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FOREWORD

The look in the future demands new knowledge, skills and abilities to be systematically and at the right time applied in practice of market relations, and competition and competitiveness of knowledge, skills and abilities.

How can we keep the intellectual capital, and use the “hidden richness” in the heads of employees?

How can we affirm entrepreneurial initiative and economic freedoms in rational creating of future?

How can we advance employment which represents a powerful means in fighting the basic problems of today’s society, like poverty?

In the light of everything mentioned the presented papers signify affirmation of scientific thought, in the wider context through multidisciplinary observation of current phenomena and paradigms in areas of education, entrepreneurship and employment by getting involved into a fight against poverty, as a result of primarily theoretical considerations, but which are supported by empirical claims of smaller number of authors.

While considering the opinions of various authors we can separate three thematic frameworks in which we can place problems of similar content.

The first thematic framework includes papers dedicated to the goal, or goals of education, completing the story on education mission – through which channels and which effects it has by turning the focus on claim that education brings new values. As a destination we have the “society which learns”, as a condition of social, economic growth and development.

The second whole in thematic framework is directly dedicated to the general influence of education on development of entrepreneurship through entrepreneurial education and development of entrepreneurial skills. Generally considering our main expectation – that education is the significant factor of content of entrepreneurial work, got a validation in theoretical and empirical analyses. Having an insight into diversity of entrepreneurial needs, especially the “scale” of education impulses, we provide conditions for designing and projecting of various strategies of education and learning inside which almost all categories of entrepreneurs and employees in entrepreneurial organizations can use their chance and encourage and speed up the enrichment of entrepreneurial work using new methods and techniques and contribute to development of various entrepreneurial skills and creativity.

The third framework is separated based on sources that rest on the analysis of areas of unemployment, domain and roles of education, channels and effects in developing and improving the employment.

Education represents a powerful tool in fighting for solution of one of basic problems of today's world, like poverty. This problem has to be further examined and actualized through searching for the answer to how can education ease and remove the problem of poverty, in all its forms.

Education can be included in bases of every planned activity in fighting the poverty and it can create much larger number of channels through which it can act and cause very different effects.

Full Professor Slavko Karavidic, PhD

I PART. EDUCATION

SUSTAINABLE DEVELOPMENT AND HIGHER EDUCATION SYSTEM

Radovan Pejanovic, PhD[1]

Gordana Radovic, MA[2]

ABSTRACT

The authors consider the relationship between the concepts of sustainable development and higher education system. The concept of sustainable development is the response to a multifaceted and widespread crisis faced by the modern society. Higher education systems should be framed precisely in such a way as to support sustainable development. This is increasingly emphasized both in the theory and practices of the European Union, particularly in its strategic documents. The authors suggest that this is the roadmap for the Republic of Serbia.

Key words: *Sustainable Development, Higher Education, University, Strategy, Reforms, European Union, Republic of Serbia*

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INTRODUCTION

Sustainable development is a key determinant of the modern development theory, which has found a prominent place in the strategic documents of the EU, such as Europe 2020 and EU Strategy for the Danube Region. This notion appeared in the 1980s in theory and the official documents of the United Nations Organization. Ever since then it has become extensively discussed due to its multidisciplinary and multidimensional character.

We have chosen, among a number of strategic documents, the two which are especially important for Serbia in terms of its EU accession path, and we therefore regard them as a roadmap and framework for our social and economic development. This is the context in which we see the development of our university, as well as the entire system of higher education, science and knowledge transfer.

The greatest contribution for this kind of perception of development could be expected from the diversification of knowledge and redesigning of education itself for the purpose of sustainable development. The US educational system, considered historically, has acheived remarkable results in attracting people (brain gain) of different background, social status and educational profile into one integrated social category.

Managing the process of development has become, both for the European Union and the rest of the world, the imperative for building an acceptable future of new generations, not only in the sense of sustainability and growth of economic systems, but above all, for the quality of life that includes the socio-cultural and ecological conditions and lifestyles. The national and regional strategies for sustainable development have become part of a new methodical approach towards the future.

EU institutions and the Council of Europe play a significant role in monitoring and advancing the quality of education in the EU member states. The Council of Europe and the EU signed in 2007 a Memorandum of Understanding that brings to the foreground: protection of human rights, rule of law, democratic stability, intercultural dialogue, diversity of cultures, and culture of democracy in Europe. It insists on a more intensive implementation of the Bologna Declaration as well as on development of educational networks and student mobility at all levels. Having this in mind, the EU educational policy for sustainable development is important. The highly educated generations of young people are becoming a precondition for a successful and accelerated resolution to the crisis that Europe has been facing for quite some time now.

The initial hypothesis of this paper is that sustainable development and higher education system are closely related and functionally interdependent. Moreover, higher education systems should be designed to benefit sustainable development. This relationship and connection is best illustrated by the example of the European Union. The experience of this powerful integration indicates that human capital is the main asset behind the stable and longlasting sustainable development. This capital is created in the process of education and it is not a purely economical, but also social and cultural category. The role of human capital is reflected in the behaviour of individuals in society, transmission of knowledge, as well as through direct social transfer of knowledge.

SUSTAINABLE DEVELOPMENT

What is sustainable development that has become so important nowadays?

When sustainable development is mentioned, many people consider it simply as an issue that has to do with ecologically acceptable projects. This is how certain actions for environmental protection, recycling, waste management and/or preservation of biodiversity are portrayed.

There are less people who realize that sustainable development is a concept created by the United Nations Organization in order to improve things on a global level by harmonizing economic indicators with ecological goals and social conditions. In that sense, sustainable development is a generally applicable socio-economic concept that could resolve a potential conflict between economic goals of growing income, employment and living standards with the interest of people to live in balance with nature in an appropriately preserved environment and in socially acceptable conditions.

It is therefore a matter of socio-economic and cultural development that is in line with conditions, limitations and capacities (indicating a principle of rationality) and which does not impair the conditions for future generations (indicating the principle of solidarity). It is a matter of humane development as a response to a deep and widespread crisis our society has found itself in.

Sustainability has several aspects: (1) social sustainability implies a fair distribution of the work results and reducing of the gap in levels of development between various social (and territorial) groups; (2) economic sustainability implies a stable economic growth; (3) ecological and areal sustainability implies growth which does not diminish the ecological and areal capacities and thresholds; (4) social and political sustainability which implies institution building in a political system and a high degree of participation of a wider public in making, reaching and implementing decisions.

Sustainable development is about qualitative growth, or development that is in line with opportunities and conditions.

The European Union adopted in 2000 a strategy of development known as the Lisbon Strategy. This document stresses the strategic goals of the EU until 2010 with the ambition of making the EU the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, offering a greater number of quality jobs and stronger social cohesion.

The global economic-financial crisis of 2007 disrupted these plans and seriously shook the EU economy whose recovery is still ongoing.

Europe 2020 emphasizes three related priorities: (1) sustainable growth promotes resource-efficient, low-carbon and competitive economy; (2) smart growth focuses on effective investments into knowledge-based economy and innovation; (3) inclusive growth envisages a high-employment economy delivering social and territorial cohesion.

With this agenda, the European Commission determined seven flagship initiatives that are supposed to encourage progress within each priority area: (1) Innovation Union aims to make it easier for innovative ideas to be to turned into products and services, thus contributing to growth and employment; (2) Digital Agenda for Europe aims to increase the use of digital technologies and create opportunities for using the EU single market; (3) Youth on the move aims to improve performances of educational systems and enable young people better access to the labour market; (4) Resource efficient Europe supports energy efficiency and a shift towards renewable sources of energy; (5) Industrial policy for the globalisation era aims to improve the business environment, primarily with regards to SMEs, and support the development of a strong, sustainable and competitive industrial base; (6) An agenda for new skills and jobs aims to modernize labour markets by developing people's skills that are in line with dynamic technical and technological changes, for the purpose of matching labour supply and demand, including labour mobility; (7) European platform against poverty aims to ensure social and territorial cohesion in which people experiencing poverty and social exclusion can feel the benefits of economic growth.

These strategic goals are interrelated.

The other strategic document, the EU Strategy for the Danube Region, is also very important for Serbia, since this strategy envisages that the Danube Region, to which we belong, should become one of the most attractive regions of Europe where participating countries should have better prospects for higher education, employment and prosperity.

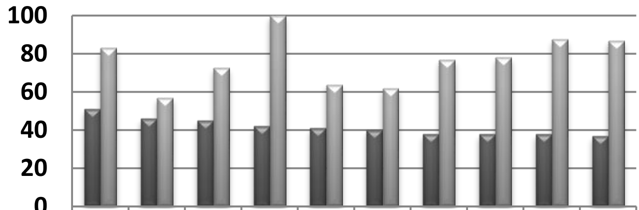
This strategy emphasizes the main challenges that will have to be addressed in the period to come, such as: mobility, energy, environment, risks, social and economic problems, safety and security.

There are four pillars dealing with the above-mentioned issues: (1) Connecting the Region; (2) Protecting the Environment; (3) Building Prosperity in the Danube Region, which implies the development of the knowledge society through research, education and ICT; (4) Strengthening the Region, primarily dealing with building and advancing institutional capacities and cooperation.

EDUCATION AND SUSTAINABLE DEVELOPMENT

The education system is an institutionally regulated system which presupposes organized learning and knowledge transfer. It has an important social, economic and cultural dimension. Education, as a key factor in the development and competitiveness of modern economy, plays a crucial role in the social and economic development of society.

Experience of developed countries indicates that education is directly related to economic progress. Research studies show that, in the first decade of the 21st century, ten countries with the largest number of highly educated population belong to the group of countries with the highest GDP per capita (from 26 to 45 thousand; and 35,000 US dollars in average).



	Canada	Israel	Japan	USA	New Zealand	South Korea	UK	Finland	Austrалia	Ireland
% of population with tertiary education	51	46	45	42	41	40	38	38	38	37
BDP per capita (Index (SAD=100)	83	56,9	72,6	100	63,8	61,9	76,8	78	87,6	86,9

Figure 1. Ten most educated countries in the world – percentage of highly educated people in correlation with the GDP per capita (USA=100)

Source: Sauter et al., 2012

The EU started the creation of the European educational policy at the end of the 1980s on the basis of successful exchange and educational programmes. It was the Action Scheme for the Mobility of University Students (the Erasmus programme); Action programme Lingua (concerned with promoting the learning of foreign languages); Trans-European mobility scheme for university studies (Tempus programme), initiated to support the cooperation between universities in Europe and the US, and finance research projects in a great number of fields. Since 1995 there has been a reorganization and integration of the above-mentioned programmes into the unique Socrates programme. This programme was substituted in 1999 by Socrates II, and then, from 2007-2013 with the Lifelong Learning Programme.

Different measures within these programmes included the following categories: physical and virtual mobility, development and networking between higher education institutions, improving the area of culture and languages, development of innovative activities through pilot projects and advancement of comparative criteria.

There are multiple goals of the EU educational policy. Some of them are: (1) Raising the quality of higher and professional education; (2) Advancing the comprehensive approach to education and (3) Reaching the highest levels of knowledge through continual (lifelong) learning.

In the process of creating and designing educational policies, the European Union applies the following instruments: (1) Guidelines (advice), that are nowadays, as a tuning instrument, focused on the recognition and attunement of professional degrees, as well as on the coordination of legal and administrative regulations of EU member states; (2) Multiannual action plans that are focused on supporting national educational policies of the EU member states and networking between national projects.

The European Commission is in charge of supporting efforts and launching initiatives in the field of educational policy. The Commission does this in the following manner: Advancing cooperation with decision-makers from the member states for the purpose of development of national higher education policies; Encouraging the principles of the Bologna Declaration and intergovernmental dialogue regarding higher education reforms and the establishment of a European Higher Education Area; Supporting the exchange of best practices; Development of the Erasmus programme enabling academic mobility and better employability of young people; Launching numerous European programmes that deal with collaboration in the field of higher education outside of the EU, such as Tempus and Erasmus Mundus; Initiating specific and relevant research by collecting, analysing and processing data on the current state of higher education systems across Europe.

The European Commission adopted the Agenda for the Modernisation of Europe's Higher Education Systems in September 2011 with the aim of supporting necessary reforms in the EU member states. The agenda emphasizes key areas that need to be reformed, with the following goals: increasing the number of higher education graduates, including international students; increasing attainment levels; enhancing the quality and relevance of higher education; attuning curricula to personal affinities and the real emerging labour market needs of the EU; enabling greater opportunities for students to acquire new skills through study periods or traineeships abroad and encouraging the internationalisation of higher education; continuing professional development of a growing number of researchers that will contribute to the EU’s economy; strengthening the so-called knowledge triangle that links education with research and entrepreneurship; creating effective governance and funding mechanisms in higher education in support of quality needed to respond adequately to the real needs of the EU’s labour market.

The largest EU programme devoted to research and innovation development for the period between 2014-2020 is Horizon 2020. The aim of this programme is to encourage and facilitate cooperation between universities, research centres, private and public companies on various scientific and innovative activities. This programme supports partnership cooperation between different institutions from the EU and the candidate countries. The ultimate goal is ensuring global competitiveness of the EU, its member states (together with the potential members). The European Union became very much aware during the previous decade that collaboration in the form of joint activities between universities and companies moves the existing boundaries and generates new knowledge, making this kind of partnership the most powerful mechanism for innovation and overall sustainable development.

By coupling research and innovation, Horizon 2020 facilitates the realization of collaborative projects between universities and their environment, putting an emphasis on excellence in science, industrial leadership and addressing societal challenges. The goal is to ensure that Europe creates world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation. This programme, in comparison to the previous ones, has more simplified application and participation requirements, with less bureaucracy and a clearer focus on the ultimate goals.

Horizon 2020 has the budget of nearly €80 billion available in the period from 2014 until 2020. A large part of the budget (€17 billion) is earmarked for leadership in industry, particularly SMEs, with the aim of fostering and commercialization of innovation and shortening the time needed for an idea to reach the market. Excellence in research implies investment into scientific programmes with the aim of EU developing, attracting and keeping talented researchers and enable them to use adequate infrastructure. Funds are also allocated to the pressing societal challenges, such as: health (demographic changes and wellbeing); food (sustainable agriculture and forestry, marine research and bio-economy); energy (secure, clean and efficient); transport (smart, green and integrated); climate, society and security. European Institute of Innovation and Technology will finance existing knowledge and innovation communities – independent legal entities that gather partners from all parts of the innovation chain. Euratom programme pursues *nuclear* research and *training* activities with an emphasis on stronger *nuclear safety* and security.

Contemporary trends in higher education are numerous (Milanović et al., 2014:42-45): entrepreneurial activity of universities (building science parks, establishing spin-off companies, patents and licensing, contract research, courses and training, part-time programmes for adult learners, professional and employer sponsored masters, consultancy, research block grants, publication of research results, education of highly qualified human resources; distance learning, e-learning); combined learning (the possibility of learning in a joint space – amphitheatre and laboratories with distance learning – independent acquisition of a certain thematic subject matter, preparation of specific classes and revision); blended learning (through the use of new information-communication technologies); the use of social media for educational purposes, such as social networking websites, wikis and blogs, internet and other modern learning tools – Facebook, Flickr, iTunes, LinkedIn, Twitter, Youtube, Blog; application of software tools in the educational process (e.g. project management software); the process of internationalisation - the topic of the new Tempus project SIPUS (Vesković et al., 2014:17-20).

CURRENT SITUATION IN SERBIA

Serbia formally framed its future development with a number of strategies that have been most broadly adopted on the sectoral level. Only in 2005 had the work began on the project aiming to draft the National strategy of sustainable development that was supposed to be the overarching strategy for all the others. Unfortunately, this was not implemented further. This points out, on the other hand, that theory and practice of the concept of sustainable development are slowly and with much difficulty coming to the foreground in our context.

In the report of the European Commission for 2012 (European Commision, The Higher Education Modernisation Agenda (text of the Agenda is available on: http.//ec.europa.eu/education//higher-education/agenda_en.htm), slow progress is noted in the field of education. The report emphasizes that financial and human resources of the Ministry of education, science and technological development, as well as the implementation of necessary reforms, are not on the satisfactory level. It is further noted that it is crucial to keep strengthening the capacities of financial management and control in all European programmes Serbia participates in. Further on, limited progress exists in the development of the national qualifications framework in the areas of vocational and higher education. It is also necessary to modernize and further reform the national system of vocational education and training, including the introduction of new curricula that would finally match with the real needs of the labour market.

Despite the fact that human resources represent the most significant potential of Serbia, the offer on the domestic labour market does not match the needs of the economy and society. It turns out that, unlike the situation in the EU, the educational system of Serbia is not oriented towards the economic and societal needs. In other words, the national educational system does not Figure as an initiator and creator of human resources that would easly find their place in the national and international job market. Designing educational profiles, therefore, does not take into account the needs of the economy, while the decisions on their changes are made and implemented slowly.

In 2012, Serbia adopted a Strategy of Educational Development by 2020. It envisages secondary education as compulsory as well as reaching the level of 38.5% of population with tertiary education (according to the official statistical data, Serbia nowadays has around 6.5% people with higher education degrees). The strategy promotes the system of awarding teachers for the purpose of promoting accessibility and quality of education and reaching European standards in this area. It also emphasizes that it is necessary to establish mechanisms for the growing effects of economy (private and public sectors) in the decision-making processes dealing with educational profiles.

The system of higher education in Serbia is confronted with multiple problems and challenges, especially in terms of material and financial limitations. Budget al.,ocations for education and science are symbolic. The weakest points of the Strategy are therefore the reality of our situation, the opportunities of achieving the intended goals and the employability of highly qualified population in Serbia.

The budget al.,ocation for science in 2012 were 0.36% of GDP. There was only a slight increase in comparison with 0.35% in 2011. This is considerably lower than what the Strategy of scientific and technological development envisages the level of 0.60% of GDP. In the area of advancing the capacity of human resources, the support received by the researchers through additional funding was considerably smaller in 2012 than in 2011. The financing of journals, monographies, scientific conferences, participation in conferences abroad and finansing of study visits have also been significantly reduced. All of that has led to the relative lowering of the rating.

In the Global Competitiveness Index 2011-2012 (which follows 142 countries), Serbia is on the 96th place. The total competitiveness index is formed on the basis of more than 200 different indicators. Therefore, according to the quality of the educational system, Serbia is on the 111th place; according to the quality of education, on 106th place; according to the efficiency of using talent, on the 125th place; brain drain puts Serbia on the 141th place, technology transfer on the 123rd place, number of patents applied for in a population of 1 million on the 119th place; the innovation capacity on the 120th place. In the past several years, our rating has continued to fall, worsened by the influence of the economic crisis (according to the Government of Serbia, Ministry of Education, Science and Technological Development; Report on the state of science in Serbia in 2012 with proposals and suggestions for the following year, Belgrade, 2013, p.9)

Moreover, Serbia has a growing demographic problem. Each year the number of citizens of the Republic of Serbia decreases by 60,000. The demographic curve, that began going downwards in the 1980s, initially in Vojvodina, and in the 1990s extended to Serbia as a whole, has not changed its direction. Some estimates indicate that Serbia will have only 5.2 million inhabitants by 2050. It is a worrying trend that will have far-reaching negative effects on education as well.

CONCLUSIONS, LESSONS AND REFLECTIONS

Kowledge-based society or post-industrial society brought to the foreground the relationship between development and education. Reforms in education, oriented towards building an educational system benefiting sustainable development, are needed. Education can nowadays be considered a factor of sustainable economic and social development. Universites, as generators of new knowledge and skills, are increasingly seen as key factors in fostering competitiveness of European economy on a global scale.

The key lesson resulting from the contemporary theory of social development is that there are numerous direct and indirect relations between buidling human capacities, or human capital, with the dynamics of technological changes (economic growth), employment and income, as well as better living conditions. In other words, there is a strong relationship between technological progress and human development.

Today’s practice of acquiring knowledge demands profound redesigning of the process of learning and education, in accordance with new technological, economic and cultural patterns of living and working, but, above all, in the direction of sustainability of the model recognized as the knowldge-based economy.

Higher education, in synergy with science, has an essential role in personal development and sustainable social development, since it generates qualified human resources. At the same time, it implies the need for new jobs creation.

Experience of the EU show that higher education systems in EU countries have to adapt effectively to the demands of the knowledge economy so as not to risk losing their global competitiveness in education, research and innovation.

Europe 2020 growth strategy stresses that the educational policy is the most important area where the cooperation between EU and its member states (and candidate countries) should be strengthened, having in mind its positive influence on the creation of new jobs and sustainable development.

