneself in order to preserve the balance with the changeable environment.

Conclusions and Discussion

 Research shows that competitiveness becomes one of the categories of contemporary pedagogy.

The new generation of our society would and should be able to live, self-develop and self-actualize successfully under the conditions of modern changeable environment. Therefore nowadays it is very important to promote the development of our pupils/students as competitive personalities and marketable prospective specialists. The mission of pedagogy nowadays is to find answers to the following questions: what kind of pedagogical approach is needed for promotion of competitiveness of new generation, including competitiveness of each individual; how can be

promoted the formation and development of every young individual as a valuable and competitive member of society; how to ensure the personality's adequate adaptation and integration into the rapidly changing, heterogeneous environment.

Our point of view is that very significant is an individual's ability to accept the environmental changes. It is important to get on with these changes. In order the changes would become the driving forces of an individual's self-development, instead of an obstacle, while performing pedagogical activities it is indispensable to take into consideration the following conclusions, presented by various authors (Fulans, 1999; Šmite, 2004; Zīds, 2003).

- The knowledge on the changes should be provided in order to prevent the disappointment, confusion and depression.
- The necessity for the change should be indicated, understood, felt and experienced. There should be the feeling of safety ensured, creating the feeling everything that is happening is for the better.
- There should be provided enough time to understand and accept the changes. It is important to be interested in the changes, to think about them, to feel them. There should be the conditions ensured that the idea about the changes could be accepted as one's own.
- The overtness towards the dialogue enables an individual to take part in the changes in all the possible ways. Such ways could be debate, discussions, expressing one's position, the declaration presenting of an opposition etc.

Nowadays it is very important to study and promote the development of pupils/students as competitive personalities and marketable prospective specialists who learn to live under the conditions of contemporary changeable environment. Thinking of society, including opinions of scientists change pertaining to meaning of competitiveness term in the context of education goals. We can say that at present, the thinking of Latvian educators is changing as well, however it is inert process.

Scientists T.Bulajeva and L.Dubliene (Bulajeva & Dubliene, 2005, p.42) wrote about changes of Lithuanian scholars' thinking within the context of educational and scientific philosophy: "Today, the philosophy of postmodernism is often used by scholars to understand different aspects of the contemporary life, not only art or literature. At present, it is popular to use it for analysis of various educational phenomena. ... it gives the possibility to look at the contemporary education from the different angle, to analyse and interpret the present educational situation in Lithuania from a radically perspective."

There are some educational paradigms in Latvia, therefore there are various interpretations of concepts: personality's competitiveness/specialist's marketability in the different contexts of contemporary educational paradigms. Nowadays meaning of competitiveness concept changes in the pedagogy. The obtained results of theoretical research show that there are contradictions in the interpretation of competitiveness meaning. New conceptual approaches in the education, including ecological and synergetic approaches, influence this process.

It is important to understand and substantiate the meaning of competitiveness concept already at the level of a philosophical paradigm. Nowadays scientists and educators-practitioners search for a way from scientific and/or educational paradigm to practical pedagogical activity and practical experimental research with a goal to study and promote the development of a personality's competitiveness during educational process, including values educational process.

The significance of a modern school is widely acknowledged regarding the promotion of the development of a pupil's personality, including the character building, the development of values and attitudes system, the development of social responsibility. In order to ensure the development of a competitive personality, it is important to place the focus on *the moral development* within the modern social environment (Гурьянова, 2005; Митина, 2003; Шаповалов, 2005; Широбоков, 2000). The ecological paradigm actualizes *the principle of complementarity in the education, including an individual's upbringing process, in order to ensure the balance between*

the anthropocentric and ecocentric approaches (Capra, 1996; Katane & Pēks, 2006; Salīte, 2002; Vaines, 1990).

According to our opinion, it is possible to search for an opportunity to promote pupils'/ students' competitiveness, from practical activities to didactic model to educational and/or scientific paradigm, on the basis of epistemology.

• Despite the contradictions in the description and substantiation of competitiveness concept, we found two main trends in developing the theoretical background of the competitiveness category. They are the following: 1) deriving new definitions and interpretations of competitiveness concept using theories from the already existing ones in the field of economics and sociology; 2) developing the competitiveness on the basis of concepts, theories and ideas of the authors of evolutionary, social, and human psychology and pedagogy, human ecology, including educational ecology.

Nowadays it is important to develop the methodology of competitiveness research, including research methods: methods of description and measurement. At present there is no conformity of opinions regarding the substantiation and interpretation of competitiveness concept, there is no one universal research approach. Nowadays several scientists go out of the *intradisciplinary research* (traditional approach, where research takes place in the framework of only one discipline): 1) they study any phenomena, taking part in the multidisciplinary research, and 2) some of them come to the interdisciplinary approach. The interdisciplinary approach in pedagogy offers opportunities for integrating of various aspects: ecological, pedagogical, psychological, sociological, economical etc. aspects, studying personality's competitiveness and forming transdisciplinary point of view (Katane, 2007, p. 92).

Scientist H.L.Ericson (1995) differentiates between a lower-level form of integration (multi-disciplinary) and a higher-level (interdisciplinary) form, promoting higher-order of thinking. The integrated curriculum model developed by S.M.Drake (1998) describes successive steps which teachers should make going from traditional (subject-based) curriculum to integrated one. Her continuum includes not only lower levels of integration (fusion, integration within one subject), but it moves further up from a multidisciplinary via to a transdisciplinary level. (Cited in Bulajeva & Dubliene, 2005, p.43).

• There are three approaches to the substantiation, including competitiveness description and measurement: 1) functional approach, where there are types and spheres of competitiveness manifestation analyzed; 2) biometrical approach, where there are indicated and evaluated characteristic features of personality's competitiveness; 3) structural approach, where there are several structural elements emphasized; this is complex approach, where the above mentioned approaches have mixed.

Nowadays ecological and synergetic paradigms as transdiciplinary paradigms offer to use transfers in both: theoretical substantiation of competitiveness concept and practical/experimental research, including functional approach, biometrical approach and structural approach, the basis of them is a system approach.

The next step in our research will be the following. We will develop and substantiate the indications system for the measurement of pupils' competitiveness, using nonparametric methods for data processing.

We hope that results of our research will promote:

- 1. the development of pupils'/students' competitiveness during pedagogical/academic process at various educational establishments;
- 2. the development and improvement of competitiveness research methodology.

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Adviced by Laima Railienė, Siauliai University, Lithuania

Irena Katane Assoc. professor at Latvia University of Agriculture, Faculty of Engineering,

Institute of Education and Home Economics. J.Čakstes bulv. 5, Jelgava, LV 3001, Latvia.

E-mail: Irena.Katane@ilva.lv Website: http://eng.llu.lv/

Ilze Kalniņa Director of Training Centre at Latvia Academy of Business and Management, Latvia.

Salaspils Street 14, Rīga, LV-1057, Latvia.

E-mail: ilze.kalnina@luma.lv Website: http://www.luma.lv