The educational policy of the EU is defined in the Agenda (of 2011) as an integral part of the European employment strategy, while the encouragement of lifelong learning and improvement of the quality of educational systems are placed into the guidelines of the EU educational policy.

EU educational policy reforms, as part of the European employment strategy, aim at increasing the number of people with tertiary education, improvement of the teaching process, and maximizing the direct impact of the educational system on the EU economy. In order to neutralize the effects of the financial crisis, determining priority areas is insisted upon. In these areas EU member states should intensify their efforts in order to achieve common goals and modernize their own policies. Recommendations in the agenda dealing with reforms of the European educational policy encompass a multidimensional ranking of European universities.

The policies of the EU regarding research and innovation aims at strengthening scientific and technological foundations of sustainable economy in order to make the entire EU economy more competitive on the world stage. The EU therefore emphasizes science, research and technological development as three of its primary goals. In order to achieve these results, the EU encourages in the member states, as well as potential member countries, intensive cooperation and joint activities between universities, research centres, private and public companies on various research and innovative tasks.

Support given to education, science and innovation is the key of the Lisbon strategy adopted by the Council of Europe in 2000, with the aim of making the EU the most dynamic and competitive knowledge-based economy in the world, with sustainable economic growth and more jobs. At the same time, the Council of Europe appealed to all EU countries to increase the allocations for research and development to 3% of GDP. Horizon 2020 emphasizes that increasing investments into reserach and innovation is one of the main preconditions for further progress.

The above-mentioned processes, changes and reforms happening in the EU need to become a roadmap, an incentive and a role model for the adjustments and reforms needed in Serbia in all segments of society, particularly in the field of higher education and universities. Unfortunately, there has not been sufficient progress in Serbia in the educational sector. This applies to the symbolic impact of the national educational policy. It is necessary to make sure that national priorities in the domain of education, science and technological development are accompanied by continually growing budget al.,ocations. More international projects and further enhancement of the quality of teaching and reseach are important priorities in the following period.

The main lesson of the analysis provided in this paper is the necessity of development, which includes higher education and university. Sustainable development should become a key determinant of reforms at our university, as this is not only the condition of its improvement, but also of its survival.

Having a strategic approach to the place, role, reforms and development of universities and higher education in the Republic of Serbia is therefore crucial.

The development of our university up to date has not been based (apart from exceptional cases) on the principles and philosophy of sustainable development. On the contrary, this development has been marked with examples of lack of planning, disorganization, brain drain, unloyal competition, corruption, inefficient studying, domination of personal, group, party, business and other interests over social and national ones. The crisis in society (economic, ecological, political, moral, ideological, demographic, value) has been reflected at the universities.

This is why we need profound and comprehensive reforms of the entire society, including its universities. These reforms should first establish the institutions. Two key institutions, when it comes to universities, are the market and the state that need to undergo radical changes.

We need a well-regulated market of higher education that will be dominated by healthy competition as well as partnership. We need a modern and effective state, with competent and professional (not only political) administration. We need a state which sets out clear frameworks and monitors how they are being implemented – a state with a stable, efficient and predictable finances that will encourage, stimulate and support development with a stable political system and a sound legal system.

We need an integrated university built on the principles of togetherness, networking, coordination, efficient organization, team work, integrated rather than disintegrated processes.

Last but not least, we need ’transition in our mindset’ on a number of issues, both at the state and the private universities.

All of these are elements of sustainable development of a university, which we should aspire to. In that sense we should look up to developed EU countries, that paved the way by their strategic documents.

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YOUR COURSE SYLLABUS: A SCHOLARLY TOOL FOR THE 21ST CENTURY

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ABSTRACT

This paper provides an instructor of higher education with a scholarly tool for the back ground to develop a syllabus, to aid a student to begin the process of developing the capacity to create and become an interactive, creative self learner of the 21st century. As quality assurance will dominate the educational scene higher educational institutions are committed to develop output objectives. A focus must be placed on developing the creative and synthesis abilities of the student. These cognitive skills must become the undergirding philosophy of higher education instruction. The planning of the syllabus must focus on such questions as to what extent has the student already developed creative and innovating projects? What can an instructor do to help the student move forward with creative and self learning development.

Key words: *New Paradigm, Assessments, Levels of Cognitive Development, Output, Quality Assurance*

JEL Classification: *I20, I21, I23*

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INTRODUCTION

Courses and programs are proliferating across universities in multidisciplinary studies. However, there is no evidence to indicate that teaching and learning methods are being continually developed and improved as a strategy for synthesizing evaluative levels of learning. The development and infusion of knowledge and implementation of concepts is calling for the use of higher cognitive levels in teaching and learning. This paper provides a practical tool for an instructor in higher education for use in developing a syllabus founded in scholarly work for teaching and learning.

As quality assurance continues to demand from the teaching-learning scene on a worldwide basis, instructors must continue to improve their teaching to require students to use their higher cognitive levels. It is important to maintain focus on helping the student develop these higher levels. There is truly a need in education for continued efforts to develop well-designed and well-planned syllabi that generate more effective teaching. Luke, Woods, and Weir (2013) define the official syllabus as a guide to the curriculum According to Diamond (1998), students must have a clear Figure of what they are expected to do when reading the syllabus, what their role is and what the criteria is for success or failure.

Research indicates that teachers who were found to be outstanding wrote similar types of syllabi. Their syllabi were exceptional in the amount of detail and clarity developed. They wrote clearly stated objectives and a session-by-session schedule, which identified the specific reading assignments and project work office hours of availability to students, and contact telephone numbers were included as well. In addition, these teachers provided clear statements regarding make-up dates, attendance, and grading standards (Diamond, 1998).

The syllabus distributed to students represents the first introduction to the instructor, the course that a student will have with the instructor, and the material that he or she will be expected to learn. It is an instructor's responsibility to think through a course of study and demonstrate implicitly in the syllabus his or her knowledge of the students' needs and interests. A syllabus is a powerful tool that reflects an instructor's knowledge, background, education, and teaching philosophy in an understood way. A syllabus spells out an instructor's beliefs and interest in the subject matter (O'Brien et.al 1998).

A LEARNER-CENTERED SYLLABUS

A learner-centred syllabus is consistent with the principles of a "learning organization" and a "learning college" (Senge, 1990). A learning syllabus tells the students that you, as a teacher, are there to help them learn and, more importantly, to help them become self-directed and creative learners. To become a creative learner Figures high in the new paradigm of education. For example, Garry Jacobs (2014, p. 122), CEO of the World Academy of Art and Science writing in Cadmus, stated

The inordinate preoccupation of modern education with specializations, classification and analysis neglects development of higher mental capacities essential for effectively addressing the challenges and opportunities confronting individuals and societies today, including the capacity to view things as aspects of a greater totality, to perceive the complexities of interrelatedness, to synthesize and recognize apparent contradictions and to integrate disparate aspects of reality within a greater whole. ... The conscious development of individuality and creativity is also largely neglected by current educational systems.

LEARNING AND TEACHING

All teachers of any subject should know about learning and teaching in the age of worldwide access to education, particularly with the coming of the MOOCs or massive online courses (Zucconi, Jacobs 2014). Certain ingredients for effective teaching have withstood the test of time, Nicholls (2002) points to three categories of attributes that constitute effective teaching. They include:

- Personal attributes, which are fairly self-explanatory, include being humorous, relaxed, imaginative, accessible, attentive, fair, friendly, supportive, and enthusiastic.
- Professional attributes include being organized, well prepared, articulate, up-to-date in the subject area, a subject expert, and good at time keeping.
- Finally, professional skills include making the work relevant , actively assisting students in the learning process, using a variety of teaching methods, having high expectations, explaining topics clearly, giving praise and encouragement, and demonstrating fairness and equity.

A well-prepared and well-developed syllabus is the foundation of the future of effective teaching worldwide. Already, the syllabus is starting to foster high expectations of governments, as indicated in the United States by the Council of Regional Accrediting Agencies (Hubbell and Gold 2007). It is also the beginning of the development of self- instructional modules and courses, which are becoming increasingly prevalent and will be used by more people in some of the lower core undergraduate courses. A syllabus is one of the most powerful and functional teaching and learning tools that an instructor can develop to improve his or her own teaching. It is the syllabus and-more specifically-its objectives that reflect the level of learning that you as a teacher expect from the student. It is the syllabus that reflects your planning and the well-written objectives that tell students what they will be taught and tested on.

The syllabus informs students of the teacher's expectations, the necessary textbook they must acquire, and the amounts of reading and activities that are deemed important for them to learn, as written in the course examinations and as expressed in the objectives.

It is the instructor’s syllabus that tells students how much teacher-student interaction there shall be in the course session or online. Furthermore, the accrediting committee examines the syllabus to gather data on what is going on in the teaching/learning business of the school or program. It considers the output learning objectives that clearly reflect what kind of course is taught when the syllabus is implemented.

In addition to the learning and teaching process used for the syllabus, recruitment and hiring committees look at syllabi to gauge an instructor's teaching abilities. Moreover, sometimes a statement of an instructor's teaching philosophy is on a syllabus. It is important that instructors all agree about the undergirding philosophy of teaching in a school, program, or institute because decisions about the curriculum must reflect the teaching philosophy.

A syllabus is the foundation of a course, and it may also be called the teaching-learning platform. It covers the questions that should be asked when you teach.

- For whom is the course designed?
- What is the rationale of the course?
- Why am I teaching this course?
- What are the course goals in the short term and in the long term?

TEACHING IN THE WORLD TODAY

Long gone are the times when an outline of two pages could serve as a syllabus. Today's syllabus needs to be a in-depth course outline, offering answers to the following questions. It must reflect hours of careful preparation, planning, and design, indicating levels of learning consistent with the standards available, such as the levels of Bloom's Taxonomy of Educational Objectives (Bloom, 1956). Before you begin your planning, ask yourself the following questions:

- What educational purpose does this course serve?
- What will the student be asked to evaluate and synthesize?
- How is the student learning to become a more creative individual?

DEVELOPING A LEARNING-CENTERED SYLLABUS

The learning centred syllabus is a work of scholarship that indicates how an instructor values learning and how he or she will help students learn, with clear expectations and standards; it sets a tone of encouraging self-direction on the part of students (O'Brien et al.,. 2008) Disciplinary theories that guide us in developing syllabi and curricula include Philosophy of Education, Psychology, Sociology, Anthropology, Genetics, and more. We can also add the hard sciences of Microbiology to this list. With today's new technologies, new information and more disciplines are added to the related areas of studies.

PREPARING AND DESIGNING YOUR COURSE

As a teacher, you also need to think through and develop an instructional aim, output-oriented objects, or several goals that must be translated into learning objectives on your syllabus. Let us distinguish between the concepts of aims, goals, and objectives. We need to think of these concepts as situated at different conceptual levels and written at various levels as well. Aims are normally considered at the most general statement of intent, with the goals translated down at the system level and learning objectives translated down to the classroom level.

According to Brady (1995) the course goal is a general statement of intent at the school or institutional level. It could be a statement of school or university policy. The goal of Brookfield Multinational College, from this broad aim is that teachers would translate their instructional goals. An aim, according to (Brady, 1995) is a broad and general statement at the system level that is intended for the school or institution.

Ornstein and Hunkins (2004) set out the levels of written aims, goals, and objectives as follows:

- Aims: An aim is usually a general statement that provides direction or intent to educational action. The source of aims usually comes from national commissions, task forces, and panels. Such aims at the national levels identify the overall direction of the basic curriculum in all studies.
- Goals: Goals are the statements of purpose and are more specific than aims. They originally come from professional associations, government agencies, state departments of education, and school districts. An example would be the National Goals for Education. Goals identify specific areas of the curriculum.
- Objectives are translated to the classroom level and are also called learning objectives. They are very specific statements that indicate general or more specific outcomes. Behavioral objectives indicate the specific behavior students must demonstrate to indicate that learning has occurred. Non-behavioral objectives use more general words to denote the learning desired. However, in recent years, such words as ‘to know’ or ‘to understand’ have not been supported in learning objectives, due to the quality assurance framework now in application worldwide.

IMPORTANCE OF OUTPUT OBJECTIVES

It does not matter whether one refers to the higher-level as aim or goal. The important factor is ensuring that the highest level is translated to the next-highest level and then to specific learning objectives for your syllabus.

There is no doubt that higher education is becoming global, with increasing numbers of students going overseas for study, transferability of credits, student mobility, and the international sharing of projects and faculty members i n universities.

In addition, the magnitude of the concept of quality assurance is shared on a global basis, as academic institutions around the world are subject to similar influences. Along with the mandates of 'output objectives,' via an agreement signed at the Bologna Convention, 45 European nations were to have output objectives in their universities completed by 20 I 0 (Hubbell, Gold 2007).

Mager (1998) defines an instructional objective as related to intended outcomes rather than to the process of achieving those outcomes. He maintains that an objective is specific and measurable. It is concerned with students, not teachers. Many people develop objectives that are process objectives, not statements of intent. For example, "students will study how to develop …" this is a method not an objective.

More focus has been placed on output objectives, or what the student should learn by the end of a learning session. At conferences, seminars, and classes, this is also important to assess whether the participants have learned what they should have learned. Output objectives become the actual examination or test questions couched in question form.

Expectations of explicit learning outcomes and assessment policies in undergraduate curricula are integral criteria which have been established by the Council of Regional Accrediting Commissions (CRAC) in the United States for all seven agencies responsible for state universities and colleges (Hubbell, Gold 2007).

SITUATIONAL ANALYSIS

A situational analysis examines internal and external influencing factors. You must identify the aspects that are a part of the situation in which you will be teaching. The results are inferred from the work you present on the syllabus, as you can then determine what factors will come into play in the student's learning process.

Brady (1995) defines aspects of a situational analysis as internal or external. The internal situation includes, most importantly, the students' backgrounds. This means you should determine, by asking your enrollees in a short letter, questionnaire, or email, about learning they have had previously. An instructor's knowledge of what the learner knows is one of the most important aspects of teaching. The influential educational psychologist D. P. Ausubel states, "The most important single factor influencing learning is what the learner already knows; ascertain this and teach him accordingly" (Nicholls, 2000).

When you make presentations at conferences, the enrollment lists are usually released in advance, so you can find out the knowledge level of attendees participating in your session. Enrollments for seminars and short courses should be available to you far enough in advance to communicate with each participant and policies of any particular program or school, and the ethos or culture of the particular school, institute, or association in which you are teaching. The culture of an institution is that which surrounds the people and their stories, values, and traditions (Brady 1995). A third feature that you should know is the pressures and concerns of the school, institute or association at which you are to teach a class or session. Expectations of explicit learning outcomes and assessments in the undergraduate curricula are also integral factors.

Next you must be cognizant of the resources available to you. More specifically, you should confirm whether projectors, computers, and other technological tools will be made available for your use. Today, such technological devices should be used to engage students, so they interact with the instructor and course material in their learning. Videos are also useful and contribute positively to the learning process.

EXTERNAL FACTORS OF THE SITUATIONAL ANALYSIS

The external factors that a person teaching or presenting seminars should be cognizant of are listed below.

The changing natures of online and standard up-front sessions, as well as recent developments in the field have changed the nature of education. As an instructor in the rapidly developing information age, you should also be aware of some of the trend s and predictions in the social and cultural environments of teaching and learning.

Predictions made in terms of education and educational delivery including the following ideas. Economist Dunn (2000) predicts that, by 2025, all educational courses will be self-instructional, and packages will be sold for such courses; the institutional middlemen will no longer exist.

Colleges and universities will become certifying institutions with students taking enough courses in one institution to be able to obtain their degree, or they may transfer to another institution and use course credits in a new major. This is already being accomplished. The Sloan Report (2011), which is published every year and is a barometer of online education, reported in 2011 that 31% of all higher education students now take at least one course online. This amounts to 6.1 million students taking at least one online course during the Fall 2010 term.

Dunn (2000) maintains that more than 50% of all college graduates will pursue their studies at more than one institution. Colleges will accept more courses taken at accredited institutions. (Dunn 2000) also predicts that, by the year 2025, at least 95% of instruction in the United States will be digitally enhanced.

Dunn (2000) predicts that the number of educational institutions will decrease. Publishers, corporations, and for-profit and nonprofit entities will jump into the education business simply because there is big money to be made in education. Publishers will sell courses directly to students. We can begin to develop self-instructional modules and develop self-instructional courses to sell. Furthermore, as Dunn states, the need for continuing education is growing. The number of students seeking continuing education will increase.

The most interesting predictions about courses and education trends are listed below, as determined by (Dunn, 2000):

- By 2025, half of today's existing independent colleges will be closed or their missions will be altered; secondly, “university degrees and programs at all levels will be available by information technologies from all quality levels of education.”
- Accreditation and program approval will be based more on educational outcomes. Testing programs will be put in place by discipline.
- “Organizations, federal and state governments, corporations, and testing companies will develop their own competency-based examinations and tests. By 2025, there will not be one national accreditation system, although the U.S. Department of Education will provide a basic safety net for quality.”
- “The virtual university is growing and will become the predominant mode of higher education by the year 2029.”
- The major growth area will be in adult and postsecondary education and in degree and certificate programs for older adults.
- Consortia of college, universities, and other kinds of institutions will band together and produce and deliver courses for students in their member consortia. Many of these consortia will seek their own accreditation and approval.
- The virtual university will be a web of educational providers that collectively distribute services to the client at the time, place, pace, and style desired by the client, with the quality determined by the client and a variety of approving and accrediting bodies.
- Colleges and universities will offer degrees free of charge, through educational companies selling products to students in between classes in distance education. The educational companies will pay the instructors and students will receive free degrees (Weigel, 2000).

It is predicted that, given worldwide access to education, at least a bachelor's degree will be expected of all workforce members engaging in non-technical work. All high- level occupations will require a doctorate degree in this information society, as doctorates will be able to synthesize the constant stream of information directed toward companies and organizations. Not only will employers expect a single degree, but people already employed will feel increasing pressure to continue their education with certificates and continuing education programs, which will be required in the workforce. These are some of the predictions that will affect our external environment in teaching in the future, and teachers should be aware of these predictions.

THE PROCESS OF LEARNING

Learning is a change in the behavior of the student or a change in the observed capability of the learner, which results from the pupil's educational experience. Gagne (1967) defines learning "as a change in human disposition or capability which can be retained, and which is not simply ascribable to the process of growth." Gagne's (l967) influence in learning has had a great effect on teaching. Conditions are taken as sets of circumstances that are present when learning occurs. The following are his (l967) conditions of learning.

- Intellectual skills: "knowing how rather than knowing that."
- Verbal skills: knowing names, places, and recalling principles and generalizations.
- Cognitive strategies: ways to manage the mental processes (of thinking) and distinguishes one form from another learning form; it is the prerequisite or the initial state of the learning." Gagne (1967) argues that instruction has a special form. This is the function of knowledge generalization (or transfer), which is not the same as the initial learning of knowledge. He maintains that knowledge transfer is often emphasized as the purpose of education. "It is said that for a person to transfer knowledge, it must be knowledge that is mastered."

Gagne (1967) also identifies what conditions are optimal to encourage knowledge transfer, stating that the instructional "mode of organized group discussion" appears to be best designed for this function. When organized group discussion is well conducted, such discussion stimulates the production of new extensions of knowledge and sets out a means of critical evaluation.

However, it should be noted that the instructor must make sure that students are entering into productive discussions to elicit the types of responses that would require them to elevate their thinking to higher cognitive levels, such as evaluation and synthesis. Without the appropriate monitoring of student discussions, any discussion can quickly degenerate into lower levels of discourse or descend into personal discussions of lower-level criticism. Many times, discussions in e-forums are allowed to descend to this level.

All tutors of multidisciplinary courses and seminars should review these levels of learning. The key is not that you vary the methodology of teaching, but that you, as a teacher, call upon the higher levels of students' cognitive domain. In your objectives, you should make sure that students use those higher levels of evaluation and synthesis.

Below, these levels are summarized in order to help teachers to focus on Bloom's Taxonomy (Bloom, 1956) when preparing and designing their programs, assignments, and syllabus objectives. The descriptions and levels detailed below are from this book.

LEVEL I: KNOWLEDGE

Course material is at a very low level of abstraction. Included in this category is knowledge of terminology, knowledge of specific facts, and ways and means of dealing with specifics. Knowledge objectives are mostly the psychological processes of remembering.

LEVEL 2: COMPREHENSION

Comprehension represents the lowest level of understanding. The individual understands and knows what is being communicated and can make use of the material or the idea being communicated, but cannot necessarily relate it to other material or see its broader implications. Types of comprehension include translation, interpretation, and extrapolation.

LEVEL 3: APPLICATION

This level includes the use of abstractions applied to particular and concrete situations. The abstractions may be in the form of general ideas, rules of procedures, or generalized methods. The abstractions can also be technical principles, ideas, and theories, which must be remembered and applied (Bloom, 1956). This also includes the application to the phenomena discussed in one paper of the scientific terms or concepts used in other pap

LEVEL 4: ANALYSIS

Analysis is the breakdown of communication into its constituent elements or parts, such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit. Such analyses are intended to clarify the communication.

LEVEL 5: SYNTHESIS

This is what our students need work on. While the author assumes that accrediting agencies demand output objectives at high levels, the work is not often checked to really determine whether the student is still explaining or describing rather than critically analyzing...

LEVEL 6: EVALUATION

This is the highest level and is composed of making judgments about material and determining whether the material satisfies the criteria of that cognitive level. These are judgments about the value of material and methods for given purposes. Evaluation includes quantitative and qualitative judgments about the extent to which material and methods satisfy criteria using a standard of appraisal. The criteria may be those determined by the student or those given to him/her.

CONTENT IN CURRICULUM DEVELOPMENT

Now you have an idea of what background your students have in formal education and in practice. How does a teacher determine what will be the content of a course? The content of your course is the subject matter of the course, workshop, or presentation. If your objectives are well planned, your objectives will carry the content in its terminology. These are called content objectives.

You must decide the levels at which you will be teaching. For example, if you are teaching an introductory course in Family History, your objectives would be basically at the initial level of asking students to indicate their comprehension of the material.

Curriculum content can be organized around approximately three basic designs. (Ornstein, Hunkins, 2004) It would be wise to select a design on which to focus your program when establishing programs in any field of studies.

MATERIALISTIC AND CONSUMERVALUES

As we have stated elsewhere (Lindgren and Blount, 2014) Futurists have said very little about the reworking of the tremendous influence consumptive and materialistic values have over American lives and other lives around the world. It is the job of higher education to begin this exploration to shift these consumptive values to cooperation and sharing. As Jacobs (2014) CEO of the World Academy of Art and Science states, "Society does not advance in a homogeneous manner. New Paradigms do not emerge in a day or supplant existing paradigms overnight. The new emerges under cover of the old and gradually grows in prevalence until it becomes dominant"

THE SUBJECT'S DISCIPLINE DESIGN

This design is the most prevalent and seems to be among the most popular organizers and developers of curricula, including subject designs, discipline designs, broad field designs, and process designs. The curriculum of a program is organized upon how the essential knowledge has been developed in the area of study. The twenty-first century will see the end of a subject discipline design in favour of a more multidisciplinary design clearly indicating the major aspects of broad multidisciplinary foci.

It is organized around content similar to the subject design. According to this design, as Bruner (1960) describes, the curriculum of a subject should be determined by the underlying principles that give structure to that subject to indicate to the students the basics of each discipline: the key relationships, concepts, and substantive structure.

Bruner (1960) argued that when you teach the structure of a subject, students learn the structure of the discipline and subject so they can apply many topics and subjects to that structure. Thus, they have indeed learned. Bruner (1960) further maintained that process learning should emphasize development or procedural knowledge. In the discipline design, students are encouraged to see the basic logic or structure of each discipline or the key concepts and principles.

SELECTING SYLLABUS CONTENT

In most instances, your content will be carefully selected from a textbook and from lists of online sites. Some instructors guide the students to their own sites, and students receive additional readings and handouts. This method should be written in the syllabus, as these readings would be included in the assignments.

To accomplish the objectives established, you must identify the methods that completion of the assignments will require. Often, too many instructors and teachers pay more attention to the methodology, aids, and materials than to the objectives of the lesson (Blount, 2008).

However, research indicates that the best ways to achieve specific objectives are readings, lectures, small group discussions, workshops, and discussions. An instructor must keep in mind that the content and student must interact for learning to occur.

Certain criteria are used to select content. These criteria are validity, significance, interest, learn ability, relevance, and consistence with social reality (Brady, 1995).

An effective syllabus should also include a schedule and the output expected from the student's work. The syllabus must reflect the content that is brought to life through a variety of methods, as suggested by the objectives. You, as an instructor, must pay close attention to the principles of learning via the selection of objectives. These principles are described in several web sites and curriculum textbooks.

Several of these principles of learning are included in this paper, and it is suggest that all readers review and print a copy of these principles for use in teaching. The link is from the University of Mississippi: http://www.pwyc.memphis.edu/learning/whatweknow/index.shtmI

Normally, your syllabus should feature the assignments which are carefully explained. As a teacher, you should explain the nature of the assignments, and these assignments should be based on your understanding of student learning. In addition, each assignment must be keyed to the objective. The teaching method should match the statement of intent, and it should be based on an understanding of theories of learning and teaching.

METHODOLOGIES

Today, we have various technologies from which to choose, and certainly technology will be a part of our education-related decisions. In selecting the appropriate methods, we need to remember that learner’s do not all learn the same way. Previous knowledge is very important, and an instructor should take the time to work from the students' previous knowledge. For students to learn, they must engage in the course materials in a deep learning approach. A surface approach achieves only short-term learning. Asking "why" questions are important when answers and responses are generated by students.

The work of two influential educational psychologists, Bruner (1960) and Piaget (1950), is consistent with what is known as constructivism. Bruner's contribution of teaching children the structure of a discipline and then revisiting that knowledge at higher levels of understanding is the spiral curriculum (Nicholls, 2002) Instructors also learn to be constantly aware of learners' cultural backgrounds and beliefs.

THE LECTURE METHOD

Let us look at the lecture as a method of teaching, which we usually use in conferences and large group sessions. The lecture method is well known as an efficient way to transmit new information to people. However, lectures require little student involvement with materials, although it is a good way to introduce a new topic. In this author's approach, at large sessions, participants are asked what interesting information they have already learned about DNA and genetic diseases to share with the group.

Another useful concept is the creation of an "advance organizer prior to the presentation of new material. An advance organizer explains and helps the student to better organize and understand the material of the main presentation, thus enhancing the learning process.

TUTORIAL METHOD OF TEACHING

Usually, a tutorial contains few students, who then have the opportunity to interact extensively with the instructor. Normally, in a tutorial, the student will receive answers to his/her questions through the interactions with the teacher through personal attention. A tutorial with fewer students is a preferable and effective way to build students' critical-thinking skills. However, these discussions must be carefully moderated.

How well do you think the course is going? Have we covered our objectives up to this point in time? Do you have questions about the objectives or assignments? Is your syllabus clear about your assignments? What can improve the testing process?

ASSESSMENT

It is wise to develop a rubric for the assessment of all courses in your program, or at least for your module. It should be placed in the curriculum so students can see specifically by what type of system they will be marked. Note that students should know the grading criteria and can refer to the rubric. The criteria for grading papers and tests should always be clear to students.

REASONS FOR ASSESSMENT

While the main purpose of an assessment is to determine how well students have achieved the stated learning objectives, it also serves other purposes that are useful to improving the learning process. For instance, Nicholls (2002) offers other purposes that can be achieved by an assessment:

- to provide feedback to students;
- to provide feedback to teachers and administrators;
- to compare students' scores and
- to compare a student's score on one test with his or her score on a different test.

Grading student work is an important part of student learning, and, for best learning, grades should be returned to students within a day or two of submission, with explanations of the grade, suggestions for improvement, and encouragement. Prompt feedback on student work is associated with more effective learning. Assessments should be consistent with knowledge of learning. All prior knowledge is very important and needs to be used as a foundation when planning your syllabus.

EVALUATION

According to (Brady (1995 an evaluation is concerned with making judgments about both student performance and the curriculum. Evaluating student performance is a prerequisite to evaluating the need to change the curriculum. How well did the group of students perform on their examinations? Most of us think about making a questionnaire for students regarding various aspects of the course they have recently completed, so they can also evaluate the instructor.

Essentially, two types of evaluation are available, as defined by Scriven (1967) . A summative evaluation is used at the end of the course or academic year to provide information about a student's progress, a teacher, or the curriculum's effectiveness. It is an appraisal of the extent to which the outcomes of a course have been achieved. A formative evaluation is used throughout both the development of a course and through the teaching of a curriculum. This enables teachers to make revisions during the implementation of a course.

Dai Hounsell (2003) provides an evaluation cycle.

- Clarify context and focus.
- Devise a feedback strategy.
- Gather feedback.
- Analyze and interpret the feedback.
- Agree on action.
- Implement changes.

CONCLUSION

In this paper, I have discussed the parts of a syllabus, as well as the underlying teaching and learning theories that make a syllabus a scholarly document.

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IMPROVING THE PROCESS OF EDUCATION USING PRACTICE: FROM THE TEACHING PERSPECTIVE

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ABSTRACT

The purpose of this article is to improve the effectiveness of classroom teaching by proposing a specific program for continuous improvement of education, and to import students into classroom teaching by using the approach of practical learning at university. In that way students can express their suggestions and solutions about real problems in the business world, an approach which puts them into a managerial position. The idea is to apply a systematic approach which utilizes four main elements: quality as defined by the students, management responsibility for improvement, increased quality of work processes, and improvement by continuous effort. A strategy for continuous classroom improvement it to provide a practical example of a virtual company with real life problems, and make it the topic of teaching, which aims to inspire and give direction by introducing students into the company's business and troubles. Also, it is suggested that universities connect with companies which would present their actual business problems for students to solve. That would be big step in improving student knowledge and preparing them for the business world. In the past 6 months, an economic survey was carried out at the Faculty of business economics and entrepreneurship with very interesting results.

Key words: *Management, Education, Improvement*

JEL Classification: *M54, I25, J28*

UDK: 371.147 371:005-051 371.12

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INTRODUCTION

Educational facilities are the place where knowledge is created, which represents a permanent source of competitive advantage and which in turn gives education a large significance in market conditions. The preparation for starting a career is not just a college or university degree, but also practical knowledge and certain skills (in some cases very specific ones). Very often, the requested skills should be acquired through practical work and professional practice during studying by facing real market situations and solving specific problems.

The aim of this paper is to research and point out the necessity of improving the educational process in university education with greater practical training and well thought-out professional practice. This implies analyzing the experiences from the developed world and the needs for contemporary skills, and based on this also the reviewing of the motive to study and proposing a model for promoting university education.

THE CONTEMPORARY EDUCATIONAL PROCESS – THE BASIC PREREQUISITE FOR DEVELOPING SOCIETY

The world is changing very rapidly, markets are more and more turbulent, science and technology are advancing daily, and social policy problems are becoming more complex. Yet, developed societies base their development on a “knowledge society”- a society of a stable economy, that is, an economy based on knowledge and business skills, in correlation with technical – technological changes and the demands of the market economy. Contemporary educational processes are realized by innovative and creative staff which keep an eye on new scientific and IT achievements and coordinate their competencies in accordance with the global directions of development. Knowledge must primarily be in the function of the development of the economy and society in general, that is, it must be practical and useful. Today knowledge is information which is applicable in practice, or results-directed information (Drucker, 1995). The process of acquiring knowledge and skills contributes to the innovational development of certain competencies which are necessary for inclusion into social processes and global changes. Under the impact of contemporary technologies, contemporary education has shifted the focus from the lecturer, as the central Figure in the teaching process, to the student. The combining of verbal-conceptual and audio-visual information with practical work, renders education and learning more concrete.

Universities must accept that certain experts are to undertake the role of easily and without too much time and effort adapting to their professional environment and as quickly as possible giving their specific contribution to social progress, that is, realizing the mission of their organization. In that sense, key competencies must be developed (communication skills, technical knowledge, foreign language, social communication, business culture, etc.), as well as an entrepreneurial spirit and the readiness to found one's own business. In a world in which there is increasingly less time to amend errors, universities must in the future take the responsibility for the professional results of their students. Contemporary university institutions endeavor to create a good system of practical work with students and student practice, as well as other types of professional training during studies, which secures the necessary quality of their services. Often the responsibility for securing student practice is transferred onto the university (especially is the universities which are not independent and are without legal subjectivity). Thus a synergy of business contacts with the environment can be used, a type of institution which deals with the professional development of young people and organized fairs for student practice and other projects (Živić et al., 2006, pp. 22-23).

Knowledge is of a fundamental significance for the individual progress and development of the national economy and its integration into global trends, representing a key factor for achieving a sustainable economic development in the long-term. An efficient use of knowledge depends on the measure to which the national economy can achieve this and furthermore, it should stress an unbreakable bond between research and educational institutions with the business sector (Petkovska Mirchevska et al., 2013). New knowledge and skills are generated in all parts of society, as well as the educational system. The basic function of the educational system is to collect, identify and create an appropriate knowledge system for society (Ambrozi, 2013).

Moreover, education is a link between the intellectual potential of individuals, the traits of organizations and realizing positive business results. It significantly raises the level of knowledge, intellectual preferences and similar, helping people find their personal identities and choose a way of life, as well as increasing practical ability and the general capacity to deal with life problems (Karavidić S., Čukanović-Karavidić, 2012, p. 4). For individuals to develop successfully, including students and entrepreneurs, effort, a permanent acquiring of new knowledge and adapting to changes in the environment and the market are necessary. Considering the rapid changes which the new economy brings with it and the global business environment, these changes must be coordinated with educational programs (Radovic Markovic, 2012). This demands a stronger coupling of university institutions and those they are educating, which is achieved with a well-organized student practice - the basis for preparing students for employment (Figure 1).

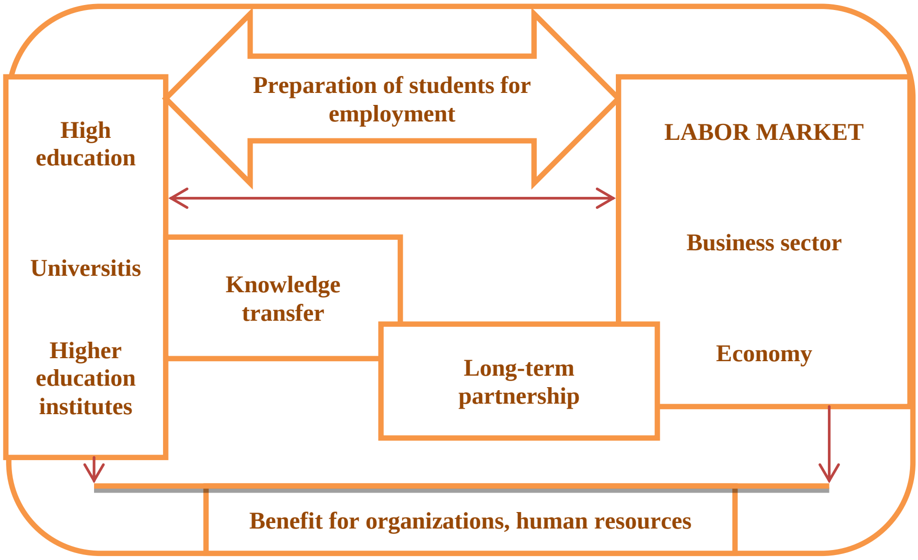


Figure 1. Partnership between university education and the labor market

Source: Pitić, 2009, p.7.

Student practice is necessary for students at all universities, those in departments of economics as well, and should become an integral part of higher education. Furthermore, compulsory student practice should be resolved in a systematic way, that is, by appropriate regulations. A systematic resolving of professional practice implies motivating students to be included in the "practical" way of learning. In the realizing of student practice, professors, assistants, associates, as well as prominent businessmen should be involved. Practical training should last during all the years of study with a special stress on the latter years. Specialized practice enables students to apply the acquired knowledge to resolving concrete tasks. The issue of motivating and profiting companies is relevant, as they would benefit from organizing specialized practice for students (Monopolist-Ekonomski-fakultet-maj-2007-broj-50).

EMPIRICAL RESEARCH OF SPECIALIZED PRACTICAL TRAINING NEEDS FOR THOSE STUDYING ECONOMICS

Our unique research in Serbia involved 164 students of all years in the teaching centers of the Faculty of business economics and entrepreneurship in Belgrade, Loznica, Jagodina and Cacak. The sample involved over 80% of the targeted population.

The aim of the study was to ascertain the extent of the interest of the students of the Faculty of business economics and entrepreneurship for introducing compulsory practical training, which would help young experts which being educated to gain quality practical experience and be ready to get to grip with problems in their chosen profession. Thus, securing practical experience has become a necessary element of the process of quality education.

Our research involved a poll in the form of “select the options offered” which was submitted for statistical checks of validity and reliability. The questionnaire consisted of 22 questions, 3 of which were related to data regarding gender, age and year of study. The other 19 questions covered in different ways all the domains which were interesting for this research. This kind of concept was enabled by its design, as the entire questionnaire was printed as two pages.

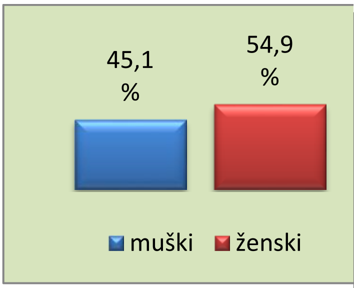
The following hypotheses resulted from the aims of the research:

- H1 – Students of higher years are more interested for practice to be a compulsory part of class than lower.
- H2 – Male students are more interested in introducing practical training as a compulsory part of class than female students.
- H3 – Students from Belgrade are more interested in setting up campuses than students from other cities.
- H4 – The proportion of interest of students for introducing practical training at university is higher than 60%.
- H5 – Students are most interested in introducing practical training during one semester.

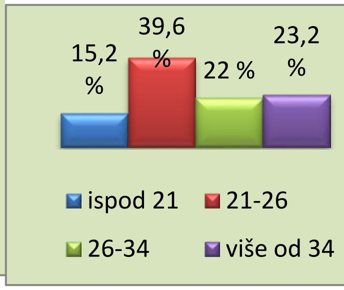
Methods of descriptive statistics were used to describe the tested population, as well as the average value (arithmetic mean), measures of variability (standard deviation) and relative numbers. The $\chi 2$ test was used to determine the significance of the difference between points, to determine the significance of differences between the arithmetic means (t-test and variant analysis). All statistical tests were accepted if the probability of the zero hypothesis was equal or less than 5 percent. The satisfaction of the user was expressed on a scale from 1 to 5 (the Likert scale), whereupon 1 = very dissatisfied, 5 = very satisfied. The data bank was created in Microsoft Excel 2007 and SPSS 21.0 in which data was statistically processed.

Some 164 students participated in the survey, of which 54.9% were women and 45.1% men (Graph 1). According to age, the respondents were divided into 4 groups: under 21, from 21 to 26 years of age, from 26 to 34, and over 34 years of age. The majority of the respondents were from the group of surveyed students with the average age of 29.2. Among the respondents, the majority of the students were between 21-26 years of age (39.6%) (Graph 2), and from the last, fourth year of study (32.3%) (Graph 3). The results of the responses to the questions are shown in Table 1, 2 and 3.

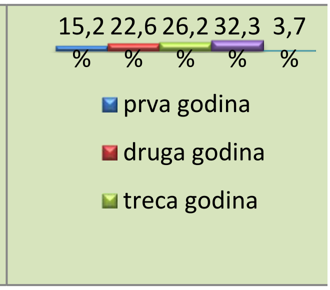
Graph 1. Gender structure



Graph 2. Age structure



Graph 3. Year of study



Source: Author's research.

Table 1. Responses to questions (the Likert scale from 1 do 5) with statistical measures.

No.		Not at all	Slightly	Average	Substantially	To a large extent	Average mark	Standard deviation
1	To what extent is the quality of the lectures relevant for choosing a school?	1.2%	3.7%	16.5%	39.0%	39.6%	4.12	0.898
2	To what extent is employment after finishing school relevant for choosing a school?	1.2%	7.9%	12.8%	28.0%	50.0%	4.18	1.015
3	To what extent do the administration and staff work on improving lecture quality?	1.8%	6.1%	23.2%	42.7%	26.2%	3.85	0.942
4	To what extent to the administration and staff work on giving support to students during lectures?	1.2%	6.1%	25.0%	40.2%	27.4%	3.87	0.930
5	Are there initiatives being carried out in the institution to improve work in accordance with student needs?	4.3%	9.1%	26.8%	38.4%	21.3%	3.63	1.051
6	Do you think the school carries out an analysis of student needs during the studies?	7.3%	17.1%	32.3%	26.8%	16.5%	3.28	1.149
7	To what extent are you satisfied with the quality of the curriculum?	0.6%	3.0%	25.0%	43.3%	28.0%	3.95	0.842
8	To what extent are you satisfied with the lectures and learning conditions?	2.4%	6.7%	26.2%	39.6%	25.0%	3.78	0.979

9	To what extent are you satisfied with the organization of practice out of school and cooperation with experts which deal with practical work?	27.4%	14.6%	26.8%	15.2%	15.9%	3.81	0.937
10	To what extent are you satisfied with the support during lectures and learning?	1.8%	4.9%	29.3%	38.4%	25.6%	4.08	0.946
11	To what extent are the lectures useful for understanding the curriculum?	1.2%	4.9%	18.9%	34.8%	40.2%	4.00	1.003
12	To what extent are you satisfied with the quality (availability) of the sources of information?	1.8%	4.9%	24.4%	29.3%	39.6%	2.77	1.411
13	Are you in favor for practice being a compulsory part of teaching?	9.1%	4.3%	15.9%	28.7%	42.1%	3.90	1.254
14	How important is the possibility of promotion after the completion of studies?	0,0%	0,6%	4,9%	31,1%	63,4%	2,39	0,747
15	How important is the possibility of learning and developing abilities?	0.0%	0.0%	7.3%	35.4%	57.3%	4.57	0.617
16	To what extent do you think it is useful to introduce practical teaching at schools?	3.0%	4.9%	23.2%	42.7%	26.2%	4.50	0.631
17	Are you interested in new practical methods being improved on student campuses?	6.1%	7.9%	21.3%	36.6%	28.0%	3.84	0.972

Table 2. Do you think practical training should be introduced?

Responses offered	No. of respondents	%
During one semester	42	25.6
During a school year	29	17.7
During the entire studies	93	56.7

Source: Author's research.

Table 3. To what extent do you consider the university has prepared and trained you for future employment?

Offered responses	No. of respondents	%
Not ready at all	12	7.3
I obtained certain knowledge, but no skills	90	54.9
I believe I am prepared enough	48	29.3
The university has prepared me sufficiently	14	8.5

Source: Author's research.

For 78.6% of students, the quality of teaching is very relevant (responses: ‘to a large extent’ and ‘substantially’). Some 78% considered the possibility of employment after their finished studies during enrolement. Students considered that the administration and staff ‘substantially’ work on improving the quality of teaching as well as ‘to a large extent’ (68.9%), they work on giving support to students during classes (67.6%), their work is improving in accordance with student needs (59.7%), and schools carry out an analysis of student needs during studying (43.3%). Students are ‘substantially’ and ‘to a large extent’ satisfied with the quality of the curriculum (71.3%) and the teaching and learning conditions (64.6). In regards to organizing practical training and cooperating with experts who deal with practical work, as much as 42% students gave a negative reply, while 31.1% of the students expressed satisfaction. Students were ‘substantially’ and ‘to a large extent’ satisfied with the support during classes and learning (64%) and the quality (availability) of information sources for learning (68.9%). Students considered that the lectures were ‘substantially’ and ‘to a large extent’ (75%) useful for understanding the curriculum. With the question whether practice at universities should be a compulsory type of class, as many as 70.8% students believed that this is necessary during the entire schooling (Table 2). To the question “To what extent do you consider the university has prepared and trained you for future employment,” the majority of students consider that they have acquired sufficient knowledge, though not skills 54.9%, while 8.5% students considered that they were totally prepared for work (Table 3). The possibility of promotion after finishing school was ‘substantially’ and ‘to a large extent’ important (94.5%). It was important for the respondents to have the possibility of learning and developing abilities ‘to a large extent’ and ‘substantially’ (92.7 %), while only 7.3% of the respondents quoted the importance as being ‘average’. The students considers that it would be ‘to a large extent’ and ‘substantially’ (68.9 %) useful to introduce practical training at university, and they were also ‘to a large extent’ and ‘substantially’ interested in improving new practical methods in student campuses (64.6%).

The results on subscales were obtained due to calculating the arithmetic mean (Table 2). Based on the results obtained, we can see that the highest value was given to the responses to the question “How important is the possibility of promotion after the completion of studies?”, (as=4.57 sd =0,617) and “How important is the possibility of learning and developing abilities?”, (as=4.50 sd=0.631), which shows that it is very important for the students to have the possibility of learning and developing. The least value of the arithmetic mean was set for the question “To what extent do you consider the university has prepared and trained you for future employment?” (as=2.39 sd=0.747) and “To what extent are you satisfied with the organization of practice out of school and cooperation with experts which deal with practical work?” (as=2.77 sd=1.41), while the standard deviation which is 1.41 means that students gave different responses to that claim.

Table 4. The correlation coefficient between variables "How important is the possibility of promotion for you" and "How important is it for you to have the possibility of learning and developing abilities?"

	How important is the possibility of promotion for you?	How important is it for you to have the possibility of learning and developing abilities?
Pearson Correlation	1	0.504**
Sig. (2-tailed)		0.00
N	164	164

Source: Author's research

Based on Pearson's correlation coefficient (r=0.504, p=0.00), we have established that there is a statistically significant, positive and high correlation between the variable "How important is the possibility of promotion for you?" and "How important is it for you to have the possibility of learning and developing abilities?" With 99% reliability we can say that there is a link between these two in the wider population as well and not just in the tested sample (Table 4).

Table 5. To what extent do you consider university has prepared and trained you for your future work?

		Not at all	I obtained certain knowledge, but not skills	I believe I am sufficiently prepared	The university has prepared me in total
Years of studying	Lower	4	34	16	8
		2.4%	20.7%	9.8%	4.9%
	Upper	8	56	32	6
		4.9%	34.1%	19.5%	3.7%
Total		12	90	48	14
		7.3%	54.9%	29.3%	8.5%

Source: Author's research.

Table 6. To what extent do you feel prepared for future employment?

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.737[a]	3	0.434

Source: Author's research.

Based on the χ2 test (χ2 = 2.737, df =3p= 0.434>0.005) and its statistical significance we have determined that there is no statistically significant difference between the expected and obtained frequencies in the responses of the students from the lower years of study compared with the upper years in the response to the question “To what extent do you consider university has prepared and trained you for your future work? (Table 5). The majority of students (54.9%) gave the opinion that they had acquired certain knowledge but not skills. The least number of students (7.3%) felt totally unprepared for future employment (Table 6).

Table 7. Testing hypothesis H1.

		N	Mean	Std. Deviation	Std. Error Mean
To what extent do you think it would be useful to introduce practical training at university?	Lower years	62	3.89	1.175	0.149
	Upper years	102	3.91	1.306	0.129

		Levene’s Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Are you in favor of practical training being compulsive at university?	Equal variances assumed	0.437	0.509	-0.122	162	0.903	-0.025	0.203	-0.425	0.375
	Equal variances not assumed			-0.125	139.488	0.901	-0.025	0.197	-0.415	0.366

Source: Author’s research.

We used the t-test to test the hypothesis. Based on the mentioned analyses, we established that upper year students have a slightly more positive attitude about introducing practical teaching (as=3.91, sd=1.306) in comparison with lower year students (as=3.89, sd=1.175). Based on the t-test and its statistical significance (t=-0.122, df=162, p=0.903>0.05) we can conclude that the obtained difference in the responses between the upper and lower year students is not statistically significant (Table 7). Based on the mentioned analysis, we can discard the set hypothesis.

Table 8. Testing hypothesis H2

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Are you in favor of practice becoming compulsory at university?	Male	74	4.03	1.182	0.137
	Female	90	3.80	1.309	0.138

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Are you in favor of practice becoming compulsory at university?	1.639	0.202	1.155	162	0.250	0.227	0.197	-0.161	0.615
			1.166	160.546	0.245	0.227	0.195	-0.157	0.611

Source: Author's research.

We used the t-test to test the hypothesis. Based on the mentioned analyses, we established that male students have a more positive attitude about introducing practical training (as=4.03, sd=1.182) in comparison with female students (as=3.80, sd=1.30 df=162). Based on the t-test and its statistical significance (t=-1.15, df=162, p=0.250>0.05), we can conclude that the obtained difference in the responses between male and female students is not statistically significant. Based on the mentioned analysis, we can reject the set hypothesis (Table 8).

Table 9. Testing hypothesis H3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Belgrade	49	3.69	1.176	0.168	3.36	4.03	1	5
Loznica	48	3.79	1.051	0.152	3.49	4.10	1	5
Jagodina	39	3.77	1.063	0.170	3.42	4.11	1	5
Cacak	28	3.61	1.343	0.254	3.09	4.13	1	5
Total	164	3.73	1.137	0.089	3.55	3.90	1	5

ANOVA					
Are you interested in new practical methods developing at student campuses?					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.726	3	0.242	0.184	0.907
Within Groups	209.926	160	1.312		
Total	210.652	163			

Source: Author's research.

To test this hypothesis, we applied the variant analysis (Anova) with the variable of teaching centres (independent) and the variable of student interest in developing at student campuses (dependent). Based on F statistics and their statistical significance (F=1.069, p=0.383>0.005 df=6) we can conclude that there are no statistically significant differences in the responses of students from Belgrade and other teaching centres. Based on the mentioned analysis, we can reject the set hypothesis. Table 9 shows the arithmetic means and standard deviations of respondent groups from various centres from the variable of students interested in the introduction of new practical methods at student campuses.

Table 10. Testing hypothesis H4.

		Transformed variable: Are you interested in the introducing of practical training at university?		
		Not interested	Indecisive	Interested
Center	Belgrade	4.2 %	3.2 %	22.6 %
	Loznica	7.9 %	6.7 %	14.6 %
	Jagodina	3.2 %	4.8 %	15.8 %
	Cacak	2.4 %	4.2 %	10.4 %
Total		17.7 %	18.9 %	63.4 %

Source: Author's research.

In order to calculate the total interest of students for introducing practical training in all teaching centres, we made a new variable, transferring the response via the command Recode into Different Variables and from the five-degree Likert scale, and for easier understanding we made a new variable with responses (not interested, indecisive and interested), i.e. we grouped the responses. Some 17.7% of the students were not interested in introducing professional practice at university, 18.9 % was undecided, while 63.4% students were interested in introducing practical training. The majority of those interested were from centres in Jagodina and Belgrade (Table 10). Based on the mentioned analysis, we can accept the set hypothesis.

Table 11. Testing hypothesis H5.

		Do you think practical training should be introduced?		
		During one semester	During one school year	During the entire schooling
Center	Belgrade	7.3%	4.3%	18.3%
	Loznica	5.5%	7.3%	16.5%
	Jagodina	6.7%	4.9%	12.2%
	Cacak	6.1%	1.2%	9.8%
Total		25.6%	17.7%	56.7%

Source: Author's research.

Analyzing the responses of the students from the Centres to the question "Do you think practical training should be introduced (during one semester, during one year, during the entire schooling)?", we established that 56.7% of students consider that practical training should be introduced during the entire schooling, that practical training should be introduced during one year is the opinion of 17.7% students, and 25.6% thought that practical training should be introduced during one semester (Table 11). Based on the mentioned analyses, we cannot accept the set hypothesis.

The obtained results have served for designing the model for organization and realization of student practice.

MODELS FOR THE ORGANIZATION OF STUDENT PRACTICE

In practice, there are four models for organizing student practice:

- Organizing practice at the university
- Practice organized via the Career Development Center
- Practice organized via virtual companies, technological centers and business incubators
- Simulations and case studies from practice

Universities should be the main generator of initiative for realizing student practice. These institutions are valued according to the fact whether the young experts they helped educate have quality practical experiences and are prepared to come to grips with their chosen professions. Furthermore, organizing practical experience for students is not a privilege but is becoming a necessary element of the education process. The world is changing more rapidly, the conditions on the market are developing, science and technology progress daily, and social and political problems are becoming more complex. In that kind of environment, universities must accept the crucial role of creating experts who will easily, without a lot of time and effort, adapt to their professional environment and as quickly as possible contribute to social progress, that is, carry out the mission of their organization. Universities are the basis of education, as well as maturing of individuals in the professional sense. Students come to understand “how things should be” through classical education, which is very important. But, by working in firms and institutions, engaging in virtual companies and by analyzing examples from practice, they come to comprehend another vital fact – “how things are in practice”. Thus acquired is real applicable knowledge about the daily problems of the organization, human relationships, the needed behavior at the workplace and commitment expected from employees.

Career Centres are the organizations through with their activities and projects secure different types of professional development. By helping in professional orientation and career planning, via organizing seminars, organizing professional training and employment support, career centres are an essential information and guidance resource for students of all profiles. It is important to stress that career centres can also be founded outside of university institutions, in profit and non-profit forms.

Universities are often initiators of projects through which business incubators, virtual companies and technological centres develop, with students getting the chance to be involved with the mentioned projects, as trainees or full participants. Business Incubators secure the infrastructure (rooms, office equipment and material, telecommunications), knowledge and financial means for forming new companies. The idea is that as many new firms as possible are grouped in one place, which in turn will, with the supervision of experts and an infrastructure, be able to develop and finally become independent. Business incubators are most frequently located within universities. Students in different areas (law, business, programming, machine engineering, psychology and similar) thus have an opportunity to help with the development of new companies and acquire valuable practical experience. Thereby, young people acquire work experience and in a certain sense contribute to the development of a social community and are mostly paid for their work. In certain cases, students can during their studies or after they have finished enter a business incubator as owners of small and perspective companies. It should be said that practice can be acquired by students of different professions here as well (Živić et al., 2006:31-32).

Acquiring knowledge by “discovering”, that is through simulating and case studies, is an indispensible part of the educational process. It would be hard to find a university which does not apply the mentioned forms of learning within the framework of its curriculum. Simulations can help students develop a complete insight into business, including marketing, sales, human resources, capacity management, investments and service quality. Simulations and case studies enable practicing visionary and strategic thinking by making decisions regarding the missions, vision, aims, policies and strategies of the virtual company which it is managing. Case analyses from practice help to think about new social and other relations and reach solutions just as if the hypothetical situations are actually happening.

CONCLUSION

Contemporary education should, along with theoretical knowledge, also provide some practical knowledge and often specific skills for its finished students. Universities in Serbia have thus far not paid the necessary attention to the practical training of students.

The results of our research have shown that students are very interested in acquiring practical knowledge and skills during studying. This affirms the set hypothesis.

The respondents gave the highest marks to the question “How important is the possibility of promotion for you”? (4.57 sd=0.617) and “How important is it for you to have the possibility of learning and developing abilities” (4.50 sd=0.631). Students found the possibility of gaining employment after their finished studies very important (as=4.18 sd=1.015), as well as the lecture quality (as=4.12 sd=0.898).

The least value of the arithmetic mean was given to the question “To what extent do you consider the university has prepared and trained you for future employment?” (as =2.39 sd=0.747) and “To what extent are you satisfied with the organization of the practice out of university and cooperation with experts who deal with practice?” (as=2.77 sd=1.41), and the standard deviation which has the value of 1.41 means that students responded differently. Some 54.9% of students considered that during their studies they had acquired certain knowledge, but not skills, 29.3% students considered that they are sufficiently prepared for future work, 8.5% thought they are totally prepared, and only 7.3% felt not at all prepared for future work. Students assessed practice outside the university and cooperation with experts dealing with practice with somewhat lower marks (as=2.77 sd=1.141).

Some 16.7% of students were not interested in the introducing of practice at university, 18.9% were undecided, while 63.4 were interested in the introducing of practical training. The majority of the interested were from centres in Jagodina and Belgrade. Analyzing the responses of students to the question “Do you think practical training should be introduced? (during one semester, during one year, during the entire schooling), it was established that 56.7% of the students considered that practical training should be introduced during the entire schooling. The idea that practical training should be introduced during one year was supported by 17.7% students, and 25.6% thought that practical training should be introduced during one semester.

Male students had a more positive attitude about introducing practical training (as=4.03, sd=1.182) in comparison with female students (as=3.80, sd=1.30 df=162) but the obtained difference in responses between male and female students is not statistically significant. Also, established was an identical interest of the students in educational centres for setting up campuses.

This research can be viewed as groundwork which should be further expanded and developed (surveys for professors and their points of view regarding introducing practical training, for conditions and study resources, survey of administrative staff and their services and others) and based on a comprehensive analysis, we suggest curriculum changes in the following sense:

- Defining new professional profiles with a greater input of practical training
- Linking education with the economy and the labor market, as well as other relevant factors of social and economic life
- Introducing new forms of the teaching process and practice.

It is necessary to stimulate the initiative and ambition of students, mostly by the input of mentors who will convey not just knowledge but skills as well, which in turn will improve the realized quality of teaching.

Future educational programs should put an accent on linking creativity and the unique opinions of students with knowledge from different areas and its application in practice.

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DEMING REVISITED: AN OLD PARADIGM WITH NEW MEANING

Carl Edwin Lindgren, PhD[6]

ABSTRACT

This paper provides the reader with insight into new paradigms or mental models of 21st century education. Importance is placed on open access forum and free quality higher educational opportunities. Educational interconnectivity is also noted. The writer discusses student marginalization or social exclusion from a historical standpoint and also how it still impacts student values and teacher opinions. Finally, emphasis is placed on W. Edwards Deming's educational paradigm of the 1980s and how new meaning can be derived from this model.

Key words: *new paradigm, information revolution, humanism, tertiary education, social exclusion*

JEL Classification*: I23, D83*

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INTRODUCTION

Much has been written of late relating to the new paradigm (a theory or group of ideas) in education. This is especially true in the writings of futurists such as Constantinescu (2013), Jacobs (2014), Lindgren (2013), Nagan (2013), Šlaus (2013) and Zucconi (2014) who have provided insight into a paradigmic shift (Kuhn 1962) of the basic assumptions within education and learning. These scholarly papers, which speak of a new revolution in education, the digital era, toward a new paradigmic shift, online education and the double helix in learning and work, provide considerable insight into the future goals of learning, online development and the utilization of massive open online courses (MOOCs).

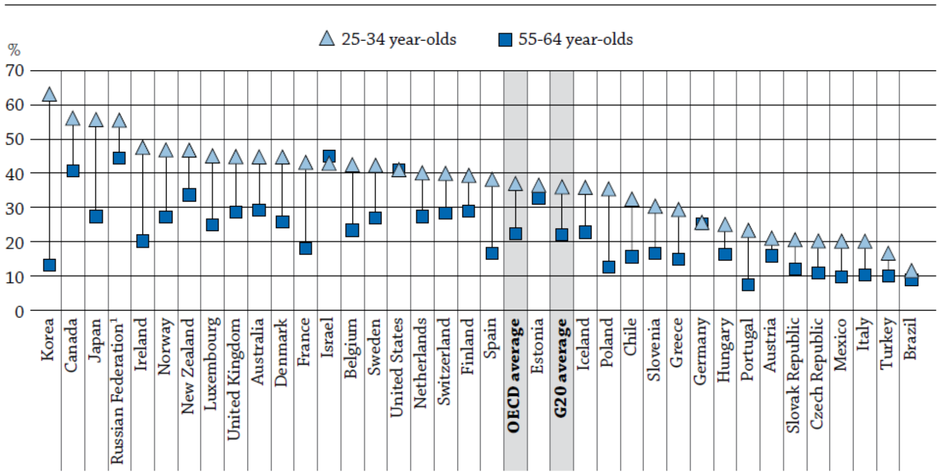
The MOOCs are primarily an open access forum via the Internet which consists of a series of online courses aimed at unlimited single or group participation. Zucconi and Jacobs (2014) state that "the quantitative extension of access to free quality higher education made possible by the MOOCs is itself only the beginning of something far more important." According to Zucconi and Jacobs (2014) this paradigmic revolution provides access to all, an upgrade in quality, educational creativity & new innovations in technological sciences. This global system of educational, social and cultural interconnectivity will predictably accelerate as we move forward into the 21st century. Many futurists believe that advances in education will include the role of the teacher being delegated more to the position of a technological specialist while computers will be assume more and more the role of teacher and administrator.

Besides the potentiality of new and innovative concepts and thought patterns in elementary and secondary education, there is also the ever existing shift toward new thought relating to higher education. Constantinescu (2013), former president of Romania and fellow of the World Academy of Art and Science, states that under the circumstances of the informatics and information revolutions, the biggest effort necessary to radically re-invent the school is not the one involving economic effort, but one concerning the intellectual effort. Universities, which are, at the same time, beneficiaries of the educational process and its latest achievement, have the duty to reflect upon this vital issue and to fight for a real democracy based on knowledge and for a new humanism, capable to radically rebuild the contemporary society.

MARGINALIZATION AND THE AGE OF ENLIGHTENMENT

In achieving this goal, Bates (2013) state in Deep Divers of Change in Global Higher Education: Technology, that in 2011, nearly 7 million American students have taken an online course. Additionally forth-two percent of United Kingdom's Open University students graduate at about the same pace as face-to-face students in U.S. state universities. Although having protractors in the academic community, open universities and total online programs are expanding and becoming mainstream. However, only 32 percent of families in Mexico have Internet access and less than five percent in Africa therefore making it difficult for individuals in these counties to benefit from online higher education. Also many countries still have low tertiary education levels.

Percentage of population that has attained tertiary education, by age group (2009)



1. Year of reference 2002.

Countries are ranked in descending order of the percentage of 25-34 year-olds who have attained tertiary education.

Source: OECD. Table A1.3a. See Annex 3 for notes (*www.oecd.org/edu/eag2011*).

StatLink http://dx.doi.org/10.1787/888932459831

In each era of education, there are various paradigms of thought, theory and implementation. According to Robinson (2010), educationists and social scientists are constantly reforming education in an attempt to assist children in taking their place in the changing economy and to retain some type of cultural identify while being an active participant in globalization. Robinson (2010), however, notes that many of today's children are disheartened by mistakes made in past implemented educational paradigms. One such category of thought was that if we worked hard, did well, got a college degree, we would have a job and potentially a career that would bring success, money and personal prestige. However, we are learning that in many cases, this does not hold true. This is especially true if marginalization or social exclusion is present as a factor, as it affects individuals and entire communities from achieving various education opportunities. In part, this exclusion is theoretically developed at an individual or group level on four correlated dimensions:

- material deprivation;
- limited social participation;
- insufficient access to social rights; and
- a lack of normative integration.

"It is then regarded as the combined result of personal risk factors […]; macro-societal changes […]; government legislation and social policy; and the actual behavior of businesses, administrative organisations and fellow citizens" (Wikipedia nd).

Relating to educational marginalization is the potential exclusion of ideas which many potential students believe is important to and about themselves, their culture and society. This idea of marginalization took roots early on as Robinson (2010) noted after the Age of Enlightenment when education was only limited to a particular group of privileged individuals from upper class society or the intellectual elite. In the mid-1800's when certain enlightened educationists (both women and men) took issue with this position and desired to educate the poor and middle class, there was an outcry by the privileged. One of the first noted societies to assist the common class was the Society of Teachers which in 1849 became the College of Preceptors under a royal charter by Queen Victoria (Lindgren, 2012).

There have been many changes and paradigms since then. However, from the small one room school, education has grown into an enormous macrocosm in intellectual pursuits with a near countless number of courses and concepts. Also with this onslaught of educational endeavors, students are also faced with mega television channels, Internet, computers, e-mail, advertising, iPhones and technological communication. Because of these distractions, students throughout the grades have difficulty in focusing and are anaesthetic to only 'in the moment activities.' This is also true of the gifted children (IQ of >137) who become easily disenchanted with meaningless and boring stuff (Lindgren, Blount, in print).

DEMING REVISITED

W. Edwards Deming, who in 1982 wrote Out of Crisis, was able to see the inability of some teachers and administrators to move from their authoritarian teaching platform, the instruction of meaningless concepts and localized teaching rather than globalization of thought. Because of his background in mathematical physics, electrical engineering, management and social constructs, Deming was aware of the economic and intellectual concepts that would later be presented by Constantinescu (2013) and Robinson (2010).

THE THEORY OF PROFOUND KNOWLEDGE

This paradigm or mental model, utilized in Deming's educational system provided a theoretical basis for systematic change and organizational improvement. This is especially true of his noted System of Profound Knowledge in which Deming's educational model was created. According to Deming (1993) these four interconnectivity components included:

- theory of knowledge stemming from epistemology;
- appreciation for a system;
- knowledge about variations; and
- psychology.

Through these components, student, teacher and administration levels are optimized. This allows for a better understanding of system management, based on prediction (Deming, 1989). This prediction principle as utilized in education is formed of:

- individual behavior;
- educational conditions;
- teacher and training procedures; and
- individual and group performance (Deming 1993; Horine et al., 1994).

RATIONALE OF KNOWLEDGE

Therefore, this prediction of educational optimization is derived on theory and knowledge through systematic revision and knowledge expansion or prediction through gradual observation (p=go). In Deming's theory of knowledge, or rationale of knowledge, questions are asked as to the meaning of truth or what constitutes pure knowledge. As a physicist, Deming attempted to show educational truth through not only social scientific principles but when possible pure natural scientific and mathematic truths. It is through these theoretical principles that Deming produced practical educational applications.

In understanding Deming's definition of knowledge, one must strive to comprehend three components of thought and how this final truth is achieved. The first is to achieve conclusions through the examination of available facts by deductive reasoning. This process or a priori knowledge (from the earlier) is accessed directly on reason alone and without "recourse to observation of the physical world" (Horine et al., 1994:289). As philosopher W.V.O. Quine (1951) states, a priori knowledge is the concept of "true by virtue of meanings and independently of fact." Secondly, knowledge can be based on observation of physical events perceived through the human senses. Knowledge derived through the observation of physical occurrences, i.e. through the senses, uses inductive reasoning and is called empirical science. This a posteriori knowledge "consists of propositions asserted on the basis of experience and observation of the world"

(Horine et al., 1994:289). Thirdly, knowledge is "thought relating to the understanding of the theory of knowledge" (Horine et al., 1994:289). This pragmatic concept stresses that the real test of meaning and truth is in fact its practical application or value on current concepts and how these ideas connect the past and future. To a large extent, a pragmatic concept tries to reconcile empirical and rational interpretations of knowledge (Randall, Buchler, 1942). Therefore, it is logical to assume that the theory of knowledge, as noted by Deming (1993), links prediction of student behavior and performance with the production of consequential knowledge.

Deming, as a scientist possessed deductive training. He also, possessed a keen sense of inductive curiosity. Deming, therefore, felt that educationists must possess an understanding of both inductive and deductive reasoning as well as principles of scientific methodology and statistical mathematics. These qualities allowed the educationist and educator to understand organizational change and global intellectual and economic diversity. It is through these traits that the educator reduces marginalization or social exclusion of theoretical thought and practical application. Horine et al., 2010:289) states that organizational designers must have the ability to "develop philosophical structures which have value in the complicated world of organizational cultural and [… be able to] sharpen their ability to think clearly and concisely."

The utilization of deductive and inductive reasoning with mathematic consistency allows for instructors to move from a priori knowledge to a posteriori knowledge "thereby removing abstractions from the problem without the interference of preconceptions" (Horine et al., 1994:290).

PERSONALITY AND ENVIRONMENT

Deming placed considerable importance on personal and environmental factors as they relate to management and education. In this regards, B=f(P/E) i.e. – behavior is the function of both the person and the environment (system) (Clark 2010). Basically this means that an individual's behavior is connected to personal characterizes and social situations. Relating to this psychological field study, Kurt Lewin, a neo-gestaltist, was attempting to apply concepts of "Einsteinian field physics to psychology" (Cooper nd). In an education environment this could also be construed to mean that B=I+E where I is the internal drive or personality of the individual exerting outward while E is the external environment of the group (students) and teacher behaviors exerting inward into the personality of the individual (Lindgren, in print). Lewin "discovered that learning is best facilitated when there is a conflict between immediate concrete experience and detached analysis within the individual. His cycle of action, reflection, generalization, and testing is characteristic of experiential learning" (Clark, 2010).

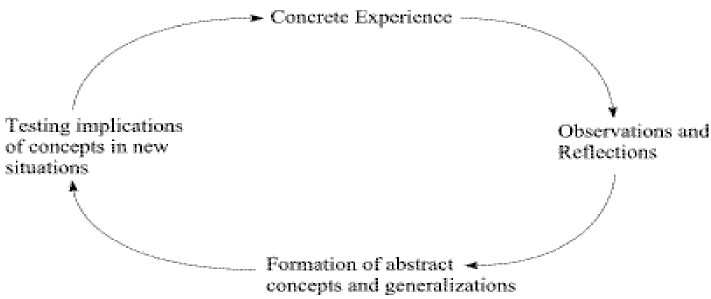


Figure 1. The characteristic of experiential learning

Source: Clark, 2010

OPTIMIZATION AND PREDICTIVITY

The following Graph, which is concerned with business application, also shows how improved quality in education could benefit optimization and predictivity which in turn would lead to better performance and job development. This qualitative enhancement can be accelerated through multimedia and technology. This cutting edge technique is being utilized by fellows of the World Academy of Art and Science through their research, publications and new paradigm shift in education, government and economics. Relating to the educational environment, Deming stressed that the instructors and administrators must improve the quality of their teaching and management through better instructional design ("analysis of learning needs and systematic development of learning materials") (Kearsley, 2011), understanding of inductive and deductive methods and maintaining correct recordkeeping. Also students would be given a critical position in assisting teachers through input.

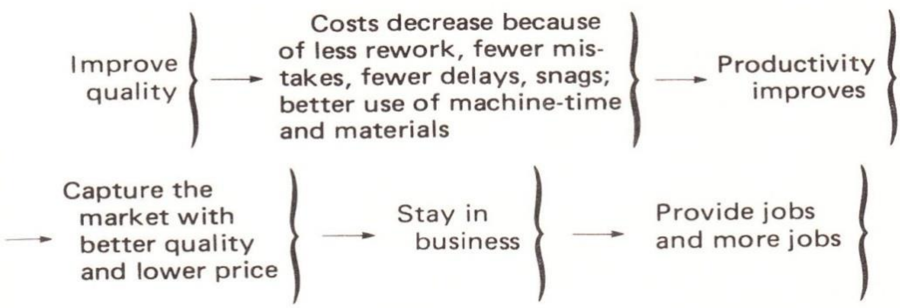


Figure 2. Toyota's Quality Mess: What Would Deming Say?

Source: Simmons, 2014

Deming's Theory of Knowledge assists the educator in understanding that knowledge is not information, but is derived from theory and this theory leads to prediction of behavior, output and general creative development. For example, "a dictionary contains information, but not knowledge. A dictionary is useful … but the dictionary will not prepare a paragraph nor criticize it" (British Deming, 1992, p. 15). Also, without statistical control, statistical theory cannot provide prediction of performance (Deming, 1993). Furthermore, such statistical control provides study system visibility, system stability, and provides the knowledge, through data, needed to take positive action based on prediction. This is extremely useful in the classroom or the educational system as it allows educators the opportunity to develop correct decisions relating to classroom improvement and system goals.

CONTINUAL IMPROVEMENT

The Shewhart Cycle of Plan-Do-Study (Check)-Act (PDSA or PDCA) is derived from the constant concept of continual improvement, as well as the ongoing search for new knowledge. Walter Shewhart, one of Deming's mentors, has created the Shewhart Learning and Improvement Cycle to combine creative management thinking with statistical analysis. Deming later utilized this Circle to provide industrial and educational improvement at all stages of development (Deming 1986). Deming had introduced the PDSA Cycle into his theory framework as early as 1950. He strove to use this Cycle to achieve total quality improvement in all levels of design.

Figure 3. The Deming Cycle

Source: Smith, 2013

EDUCATION AS A LEARNING SYSTEM

Deming was instrumental is achieving a management system for varied levels of educational development. In this learning platform, Deming (1986) advocated that no success or failure should be based on test scores but rather on a system when the student would feel productive, energized and secure without fear of intimidation or reprisal - i.e. based on grading, It is within this educational design that students and teachers would receive staff appraisal, merit, cooperation and acceptance. This concept is currently being evaluated by the World Academy of Art and Science and the London College of Teachers. Ideas, understanding and creativity are utilized in providing student enrichment rather than harsh grading and intimidation. In this format, students and teachers are encouraged to express opinions and speak freely without reprisal (Horine, Lindgren, 1995). According to Deming (1991), schools and their organization should be viewed as systems.

A system is a series of functions or activities within an organization that work together for the aim of the organization. The components are necessary but not sufficient to accomplish the aim of the system. There is in almost any system inter-dependence between the components thereof.

Relating to an educational context, private schools, public schools and colleges should all work together within a common system.

REVISITING ASPECTS OF PROFOUND KNOWLEDGE

Within the confines of Profound Knowledge there are 14 points which may be utilized in an education context. These include:

1. Create constancy of purpose for improving products and services.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. End the practice of awarding business on price alone; instead, minimize total cost by working with a single supplier.
5. Improve constantly and forever every process for planning, production and service.
6. Institute training on the job.
7. Adopt and institute leadership.
8. Drive out fear.
9. Break down barriers between staff areas.
10. Eliminate slogans, exhortations and targets for the workforce.
11. Eliminate numerical quotas for the workforce and numerical goals for management.
12. Remove barriers that rob people of pride of workmanship, and eliminate the annual rating or merit system.
13. Institute a vigorous program of education and self-improvement for everyone.
14. Put everybody in the company to work accomplishing the transformation (Deming 1986:23 – abridged).

These points were first mentioned by Deming at a meeting of the Institute of Management Sciences in Japan. This system can assist administrators and teachers from all countries with the information or knowledge necessary to manage educational systems. Deming notes that “[h]ard work and best efforts, put forth without guidance of profound knowledge, may well be at the root of our ruination” (Doherty 2003:176). Today’s educational system needs a profound paradigm shift. Horine and Lindgren (1995:7) state that “a system perspective is necessary to integrate the many excellent, but isolated, educational initiatives underway today such as site-based management, shared decision making, whole language, [MOOCs, online teaching] and collaborative teaching.”

CONCLUSION

Today, as never before, educationists and social scientists are looking for new ways to implement better, more informative and production learning. As noted previously, many of these paradigms are isolated and merely produce separate outputs and goals, rather than the goals of the system. Deming provided us with much need input and recommendations. Alas, in many ways we have ignored and forgotten these ‘gems of knowledge’ as we move blindly forward into other new ideas and concepts. It may be possible to revisit Deming’s theory and utilize some of his ideas and interconnect them into the new paradigm of the 21st century. If nothing else, we can be aware of the ideas Deming projected relating to learning framework, output objectives, optimal performance, the student as a customer and continuous improvement which will provide less errors and more productivity.

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ANALYSIS OF THE COMPETENCIES OF STUDENTS BASED ON THE SUCCESS IN FOLLOWING CLASS: TECHNICAL AND INFORMATICS EDUCATION, MATHEMATICS AND SERBIAN LANGUAGE, DEPENDING ON THE PROFESSIONAL SKILLS OF TEACHERS

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ABSTRACT

This study investigated the influence of teachers' professional skills on students', more precisely on students' achievements in following class: Technical and informatics education, Mathematics and Serbian language. A random sampling technique was used to select 5 classes of one Belgrade elementary school that differ in the level of qualifications of the teaching staff. Data were analyzed using statistical methods and results revealed that there is a significant relationship between teachers' professional skills and students' achievements in the abovementioned three classes. There is the fact that highly educated teachers promote students with better success rate compared to students who were promoted by lower educated teachers. In addition to the three examined classes, it was concluded condition applies also to the total average grade of each class. The advantage of this work compared to other works in literature is that the conclusion was based on actual data generated in a primary school. Recommendations were made for engagement of more qualified staff in primary schools in Serbia.

Key words*: Learning, The Level of Qualification of Teachers, Students' Competences*

JEL Classification: *C13*

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INTRODUCTION

The main task of teachers working in elementary schools is to organize and implement the educational process, i.e. a learning process. Learning in this context involves the acquisition of information, knowledge and intellectual skills, the formation of motor skills, then developing interests, attitudes, desirable character traits and values. In that context, special importance has a creation of positive habits and elimination of potential negative habits. The curriculum for each grade is prescribed by the curriculum of elementary schools, by the Ministry of Education and Science.

Modern knowledge of psychology, pedagogy, communication and related disciplines have contributed significantly to the progress of didactical and methodical technologies (training process), so that teachers are less teachers and more organizers, advisors and mentors in schools and extracurricular activities. In addition to work in the immediate teaching and extracurricular activities, teachers have a number of other educational tasks. One of them is the systematic monitoring of the development of each student, which includes the evaluation and assessment of their progress. In addition, teachers work with parents (guardians) of students so that schools and houses would educationally act together, which often requires the appropriate education of parents. They organize many school and extracurricular events, such as festivals, competitions (cultural and sports), exhibitions, tours and the like. It should be noted, and the organization of specific forms of working with students with special needs, such as gifted students and students with disabilities. Certainly, teachers perform all the administrative tasks related to education and teaching, as well as writing plans, record keeping, reviewing and correcting students' written work, making statistical analysis, reviews of student assignments, reports and the like. So, because of all the above, the following may be come to the conclusion that being a teacher is a complex profession that requires certain competences, but also requires the possession of moral norms.

The process of educating teachers is in political debates in many countries, linking the importance of preparing young people for life, and the fact that the educational systems spend considerable financial resources. However, the degree of political control over teachers' education varies. In places where the teacher education is entirely in the hands of the university, the state cannot have any direct control over the facts of what and how teachers teach. At the same time, in some other state systems, training of teachers is thoroughly determined by the Ministry, for example state can determine what skills must possess all teachers or can determine the content of the courses to be taught in schools for teachers. The European Union has adopted a detailed description of what each teacher in the member states of the EU must have (common European principles for teacher competences and qualifications).

In Serbia, there is a law prescribing that every teacher must have a university degree (which provides the title of primary school teachers), however, the law is for some reason selectively enforced. In the classrooms can be found various staff who, often without any control by the Ministry or any other services, teach with inadequate education. The study in this paper highlights the impact of such personnel in the education of young people. The research was conducted based on the results that have achieved the fifth grade students of an elementary school in the subject of technical and IT education, mathematics and Serbian language. The classes differ in the professional competence of teachers who have taught children for up to fourth grade of elementary school. The results showed that student achievement is directly dependent on the level of professional qualifications of primary school teachers.

TEACHERS IN ELEMENTARY SCHOOLS

Teachers in elementary schools educate and raise children who attend compulsory elementary school. Elementary school is compulsory in our educational institution. It lasts eight years. In the first four years it is organized like classroom teaching, and from the fifth to the eighth-grade subject teaching. Classroom teaching is conducted under one teacher (same teacher from first to fourth grade), while the subject teaching involves more subject teachers, depending on the curriculum for each class. This means that the class teacher teaches all the required subjects and subject teachers are qualified only for certain subjects, for example the Serbian language, mathematics, history, etc.

The main task of teachers working in elementary schools is to organize and implement the educational process, i.e. the learning process. Learning in this context involves the acquisition of information, knowledge and intellectual skills, the formation of motor skills, then developing interests, attitudes, desirable character traits and values. In that context, special importance has the creation of positive habits and elimination of potential negative habits.

Educational process adapts to the abilities of individual students, preference is given to mathematical teaching, classes in nature, experimenting, learning-based on observations, group and individual work. In doing so, they use modern audio-visual equipment, including internal television, computers, and similar products.

Special additional coordination and advisory work have subject teachers who are at the same time class teachers in the upper grades and teacher-mentors who work in the so-called workshops, where are practically preparing students, future teachers. Certainly, teachers perform all the administrative tasks related to education and teaching, as well as writing plans, record keeping, reviewing and correcting students' written work, making statistical analysis, reviews of student assignments, reports and the like.

WORKING CONDITIONS

Working time for teachers is prescribed by the Ministry of Education and Science, in accordance with the Law on Primary Education. In teaching teachers spends 18 to 24 hours a week, and the remaining time is used for stated extracurricular activities, among which plays an important role and preparing for classes.

In most cases, because of the lack of space, school teachers is working in shifts (one week in the morning, another week on the afternoon) and some of them have the "between shifts". More modern school buildings, except for the comfortable classrooms and a hall for physical education, have and some other areas which are needed for extra-curricular work (staffroom, offices, workshops, libraries and reading rooms, rooms for the reception of parents, school kitchens, dining rooms, et.). However, today - a state in the near future will not significantly change - quite a large number of schools have inadequate working conditions that significantly hinder the work of teachers. Part of the teaching takes place outside of school buildings such as: visits to institutions and workplaces, school trips, work in the school garden and the like. Although teachers are not typically exposed to heavy physical work, school work, because of the intense mental concentration in the long run, is quite hard, which is slightly eased by daily rest periods and holidays. Furthermore, teachers are because of the direct contact with a large number of students often exposed to infectious diseases.

DESIRABLE CHARACTERISTICS OF TEACHERS

Good indicators of teachers occupations say it is a very demanding profession, responsibly and humanely. This claim comes from the fact that the elementary school teachers are entrusted with the education and upbringing of children in the most critical stage of their physical and mental development and the result of this development depends largely on the quality of the teacher's work. Possible errors that the teacher can make in a child's education during this period, it is difficult and often impossible to correct later. On the other hand, well-educated, balanced, socially adjusted and successful adult working people are the pride of their former elementary school teachers.

In their work, the teacher is daily exposed to simultaneous communication with several dozen students of unequal ability and qualities as well as the uneven pace of development. Therefore, it is necessary that in its normal intellectual and emotional part teachers possesses some of the traits with which will be able to respond to all the individual needs of their students. In the first place it is a sincere interest in the teaching profession, which involves love to work with children and the patience for a specific individual access to education to every child. Further, it is good speaking skills, because in the school speech is the main means of communication. Preferred are some creative abilities, because a teacher many situations will not be able to overcome by the simple solutions, but only with the original proceedings. In addition, the class teacher must have an appropriate level of physical development, musical and artistic abilities for better acting in the physical, musical and artistic education. Of course, it is assumed that the subject teachers have the appropriate skills and characteristics that are relevant to their subject. With all this, it is very important fact that the children often imitate their teachers and identify with them as their role model. Therefore it is necessary that the teacher be emotionally mature and socially adjusted person with a clear positive value system.

TRAINING AND PROMOTION OF TEACHERS

Primary school teachers are qualified for the work, under the new law, during the four-year study. Studies for class teachers and subject teachers are slightly different. In the training of elementary school teachers dominate the program content with the knowledge which make them applicable to transfer knowledge to students (pedagogical-psychological education and methodological training) over the facilities of vocational subjects, while in the training of subject teachers is reversed, dominate the expertise of the subjects over the psychological-pedagogical and methodological facilities.

By completion of study, class teachers receive professional title class teachers and subject teachers receive the professional title of professor. For teachers who have completed non-teaching faculty commitment is that within one year from the date of employment gain "additional pedagogical education", i.e. content prescribed by the Ministry of Education and Science. In our schools, there are still some staff employed like school teachers who have not acquired legally required education, but have only completed teacher's college. During the period when the law came into force that class teachers must have a college degree, all non-adequately trained teachers were given time to supplement their education in a way that will enrol colleges and pass the difference in exams. Some still have not done it yet. This study leads to results that shows the differences in the education of students whose teaching kept adequately and inadequately trained teachers.

Teachers without experience are employed as interns. The internship lasts one year at most and thereafter intern takes a professional exam. Teacher during work can progress and acquire the title of teacher mentor and teacher advisor that bring status and material privileges. The Law prescribes that teachers are obliged constantly to improve, both in the professional and the pedagogical and methodical way.

RELATED PROFESSIONS

Close professions to teachers are more or less all occupations in education (high school teachers, college professors, teachers in kindergartens). All of them connects a double work role: the role of lecturers and the role of educators. Regarding to this, they share a double competence: knowledge of the profession (knowledge and skills that transfer to their students) as well as psycho-pedagogical and methodological qualification (efficiency training and education of students) (Content available at the http://mrav.ffzg.hr/zanimanja/book/part2/node0803.htm).

RULES OF BEHAVIOR FOR TEACHERS AND SCHOOL EMPLOYEES

How should teachers and employees behave in school (Content available at the http://www.mojaskola.me/os-vlado-milic/home/pravila-ponasanja-nastavnika-i-zaposlenih-u-skoli/)?

1. The obligation of the teacher is to keep regular classes, supplementary and additional classes.
2. Teachers must not be late to classes.
3. Teachers must regularly be on duty in the hallways so as to safety of students raised on higher level.
4. Teachers should come to school neat and clean. Clothing should be appropriate - not to come in short skirts, T-shirts, tank top, transparent clothing, or the clothing with a deep neckline. In the sweater can come only physical education teachers. Makeup should not be expressive.
5. Teachers are prohibited from using cell phones in class.
6. Teachers must be able to maintain order in the classroom, so that students can hear lectures and explanations.
7. Teachers are not allowed to yell at students.
8. Teachers are not allowed to expel students from class, if the student interferes with the teaching, he should be sent to the pedagogical and psychological services or the director of the school.
9. Teachers need to adapt teaching to students and explain everything that is unclear.
10. Teachers should respect the personality of students, must not offend them, give negative mental qualifications, mock in front of department, discriminate on any basis, nor to express revanchist. All students should be equal, teachers are not allowed to favour certain students.
11. Each progress and success that the student achieve is worth the praise, the teacher can not belittle the students success if he does not satisfy the criteria set by the teacher.
12. In working with students the teacher must express tolerance, to provide them with all necessary help and to encourage students.

TEACHER EDUCATION

Teacher education relates to methods and procedures designed to train potential teachers with the knowledge, attitudes, behaviours and skills they need to perform their tasks effectively in the classroom, school and wider community.

Although ideally should be designed and organized as a continuum, teacher education is often divided into the following phases:

- initial teacher training / education (initial course before entering the classroom as a fully responsible teacher);
- induction (the process of training and support during the first few years of teaching or the first year in a particular school);
- development of teachers and continuing professional development (the process of further training of teachers).

There is a longstanding debate about the most appropriate term to describe these activities. The term teacher training (might get the impression that the activity involves training staff to undertake relatively routine tasks) is losing ground, so that adopts the term teachers education in preparation of personnel for the professional role of practitioners.

ORGANIZATION

In many countries, initial teacher education takes place mainly or exclusively in institutions of higher education. It can be organized according to two basic models: consecutive and competitive model.

In the "consecutive" model, the teacher first obtains qualifications in one or more subjects (often a degree), followed by studies of the acquisition of additional qualifications in teaching (this can be in the form of specialist or master studies).

There are also available, and some other ways of education. In some countries, it is possible that a person go through a training for classroom teachers / teachers, working at the school, under the supervision of an accredited experienced professor. As part of a university education for teachers, it is conducted practical classes where the teacher candidate is in a community that allows him to apply the theory he learned in class and to practice.

CURRICULUM

The question of what knowledge, attitudes, behaviours and skills teachers should possess is the subject of great debate in many cultures. This is understandable, because the teachers are entrusted with the transmission of specific knowledge: social beliefs, attitudes and ethics, as well as information, advice and wisdom, acquiring key knowledge, attitudes and behaviours of the students who will need to be active in society and the economy.

Generally, program for teachers education can be divided into four main areas:

- The first area consists of: basic knowledge in the educational aspects of the philosophy of education, history of education, educational psychology and sociology of education.
- The second area includes: skills in evaluating student learning, using technology to improve teaching and learning, with the support of students with special needs.
- The third area is the area of activities, the methodology of knowledge and skills - this area also often includes ways of teaching and evaluation of specific subjects, which leads to that this area overlaps with the first (fundamental) area. There is an increasing discussion of this area, because it is not possible to know in advance which kinds of knowledge and skills will students need to have when they enter into adult life, and it is then difficult to know, and what kinds of knowledge and skills teachers must have. Increasingly, emphasis has been placed on the "transverse" or "horizontal" skills (such as "learning how to learn" or "social competence"), which break through beyond traditional subjects, and thus call into question traditional ways of making curriculum and teacher educational programs.
- The fourth area is: the practice in the classroom or in some other kind of educational practice usually supervised by experienced teachers and support in some way, but this is not always the case. The practice may be in the form of experimentation, internships or student exchange.

THE PRACTICE OF TEACHER

Every teacher, before starting his own career, passing the practical work in school under the supervision of an older, more experienced teacher. Such a practice can take place in several ways:

- Observer way - includes tracking and limited participation of new teacher within the classroom under the supervision of experienced teacher (the usual way)
- The practice during the study - includes several weeks of teaching in a particular classroom under the supervision of the classroom teacher and mentor (from college)
- Internships - includes classes when the candidate is supervised in his own classroom

These three areas are related to the organization of most teacher education programs in the country (though not everywhere in the world) courses, modules, and other activities are often organized as belonging to one of the three main areas of teacher education. Good organization makes the programs more rational or logical structured. Conventional organizations sometimes has been criticized, as it is artificial and that does not correspond to the faithfully display of how teachers actually experience their work.

Problems in practice often (perhaps most frequently) are concerning fundament issues of curriculum, as well as practical knowledge simultaneously, and separating them in teacher education does not contribute anything. However, the question of what are the essential elements of training is highly debated since it is observed that many teachers do not complete their studies. In addition, with the increasing demands that are placed to teachers research is beginning to suggest that teachers must not only be trained to pass on the knowledge to their students, but also to be the leading researchers in their fields.

The debate about how is the best to prepare teachers for teaching in today's demanding conditions of life, is becoming an important focus of research in our country and abroad, where the successful education of children is a priority.

THE INCLUSION OF TEACHER-BEGINNER IN TEACHING

Holding the instructions involves the use of a wide range of knowledge on the subject being taught, and in addition, must include knowledge about the most effective ways to present the subject to different types of students. Therefore, from the teacher is in every minute requested to perform a complex set of tasks.

Many teachers stressfully experience their first year in the profession. Statistics shows a high percentage of teachers who, either continue to do their work after the end of practice, or leave the profession after the first semester of teaching.

There is a big difference between hiring teacher in the new school (explains the vision of the school, procedures, etc.) and encouraging new teacher to the teaching profession (providing him the necessary support and assistance to start working at the school and the development of professional identity, and further development of basic skills that teachers acquire in college). Large number of countries and states have developed a comprehensive support systems to help teachers in the early years of professional experience. The elements of such a system of support may include:

- mentoring: assigning a mentor to each newcomer. Such mentors are specially trained for their jobs, so they can provide adequate emotional and professional support and guidance. In many U.S. states, beginning a career working teacher are reduced to going through training with a mentor, but research suggests that, by itself, this practice is not enough.

- partnership networks: for mutual support and help between fellow beginners.
- the input that teachers get from education experts (for example, to help teachers-beginners about what they did not learn in college).
- support for the process of self-reflection that would include all teachers (for example, through keeping a journal).

Some research suggests that such programs can: increase the retention of teachers-beginners in the profession; improve teaching performance; promote personal and professional well-being of teachers.

CONTINUOUS PROFESSIONAL TRAINING

As the world in which teachers prepare young people to enter is changing so rapidly and so are the necessary skills that a teacher must develop rapidly changing, the initial course of introduction of young teachers in the job may not be enough to prepare teachers for a career of 30 or 40 years. Continuous professional training is the process through which teachers (and other experts) think about their jurisdiction, and it allows them to keep pace with the times and to develop further. However, the extent to which the Ministry is supporting this varies, which reflects the efficiency. This rapidly expanding research on this subject shows that, in order to continuous professional training was as effective, it must contain the following:

- keep up with the times
- to be common
- use active learning
- divide the teachers into groups
- to includes periods of practice, teaching and monitoring
- promote reflective practice
- encourage experimentation, and
- respond to the needs of teachers.

THE QUALITY ASSURANCE

The quality of education is related to the quality of the work undertaken by the teacher, who has a significant effect on his students. Besides, taxpayers who, through taxes on their salaries affect teacher salaries, wants to be sure that teachers provide adequate services for that money. Because of all this, we often look for ways to measure the quality of individual teachers, schools and education systems in general.

In most countries, a teacher's salary is not at the same time related to the perception of the quality of his / her work. Some countries, however, have systems to identify the "most effective" teachers, which increases their profits. Needs to assess the performance of teachers appears with the aim of identifying the need for teacher training and development, or, in extreme cases, to identify those teachers who should leave the profession. In some countries, teachers have to periodically re-apply for a license to operate, and in that way, to prove that they still have enough knowledge. The feedback on the work of teachers are an integral part of many public and private educational procedures, but are obtained in many different forms. They are essential in order to improve teaching profession.

ACT ON EDUCATION OF TEACHERS

The process of educating teachers is in political debates in many countries, linking the importance of preparing young people for life, and the fact that the educational system spends considerable financial resources.

However, the degree of political control over teachers education varies. In places where the teacher education is entirely in the hands of the university, the state cannot have any direct control over the facts of what and how teachers teach, leading to anomalies, such as the use of inappropriate teaching methods and the employment of people with little or no practical experience in teaching in real classrooms.

At the same time, in some other state systems, training of teachers is thoroughly determined by the Ministry, for example, state can determine what skills must possess all teachers or can determine the content of the courses to be taught in schools for teachers.

The European Union has adopted a detailed description of what each teacher in the member states of the EU must have a (common European principles for teacher competences and qualifications).

In Serbia the law prescribes that every teacher must have a university degree (which provides the title of elementary school teachers), however, the law is for some reason selectively enforced. In the classrooms can be found various staff who, often without any control by the Ministry or any services, teach with inadequate education. The study in this paper shows precisely the impact of such personnel on the education of young people.

INVESTIGATION OF THE INFLUENCE OF TEACHER EDUCATION ON STUDENTS' COMPETENCES

For the purposes of this study, it was isolated a sample of 5 classes of students who belong to one and the same generation, and are different according to the level of teacher education, which held them classes in the lower grades of elementary school (Table 1). In determining dependencies between the level of teacher education and acquired skills and knowledge of students, it have been analysed the data on the grade in the subjects of technical and IT education, mathematics and Serbian language.

The selected sample on which the research was based on is grouped so that data is processed on the total number of excellent, very good, good and sufficient score at the end of the second term of five fifth grade classes, in subjects of technical and IT education, mathematics and Serbian language. Besides, data were analysed and on the average grade of a specific subject, in each of the classes at the end of the second semester of the fifth grade. These data are presented in Table 2, Table 3 and Table 4.

Table 1. Education level of professional staff in five tested grade of elementary school

Teacher education per classes	IV-1/V-1	IV-2/V-2	IV-3/V-3	IV-4/V-4	IV-5/V-5
	Professor of class teaching	Professor of class teaching	Teacher	Teacher	Professor of class teaching

Table 2. Level of results in technical and IT education in five tested classes of fifth grade of elementary school

The students success in the class	V-1	V-2	V-3	V-4	V-5
Total of great mark	18	13	14	10	15
Total of very good mark	7	7	4	4	8
Total of good mark	2	3	10	10	5
Total of sufficient mark	0	1	0	1	0
The average score of classes in technical and IT education	4,59	4,33	4,14	3,92	4,36

Table 3. Level of results in mathematics in five tested classes at the end of the fifth grade of elementary school

The students success in the class	V-1	V-2	V-3	V-4	V-5
Total of great mark	11	9	3	7	11
Total of very good mark	2	5	6	4	5
Total of good mark	4	5	8	2	9
Total of sufficient mark	10	5	11	12	3
The average score of classes in mathematics	3,52	3,75	3,04	3,24	3,86

All data were originally taken from the diary of the five classes at the end of the second semester of the fifth grade, but with the protection of privacy of students. The data processed like this, taking up three of the table with six columns and six species, can be present in various ways, for example, matrix, with the help of a graphic diagram envy or pie (pie) Graph.

Table 4. Level of results from Serbian language in five tested classes of fifth grade of elementary school

The students success in the class	**V-1**	V-2	V-3	V-4	V-5
Total of great mark	11	9	5	5	8
Total of very good mark	5	3	6	6	8
Total of good mark	7	9	9	2	3
Total of sufficient mark	4	4	8	12	9
The averages core of classes in Serbian **l**anguage	3,85	3,68	3,29	3,16	3,54

In order to better assess the success of relations between classes where teaching was hold by more educated i.e. highly educated teachers, on Figures 1,2,3,4 and 5 are graphically presented the changes of the total number of excellent, very good, good and sufficient score, respectively, for all five classes of fifth grade.

From the graph shown in Figures 1, 2 and 3, it can be visually observed that the lowest results of all three analysed subjects has students of V-3 and V-4 grade.

In Figure 4 are graphically shown the results of average grades of three subjects in all fifth classes at the end of the fifth grade. And that, the blue colour shows the results achieved in Serbian language, the red colour shows the results in technical and IT education and the green shows results in average score in mathematics. It is easily notes that the lowest average grade have students of V-3 and V-4 class, where classes are held by teachers of education, i.e. teachers.

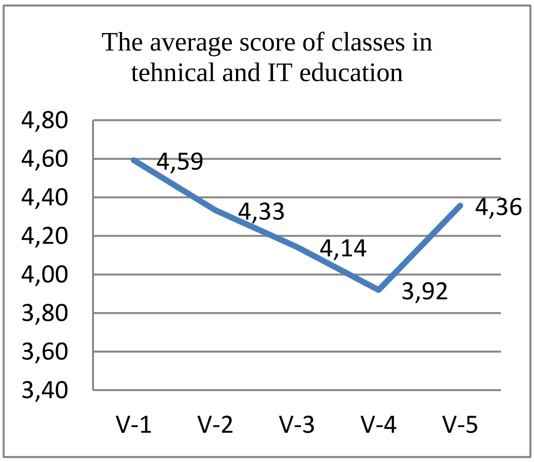

Figure 1. The average score in Technical and IT education

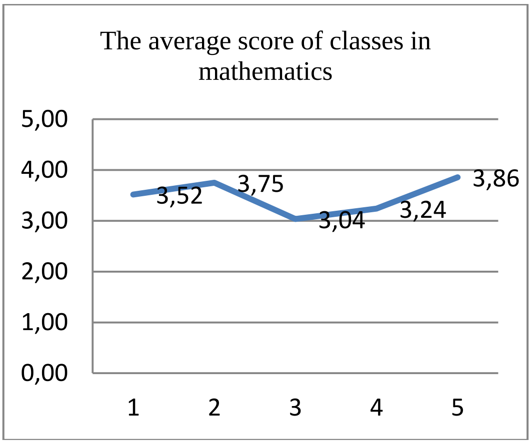

Figure 2. The average score in Mathematics

Classes V-1, V-2 and V-5 had a significantly higher total number of excellent scores from the Serbian language over the classes V-3 and V-4, while it is also valid the true quantitative status. The classes V-3 and V-4 had a significantly higher total number of good scores from the Serbian language over the classes V-1, V-2 and V-5 (Figure 5, Figure 8). A similar situation is observed in the results achieved in mathematics where class V-3 has a record low number of 3 excellent grades at the end of the school year, and also has a very large total number of 12 sufficient scores, indicating poor success of this class in the subject of mathematics. At the same time, the classes V-1 and V-5 has large number of excellent scores in mathematics, as many as 11, while the class V-5 has only 3 sufficient scores in this subject, indicating a high overall success of these two classes when it comes to knowledge of mathematics (Figure 5, Figure 8).

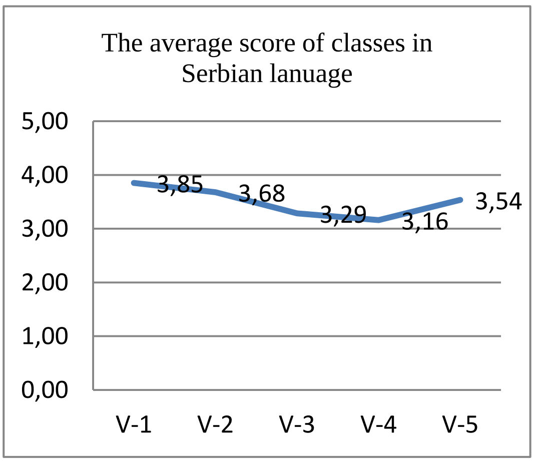

Figure 3. The average score in Serbian language

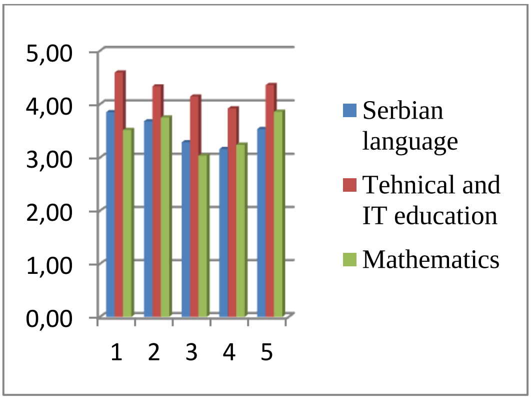

Figure 4. The average score of three subjects at the end of the fifth grade

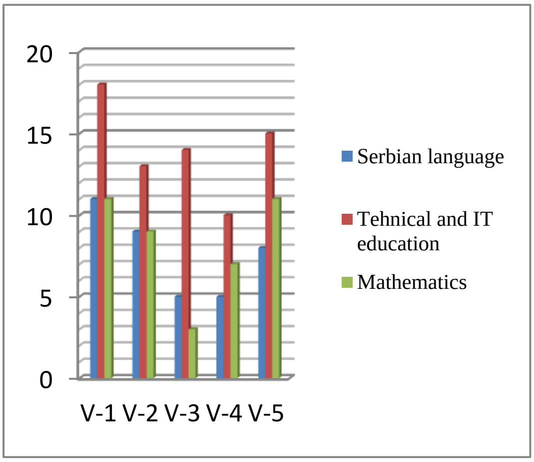

Figure 5. Total number of excellent scores at the end of the fifth grade

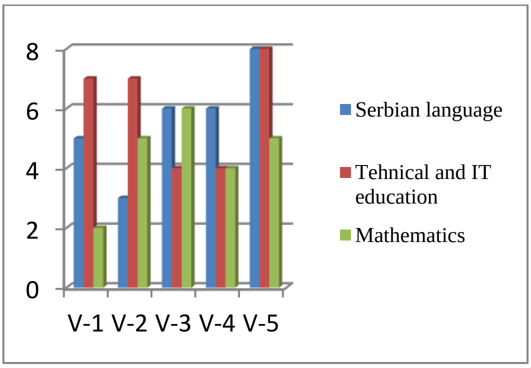

Figure 6. Total number of very good scores at the end of the fifth grade

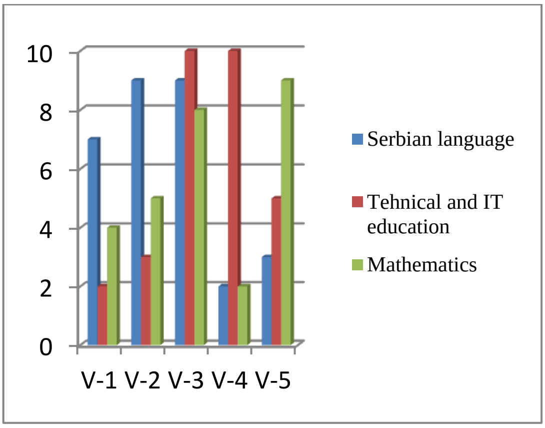

Figure 7. Total number of good scores at the end of the fifth grade

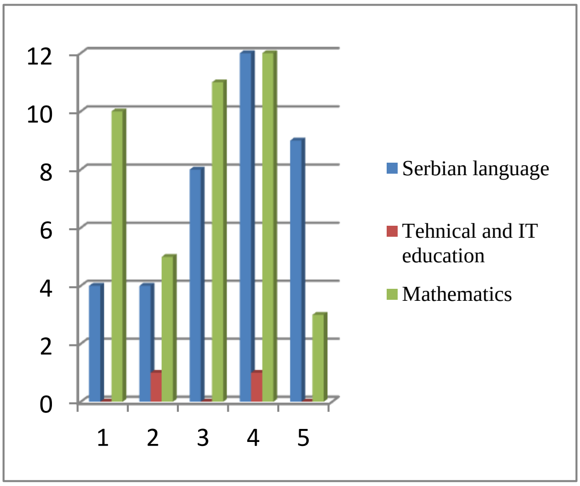

Figure 8. Total number of sufficient scores at the end of the fifth grade

The class V-4 has the smallest total number of excellent and very good scores in the technical and IT education, while at the same time has the highest number of good scores in the same subject, which indicates the poor performance of this class when it comes to knowledge of technical and IT education (Figure 6, Figure 7). A similar situation is reflected in every other subject.

Figure 9 shows the summarized results of the total scores, on concrete level, for subjects of technical and IT education, mathematics and Serbian language. The smallest total number of excellent grades for all three subject is in classes V-3 and V-4, where classes are held by more educated teachers, while higher number of excellent grades are in the classes V-1, V-2 and V-5. The largest number of sufficient scores is in classes V-3 and V-4, while the lowest total number of sufficient grades for all three subject is in class V-2 in which the classes are held by highly educated teachers.

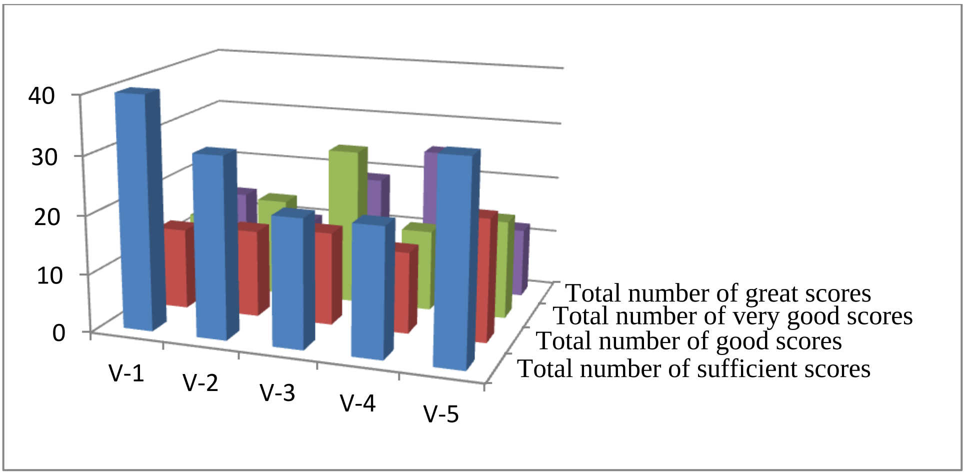

Figure 9. Total number of grades on certain level from the subjects of technical and IT education, mathematics and Serbian language

Final analysis of the success of these five classes in three subjects (Serbian language, technical and IT education and mathematics) at the end of the second semester of the fifth grade is shown in Figure 10. Even when it comes to the total average score of the three randomly assigned subjects, it confirms the current trend of success of these five classes. Definitely the lowest average grades, which amounts 2.92 and 3.16, have classes V-3 and V-4, respectively, that is indicating that the lowest success achieved in these two classes where the classes were held by more educated people-teachers, continues.

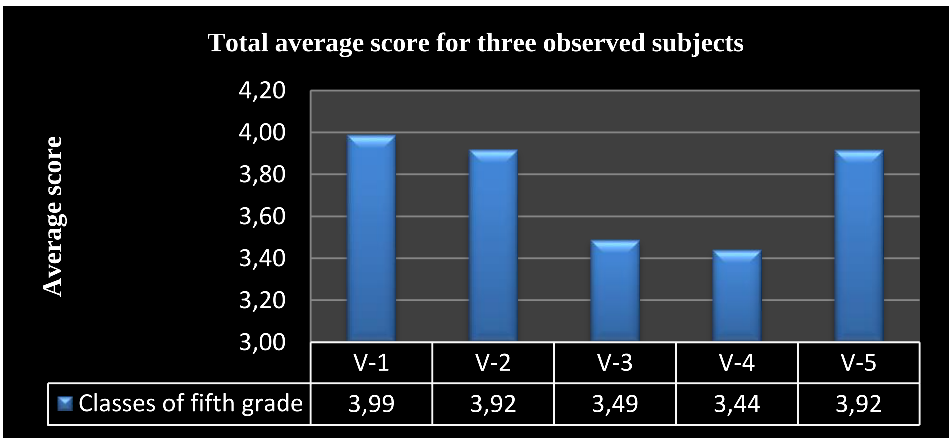

Figure 10. Average score of technical and IT education, mathematics and Serbian language for five classes of fifth grade

METHODOLOGY

During the writing of this scientific work, the author had a pre-conceived plan, a concept which included data collection, processing and evaluation of data, statistical calculations, and finally analysing and drawing conclusions. Data were taken from the diary of one elementary school in Belgrade, where all project participants (students and teachers) remained anonymous to preserve their privacy. This project was preceded by another similar research work by the same author, in which were analysed the overall results at the end of the fourth and fifth grades. The advantage of this project is highly specialized subject that analyses the concrete results for the three subjects: technical and IT education, mathematics and Serbian language, which sets the benchmark for future research.

RESULTS AND DISCUSSION

The results of this study confirms the widespread opinion of many researchers that teachers have a great impact on the students, and therefore the level of teachers' knowledge affects the level of acquired knowledge of students. The paper (Content available at the http://www.rc-cacak.co.rs/sr/projekti/42-ucitelji-u-sistemu-strucnog-usavrsavanja.html) discusses about the professional development system to work, INSENT education system (In-service Education for Teachers), who represents the innovation of acquired knowledge, training skills, improve practice and continuing professional development of teachers. Research in paper (Content available at the http://www.ftn.kg.ac.rs/konferencije/tio2012/zbornik.html) from the International Conference on FTN Čačak "Technics and Informatics in education – TIE 2012" talks about education of teachers and lifelong learning in a new environment. The research in the paper (Darling-Hammon, 1999) concerns the impact of teacher quality on student and the student's education. The research in the paper (Struyven, De Meyst, 2010) focuses on examining how much impact had training improvement of teaching staff in Belgium, carried out in 1998. on achieving the competencies of students. So the study examines the direct dependence of teachers expertise in relation to students' competences corresponding to the survey. The research in the paper (Kessel et al., 2012) included 1049 teachers to examine the impact of psychological conditions of teachers to students. In paper (Gonul et al., 2012) the research is conducted about the impact of support that the teacher gives the students to acquire knowledge in mathematics.

So, all over the world are performing various studies about the impact of teacher competences in learning, among students, using a different quantifiers and different number of teachers and students who undergo this study. The contribution of this paper is that it uses the grades of these three particular subjects achieved at the end of fifth grade, as in the available literature were not found. In order to improve the results, it is suggested more detail research on this topic in order to determine the exact relationship between the professional qualifications of teachers and achieved academic results of students in elementary school. Also, as the results showed a direct relationship between teacher education and student results, it is suggested that schools in Serbia introduces employment as educated teachers, or at least to respect the laws currently in force in order to provide an adequate education for children which is the goal of every parent.

FUTURE WORK

As a continuation of this research is proposed the examination of dependency of students results in each individual subject that is taught in elementary school, and depending on the professional qualifications of the teaching staff. It also suggests that the examination carried out in a number of schools, for example fifteen, and the addition of randomly selected six schools and then perform a detailed analysis in the frame of six randomly selected schools. It is necessary, in addition to student grades that are included in the evaluation to make questionnaire and to collect additional information from the students and the teachers.

Such studies should determine whether there are and how significant relationship is between teachers competences and academic success of students in various subjects, for example, the subject of Chemistry.

CONCLUSION

For the purposes of this study, the author shortlisted and isolated sample, collected data that were available (student grades), taking into account the respect for privacy of the students and teachers. After collecting, the data were mathematically analyzed and formed mathematical models that have been statistically analyzed as such. After statistical processing, it is determined the dependence between the level of education of teachers and students acquired skills and knowledge to the concrete subjects which is reflected in student achievement at the end of fifth grade. Some of the results of this study are graphically interpreted in this paper, where it easily can visually confirm the starting hypothesis of this study that the level of qualification of class teachers affects the students' competences for learning the subject of technical and IT education, mathematics and Serbian language.

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THE SCHOOL VIOLENCE PROBLEM

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ABSTRACT

The school violence is an issue which draws more and more attention of researchers in the world but also in our country. It is a serious and negative phenomenon which shows growing tendency and causes series of negative consequences. In our wish to point out the seriousness of this problem, and having in mind the fact that researches on this phenomenon are very significant, not only for determination of its etiology and phenomenology but above all for conceiving preventive programs which can contribute to stopping and reducing the phenomenon of the school violence, in our paper we have demonstrated results of a research conducted in 19 elementary schools in Belgrade, which included 914 examinees, students from the third to the eighth grade. The research includes only students' attitudes about violence and shows that there is violence among students, mostly in the form of the verbal violence. We think the fact that there is clear awareness among students about the significance of this problem and their wish to participate in its solving process is very important. Unfortunately, big number of students think that their school didn't undertake or they are not familiar with whether any measure for reduction, suppression or eradication of violence have been undertaken. The above mentioned implies that for stopping this phenomenon, preventive measures which include raising awareness about the significance of this problem should be pointed out, along with developing skills of non-violent communication, tolerance, peace, moral behavior, with thorougher and more efficient cooperation of school staff, students, parents and wider community.

Key words: *Violence, School, Students, Prevention, Bullying*

JEL Classification: *I24, I25*

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INTRODUCTION

The forms of violence over children, as well as methods which facilitate it, have got disturbing proportions all around the world. The school violence problem in the past years has become a part of our present. This is especially disturbing when we have in mind a fact that school, along with family, should be a safe place for children's socialization and that it is not only an educational factor, but also an important educational institution and institution where attitude, values and norms are being formed. Also the educational and pedagogical system is, according to the population volume, one of the biggest systems in the Republic of Serbia, which includes almost all children, to whom at least safe and optimal conditions for undisturbed stay and work, as well as the protection from all kinds of violence, abuse and neglect need to be ensured (the Ministry of Education of RS, 2007). According to the Convention on the Rights of the Child ("Official Gazette of SFRJ" – International Contracts, no. 15/90) every child has right to education and the purpose of education is for child to develop his or her personality, talents, physical and mental abilities, as much as possible.

Unfortunately, the problem of violence among students is one of the biggest problems these days which shows growing tendency. It is a serious and negative phenomenon, because the way children interact with their peers and establish relations with them, can represent a model of behavior which will be used in adulthood. Also, violence among peers provokes negative both physical and psychological consequences, which can be numerous and last for a very long time. That is why the purpose of this paper is to indicate all the seriousness of this problem and its consequences and to suggest possible ways for their solution. In accordance with aforementioned, the problem of elementary school violence is considered. In relation to that, we tried to determine causes and forms of this violence, diffusion, demarcation with similar concepts, preventive measures, etc. Along with reference to the most important researches linked to the school violence, the basic goal of the paper is presenting results of the school violence research which we have conducted in the period from January to May of 2014 in elementary schools on the territory of Belgrade.

DEFINITION OF THE SCHOOL VIOLENCE

An attempt at conceptual definition of violence, i. e. its defining is very important, having in mind that there is not one generally accepted definition. First of all, violence is the most common form of human rights violation. The right to protection from all forms of violence represents a basic right of every child established in the Convention on the Rights of the Child and other documents of the United Nations, Council of Europe and other international organizations, which have been ratified by the Republic of Serbia as a member of that organizations. The Convention on the Rights of the Child contains special provisions about the rights of the child to physical, psychological and moral integrity. In accordance with the aforementioned, all forms of violence, maltreatment, abuse and neglect of children, which jeopardize or disrupt physical, psychological and moral integrity of the child's personality, represent violation of one of the basic rights of the child mentioned in the Convention of the United Nations on the rights of the child and that is the right to life, survival and development. With the adoption of the Law on ratification of the Convention of the United Nations on the rights of the child ("Official Gazette of SRJ" - appendix: International contracts, no. 15/90 and "Official Gazette of SRJ" - appendix: International contracts, no. 4/96 and 2/97) our country made a commitment to undertake measures for prevention of violence in the family, institutions and wider community and to ensure the protection of the child. In accordance with that, the Ministry of Education adopted the Special Protocol for protection of the children and students from abuse and negligence in educational and pedagogical institutions (The Special Protocol is binding for everyone who participates in life and work of an educational and pedagogical institution, pedagogical and educational institution and dormitory and it is designed for children, students, tutors, teachers, principals, associates, administrative and support staff, parents/ guardians and i representatives of the local community). In the mentioned document the violence is defined as "every form of once committed or repeated verbal or nonverbal behavior which as a consequence has real or potential endangering of health, development and dignity of the children/ students".

In the beginning, we consider that it is necessary to make a difference between two concepts – violence and aggression. Violence is mostly defined as frequent psychological or physical maltreatment of other persons. According to the widest definition, which was given by the World's Health Organization, violence is "an intentional use of physical or psychological force or power under threat, against oneself, other person, or against a group or community, which results, or there is a great possibility to result, in injury, death, by psychological means, bad development or deprivation" (Ortega and others, 2006:18). On the other hand, aggressiveness is a wider concept than violence. Generally speaking, the forms of school violence fall within aggressiveness, but it can occur that some acts which we consider as violence are not aggressive acts, having in mind that a perpetrator is performing them without taking into consideration that those acts are hurting somebody (for example: different disciplinary measures taken by a teacher), or failing to observe their influence considering them as a joke (Popadić, Plut, 2007). Therefore, although frequently used as synonyms, aggressiveness and aggression indicate more to motivation which leads towards hurting other person and towards disposition, while the concept of violence in greater measure suggests the inadmissibility of harming, often without an intention (Popadić, Plut, 2007).

Generally speaking, the definition of school violence includes the following categories: verbal, physical, sexual and psychological violence; social exclusion, violence against the property, threats, assaults and spreading rumors (Smith et al.,. 1999, retrieved from Bačanović, Jovanova, 2011). However, when we talk about violent behavior, we usually refer to physical violence as the most impressive form of aggressiveness aimed at others. Reason for that is a fact that manifestations of the physical violence are diverse and usually dramatic. There is no doubt that the physical violence is the most evident form of violence, which includes punching, pushing, pinching, pulling etc. Also, this kind of violence leads to the most serious consequences, which, unfortunately, can result not only in physical injuries but also in fatal outcome.

The verbal violence more frequently goes along with the physical violence, and it includes insulting, spreading rumors, constant teasing, laughing at somebody etc. Although the consequences of the verbal violence are not visible like when it comes to the physical violence, children differently experience the exposure to the verbal violence. Some of them with low self-esteem can clam up, become depressive, anxious, and sometimes the consequences are very serious like self-harm or in some cases even a tragic ending of life. Also, the children who suffer the verbal violence can refuse to go to school or to participate in the activities along with their peers.

The emotional (psychological) violence is deliberate exclusion of the victim from the group activities of a class or children's group, as well as ignoring. That is a behavior which leads to temporary or permanent endangering of psychological or emotional health and dignity of a child/ student. This type of violence also provokes a series of negative consequences at a child/student, like fear, depression, loss of self-esteem, inability of socialization.

The sexual violence includes unwilling physical contact and offensive comments. In accordance to the definition provided by the General Protocol about children protection from abuse and neglect, which the Government of the Republic of Serbia adopted in 2005, sexual abuse of a child represents inclusion of a child in sexual activity which is not completely clear to him/ her, without a child's consent or a child is not mature enough for that and not in a condition to accept it, or an activity which brakes laws or social taboos of a society. The sexual violence includes: sexual harassment – lascivious comments, labeling, spreading rumors, touching, sending messages, taking Figures, telephone calls etc.; compelling or forcing a child/ student to participate in sexual activities, whether those are contact (sexual intercourse, sexual touching, etc.) or non-contact activities (exposure to others' eyes, exhibitionism etc.); using children/ students for prostitution, pornography and other forms of sexual exploitation.

Finally, the social violence implies separating a child/ student from others based on differences, bringing to a position of inequality, isolation and rejection based on any reason.

However, although there are different kinds of violence to whom children in schools are exposed, we should have in mind that there are not precise boundaries between different kinds and forms of violence. On the contrary, all aforementioned forms of violence are interrelated and influence each other, and they often occur simultaneously.

Here we consider that it is necessary to point out a difference between two terms – school violence and the term bullying in more recent literature. It is because many authors are equalizing school violence and bullying although they are neither conceptually nor theoretically the same. The word bullying originates from English language and it means bully, rapist, noisy, brawler, tease. In relation to that, bullying is defined as “a type of rowdyism or its subtype which is concentrated on interpersonal relations mainly in elementary and secondary schools between students or between students and teachers, where the primary way of communication is – violence, and purpose – maltreatment or degradation of a victim in physical or psychological sense” (Đorić, 2009).

On the other hand, when we talk about the school violence, many authors use the definition by Dan Olweus, a leading researcher of the school violence problem. According to this author, a student suffers violence when exposed to the permanent negative behavior by some other student or a group of students (Olweus, 1998). This definition stresses negative (aggressive) acting which repeats during a longer period of time. Also, the negative behavior implies a behavior aimed at harming or causing discomfort to somebody. In this paper we have chosen the definition of school violence which throughout the research “Violence between children in school” conducted the Faculty of Security Studies in Skopje, in 2010. Within the mentioned research the school violence is designated as following: “when one or more children frequently or constantly, deliberately molest, assault or hurt another child in school by diverse physical, verbal, forced (or direct), as well as/ or indirect forms of violence” (Bačanović, Jovanova, 2011).

DIFFUSION OF VIOLENCE

It is hard to give exact data about real proportions and forms of violence which children in our country are suffering, since there is not a unique system of recording and following this phenomenon. However, the results of the research conducted for this subject undoubtedly show trend of increasing violence over children by adults, and especially peer violence among children and the young. First of all, violence is a phenomenon which is old as the society itself. First systematized researches of the peer violence phenomenon started in 1970's when three boys from Norway committed suicide because of bullying they had suffered by their peers, and that is why the Norwegian Ministry of Education started a campaign on the state level for solving violence problem among children. The fact that bullying among the school children was in expansion at the end of the 1980's and at the beginning of the 1990's, launched researches in other countries, too, among which were Japan, England, Canada, the USA and Australia. It should also be mentioned that the USA and Israel are the countries where the school violence is a big problem. Namely, based on the data of the “National Association of School Psychologists” in the USA 160,000 of children miss school every day because of fear from bullying (Đorić, 2009:154).

According to the Bureau of Justice Statistics and the National Center for Education Statistics, students aged twelve to eighteen were victims of approximately 828,000 nonfatal victimizations at school in 2010; thirty-three school-associated deaths occurred between 1 July 2009 through 30 June 2010 for youth ages five to eighteen. Over the past several years, the number of deaths as a result of school shootings has increased, with rates of safety and security measures in public schools also growing (Cornell, Mayer, 2010).

Having in mind all the above mentioned, the researchers started to investigate this phenomenon aiming to determine and estimate its nature and prevalence and based on that to construct a profile of school violence. The conducted researches undoubtedly show that the violent behavior in schools is a general phenomenon which in the majority of European countries is manifested on more or less uniformed way. In the early ages it is commonly manifested directly, i. e., the children openly choose to be harsh to one another, and later on, the forms of violent behavior assume concealed and indirect forms, which represents a great danger because it complicates detection, proving and also finding the efficient ways for preventing this phenomenon.

The World Health Organization also indicates to the significance of this issue which classified violence among peers as highlighted public health problem which puts into danger both physical and mental health of children. Those exposed to school violence may subsequently experience negative outcomes including alcohol and drug use, delinquency, depression, anxiety, traumatic stress, physical injury, or fatality. Treatment and prevention efforts may mediate the relationship between exposure to school violence and adverse outcomes. Bearing that in mind, some authors point out the importance of incorporating mental health providers in school bullying and violence prevention efforts (Twemlow, Sacco, 2012).

Two issues which concern violence and exposure to the school violence are included in the research conducted every four years by the World Health Organization. The last research was conducted in 41 states/ regions on a group of more than 200.000 children of three age groups: of 11, 13 and 15 years. 33% of questioned students was exposed to violence at least once, and 13% of them was exposed to violence at least two-three times a month. Among bullies there were significantly more boys than girls. And fights turned out to be relatively frequent: around 40% of children had a fight at least once during last year (WHO, 2008).

When our country is concerned, first testimonies about schools in Serbia, at the end of the 18th and at the beginning of 19th century, already show to what extent the school violence was a common phenomenon at that time, which implies primarily the cruel measures of punishment by the teacher (kneeling on corn, whipping with ferula, pulling by the ears etc.). Since then, till nowadays, there were changes in the intensity of violence and forms of its manifestation, but it undoubtedly still exists. However, in the Republic of Serbia there is lack of continuous researches, which will facilitate the phenomenon of school violence to be understood, to determine whether there is "evolution" regarding the forms of this violence, methods of performing, roots of violence, its consequences and evaluation of the existent methods of its prevention (Bačanović, Jovanova, 2011:305). In relation to that, a fact that the realization of the program "School without violence" conducted by the UNICEF in cooperation with the Ministry of Education and Science, Ministry of Health, Ministry of Labour and Social Politics, Council for Child Rights of the Government of the Republic of Serbia, Institute for the Advancement of Education, and from 2008/2009 school year also with the Ministry of Internal Affairs and Ministry of Youth and Sports started in 2005/2006 is very important. The main goal of the program is creation of a safe and stimulating environment for studying and development. Also, within this program violence is defined as “every behavior which is aimed at deliberate causing of psychological or physical pain to other person”.

The results of the Report of the Protector of Citizens about children and students protection from school violence are also significant (Nešić, Jović, 2012) and they are based on researching conducted in the period from March to June of 2011 by the children – members of the Youth Advisory Panel (The survey was conducted in 72 schools, in 37 elementary and 25 secondary schools (1257 examinees in total)), as well as on the data gathered by the republican ombudsman acting on citizens' complaints and his own initiative when he had knowledge about possible injury of a child. The results show that in secondary schools violence is more present than in elementary schools; that older students perform violence more frequently over younger students; that teachers also perform violence over students (23% of elementary and secondary school students confirmed that they had witnessed some form of violent behavior of teachers towards children). Unfortunately, 60% of children/ students think that their school didn't undertake or they are not familiar with whether any measure for reduction, suppression or eradication of violence have been undertaken, and to which schools are obliged by the Protocol.

CAUSES OF THE SCHOOL VIOLENCE

Different forms of school violence in the sociological literature are mainly treated as the social crisis product. Namely, economic and other crisis, war actions, poverty, distortion of all moral and social values were convenient for creation and persistence of violence in our country. The general moral erosion supported by difficult economic conditions contributed to insufficient conviction of violence, on the contrary, it contributed to its culmination and to become a model of socially acceptable behavior. In one word, the school violence is a reflection of overall social situation. Social context is completed by mass media, especially television, Internet, video games, computer games, mobile tele systems, which stimulate and spread some forms of violence among students (Georgievski, 2009). The aforementioned is confirmed by numerous sociological researches. For example, Harper Collins (1992) and Newson (1994) emphasize that the problem of media effect is urgent and very serious and that there is a connection between presentation of violence in the media and the later violence in the real life. Today is almost impossible to see a video or computer game for children which doesn't contain examples of the most diverse injuries, murders, violence, etc.

Generally speaking, the forms of violence over children as well as the methods which facilitate it gained astonishing proportions all over the world, and the development of informatics and communicational technologies contributed to that.

Some characteristics of the Internet communication like anonymity, availability, free flow of different contents etc., opened a space for different kinds of abuse and numerous dangers, to which children are especially exposed. When dangers for children on the Internet are concerned, it usually refers to the forms of sexual harassment and children pornography. Every child can become a victim, regardless the sex, and psychological and emotional immaturity of children, who sincerely and naively reveal their personal data, their age, home address, school they are going to, etc., especially contribute to the abuses. As one of the newer forms of this kind of crime there is making photos and audio visual materials using mobile phones and then there is exchange of that material using MMS service. Unfortunately, we are witnesses of the fact that children frequently film each other by mobile phones, voluntarily or under different kinds of coercion and then spread those video clips on the Internet or over the Bluetooth (Lately, there is a familiar case of a thirteen-year-old girl from Pirot sexually abused by for older female students who recorded that with a mobile phone. A similar case occurred in France where two boys raped ten-year-old sister of one of them and recorded those scenes showing them as a porno movie in school. http://www.naslovi.net/2008-05-16/mondo/maltretiranje-i-decja-pornografija-u-skolama/674436 (access on 28 of October of 2011)).

The school environment is also very important for the appearance of violent behavior. The lack of closeness and acceptance of all the students, and mutual respect between teachers and students, and vice versa, lead to violent behavior in school. Inertness of teachers and professional associates to violent behaviors of students and bad supervision in some school areas (playground, hallways...), only facilitate violent students to be violent and to intimidate other students (Zečević, 2010). The role of peers in the behavior of an individual is perceived also while examining the causes of juvenile delinquency (For example, Edwin Sutherland developed a theory of differential association according to which criminal behavior is learned in interaction with others).

Finally, but certainly the most important cause of violence among children should be sought in the family itself. This is mainly because the family is basic mother cell in which children should adopt the most important moral values and patterns of behavior. For personality development it is important for a child to have a sense of security, to feel that parents take care of him/ her and to love him/ her. It is more probable that children from families where there is mutual trust, love, friendly relationship will become adult people with positive characteristics, independent persons, with more self-confidence and more balanced than the children from families where there are frequent conflicts and quarrels and where insufficient attention was paid to a child (Rot, Radonjić, 1992:220). The influence of the family and parents to child's personality development is also significant because the society throughout the parents transfers the accepted concepts about desirable characteristics and desirable behaviour. Parents, then, represent a role model for the children with which they identify. If a child grows up in an aggressive family environment, and especially if that aggression is directed also towards the child, he/ she will most frequently behave like that. It means that the child will understand the parents' quarrels as a normal way of communication, and aggression, i. e. violence as an acceptable way of behaving. Unfortunately, in the modern conditions, the family became burdened with existential and other problems, and therefore it cannot dedicate much time to children, which can result in appearance or lack of recognition of violent behavior of children, and along with that failure to respond to that.

CHARACTERISTICS OF THE CHILDREN INVOLVED IN VIOLENCE

All violent children have certain common characteristics which are the base of that behavior. They like to dominate over the others, search for attention and recognition. Usually, they are physically stronger than their peers, they are hyperactive, they have bad school marks, attention and concentration. Also, the bullies are often the children who were victims of violence, whether in their family, school or some other place. And often violence is not an individual act of a single person. Generally speaking, violent children are frequently making friends with other violent children. However, the fact that violence includes other children who observe violence, and who experience very stressfully the compassion with the victim, or they even participate in violence, fearing to become victims themselves, by cheering, approving, participating in or even failing to take some action, is frequently forgotten. Unfortunately, very small number of researches is dedicated to pointing out the problem of protection of the children who are neither victims nor bullies, but witnesses of the violent behaviour, i. e. the observers.

On the other hand, the victims of violence are usually children who are physically weaker, who clam up, who don't fight back, suffer and don't talk about violence. That is exactly why those children are prone to become victims, because it is presumed that they won't report violence.

The victims also have some deficiency, like physical: obesity, stuttering, or children who belong to some of the marginalized groups, whether to Roma people, persons with disabilities, refugees, etc. Unfortunately, the children who are victims of violence frequently feel shame, even guilt, because of that, thinking they have deserved it. That is why it is very important to recognize violence, to react on time and not to let those children to face this problem on their own.

The research “Violence in elementary schools” - Goals of the research

1. To examine the frequency of violence
2. To examine the forms of violence (verbal, physical, emotional)
3. To examine attitudes of the students towards violence
4. To examine the sense of security- insecurity. i. e. the fear from violence
5. To examine whom children ask for help when they are victims or witnesses of violence
6. Suggestions to overcome violence.

TEMPORAL AND SPATIAL FRAMEWORK

The research was conducted in the period from January to May of 2014 in 19 elementary schools in the city of Belgrade. The reasons why we have chosen this sample lie in the fact that Belgrade is the capital of the Republic of Serbia with the biggest number of elementary schools on the territory of the republic, as well as in the assumption that violence is more frequent in urban environments.

METHOD

The sample in this research are 914 examinees – students from the third to the eight grade. The data about the sex and age are given in the table 1.

TECHNIQUE AND USED INSTRUMENTS

In the research we have used the surveying of students technique, and an anonymous questionnaire has been used as instrument. The questionnaire is composed of several parts. In the introductory part, there were social-demographic questions (age, school grade and sex). In the first part there were questions focused only on violence. This part of the questionnaire is dedicated to students' attitudes about the school violence problem, violence experience, inclusion in violence, i. e. forms of violence, both among students and violence by students towards teachers and vice versa. The second part of the questionnaire is dedicated to perception and prevention of violence. In accordance with that, in this part there are students' attitudes about how the school violence can be reduced, whom to address for help in case of violence, as well as whether they are scared of violence, etc.

All the information gathered by the questionnaire are treated as anonymous and confidential. However, during the survey, we faced some difficulties which first of all relate to distrust, i. e. the resistance of the examinees to talk about the mentioned subject and to fill in the questionnaire, distrust and fear from whether the survey is really anonymous and unfortunately, a lack of examinees' interest to fill in the questionnaire is also perceived.

RESULTS OF THE RESEARCH

In general, the results of our research confirm that violence is present in elementary schools. When age is concerned, the majority of examinees are from 13 to 14 years old, i. e. from the fifth or sixth grade, which we can explain by the fact that older students are more willing to talk about this problem than the younger ones, i. e. that they are capable of recognizing the problem, as well as that violence happens more frequently at the mentioned age than when younger students are concerned, i. e. lower grades. Also, in the description of the sample of students it can be noticed that the girls are present in bigger number than the boys, which we can explain by the fact that the girls are more willing to talk about this problem than the boys, and that's why they showed more interest to fill in the questionnaire.

Table 1. Description of the sample of students

Sex	Number	%
boys	397	43,43
girls	517	56,56
Age	Number	%
9-10	62	6,78
11-12	297	32,49
13-14	490	53,61
above 15	65	7,11

The thing we consider very important is the fact that there is expressed awareness at students about the significance of this problem. Namely, 780 students (85.33%) answered affirmatively to the question about the attitude of students – whether the school violence is a very serious problem. However, when it comes to the attitudes of the examined students about whether students are often exposed to violence in schools, we encountered different responses, from ones who stated that they mostly or slightly agree with the above, to those who did not have an answer to the mentioned question.

When it comes to whether teachers or other staff are frequently exposed to the school violence, big number of the examinees gave a negative response, or they didn't have any knowledge about the above mentioned. In the answer to the question whether some of the students from the class of the examinees insulted, threaten, threw stuff at, punched a teacher, etc., only 134 (14.61%) of students responded affirmatively. The reason for this kind of results we can seek in the fact that the examinees are the elementary school students and that violence towards teachers is performed more frequently by older students, i. e. those who go to the secondary schools.

Table 2. Students' attitudes about the school violence

The school violence is a very serious problem		
	number	*%*
I do not agree at all	-	-
I slightly agree	-	-
I do not know	32	3,50
I mostly agree	102	11,15
I totally agree	780	85,33
Students are often exposed to violence in schools		
	number	%
I do not agree at all	68	7,43
I slightly agree	304	33,26
I do not know	90	9,84
I mostly agree	407	44,52
I totally agree	45	4,90
Teachers and other employees are often exposed to violence in schools		
	number	%
I do not agree at all	278	30,41
I slightly agree	97	10,61
I do not know	207	22,64
I mostly agree	120	13,12
I totally agree	134	14,61

The percentage of students who were exposed to violence in general, whether they were bullies themselves or not, represent the percentage of those who were exposed whether to violence of the peers or to violence of the teachers. Students (examinees) were asked a question: Have they experienced violence in school? and offered answers: 1) never; 2) once; 3) twice i 4) frequently (more times). The results are shown in the table no. 3

Table 3. I experienced school violence

	Number	%
Never	596	65,20
Once	190	20,78
Twice	79	8,64
Frequently (more times)	49	5,36

The biggest number of the examinees (65.20%) have never experienced violence or experienced violence only once (20.78%). This answer of the examinees is not encouraging, although the biggest number of them told that they hadn't experienced violence. This is because the answers to some other questionsin the questionnaire put this impression in doubt. Also, question is whether the students have a clear idea what the school violence includes, i. e. how do they experience it.

One of the most important questions, which among other things reveals the phenomenology of violence is the question about the forms of violence. Thereby, in the questionnaire we mentioned several forms of violence: verbal, physical, psychological, social, and the results are shown in the table no. 4. In relation to that, it can be noticed that among the forms of violence the verbal violence is the most common.

Table 4. Students' attitudes about the forms of violence

Other students were teasing me, laughing at me, calling me names		
	Number	%
I do not agree at all	58	6,34
I slightly agree	202	22,10
I do not know	7	0,76
I mostly agree	592	64,77
I totally agree	55	6,01
Other students were punching, hitting, kicking me		
	Number	%
I do not agree at all	668	73,08
I slightly agree	133	14,55
I do not know	53	5,79
I mostly agree	32	3,50
I totally agree	28	3,06
Other students were intimidating and threatening me		
	Number	%
I do not agree at all	398	43,54
I slightly agree	243	26,58
I do not know	118	12,91
I mostly agree	110	12,03
I totally agree	45	4,92

When it comes to relation between violence and sex, the results of our research confirm what other researches which treated this problem have shown: the boys are included in violence to much greater extent than the girls. Also, older students are frequently teasing the younger ones, and that is confirmed by the data that 811 students responded affirmatively to that.

In the previous analysis we shown how much students were exposed to the violent behavior and now we are going to show how much they themselves were violent to some other students. When it comes to whether the examinees themselves have performed violence towards other students and how, it is interesting that the biggest number of examinees responded affirmatively only when it comes to the verbal violence, while the physical violence, threatenings, intimidation, stanching or destroying things are not the forms of the violent behavior shown by the examinees. From the total number of examinees, 476 of them mostly agree with the statement that they have been teasing, laughing at or calling names to other students, while 114 of examinees completely agree with the above mentioned.

In the answer to the question when and where violence happens the most frequently, the most critical time, according to the examinees' responses is during the break between classes on the playground, i. e. the schoolyard, while in the classroom it happens the least frequently. Obviously, the reasons for these answers we can search in the fact that violence still happens when there are no teachers nearby, i. e. when there is no control over their behavior.

Table 5. Time and place where violence is happening

Violence mostly happens in the classroom		
	number	%
I do not agree at all	658	71,99
I slightly agree	98	10,72
I do not know	86	9,40
I mostly agree	58	6,34
I totally agree	14	
Violence mostly happens during the break between classes		
	number	%
I do not agree at all	43	4,70
I slightly agree	117	12,80
I do not know	73	7,98
I mostly agree	617	67,50
I totally agree	64	7,00
Violence mostly happens on the way to school		
	number	%
I do not agree at all	398	43,54
I slightly agree	143	15,64
I do not know	218	23,85
I mostly agree	100	10,94
I totally agree	55	6,01

A separate part of the questionnaire is dedicated to the students' attitudes about the school violence prevention. In accordance with that, we wanted to know to whom students would address for help in case of violence, whether the problems of violence are being solved in their school and finally, what is their attitude about how violence can be reduced and prevented. The results of the survey have shown that the biggest number of students would address to their parents in case of violence (740 students), while the rest would address to a teacher (30 students), to a psychologist (17), to a principal (23), to a boy or a girl friend (104). The above mentioned proves that the students still have the greatest confidence in their parents in case of violence or in a boy or a girl friend. On the other hand, they have minimal confidence in the school staff: psychologists and principal, which leads to a conclusion that the mentioned persons are not engaged enough in the solving of this problem, so the examinees doesn't recognize them as subjects they can confide in case of violence, nor that they can expect help or support from them.

That is also confirmed by the students' attitudes about whether their school is successful in solving problems of violence. As an answer to that question, 432 students responded negatively, 217 slightly agree with the mentioned statement, while even 180 students don't know whether their schools are successful in solving problems of violence. The mentioned data are worrying if we have in mind the fact that the schools, in accordance with the adopted regulations (the Special Protocol for protection of the children and students from abuse and neglect in educational and pedagogical institutions, as well as the Rules of the Protocol of Conduct in the institution in response to violence, abuse and neglect), were obliged to undertake certain preventive activities, and to define the Program of children/ students protection from violence in the Annual work program and to create a Team for children/ students protection from violence.

The students' attitudes about how the school violence can be prevented (reduced) show that students think preventive measures which include mutual activities of all parts of society are the most important, whereby students consider that they also have to be included in solving this problem.

Table 6. Students' attitudes about how the school violence can be reduced

All bullies should be punished very severely		
	number	%
I do not agree at all	158	17,28
I slightly agree	390	42,66
I do not know	191	20,92
I mostly agree	142	15,53
I totally agree	33	3,61
Violence can be reduced with continuous preventive application of educational methods in families, schools, social organizations and mass media		
	number	%
I do not agree at all	-	-
I slightly agree	21	2,29
I do not know	43	4,70
I mostly agree	310	33,91
I totally agree	540	59,08

Violence can be reduced with combination of educational and punitive measures		
	number	%
I do not agree at all	220	24,07
I slightly agree	178	19,47
I do not know	41	4,48
I mostly agree	310	33,91
I totally agree	165	18,05
Students should be included in the violence problem solving		
	number	%
I do not agree at all	5	0,54
I slightly agree	27	2,95
I do not know	42	4,59
I mostly agree	412	45,07
I totally agree	428	46,82

Finally, we were especially interested in whether the students are afraid of violence they could experience in school. The data we obtained show that this fear is present at even 613 examinees (67,06%), although children in school should, above all, feel safe and satisfied.

Table 7. Students' perception of fear from violence

I am not afraid of violence		
	number	%
I do not agree at all	613	67,06
I slightly agree	170	18,59
I do not know	38	4,15
I mostly agree	33	3,61
I totally agree	60	6,56

CONCLUSION

If we summarize the most significant results of our research, we can say that violence is present in schools, whereby the most present are the forms of the verbal violence (gossiping, calling names, teasing, etc.). Generally speaking, in all previous researches of the school violence, the verbal violence is presented as its most frequent form. Also, students are mostly willing to admit that they performed the verbal violence, while they are very restrained when other forms of violence are concerned, first of all the physical violence. The boys are more pron to the violent behavior than the girls, and the older students tease the younger ones more frequently. The period between the classes, i. e. during the brake and the schoolyard are time and place when violence happens the most. Parents are mostly recognized as subjects whom the students are addressing to in case of violence, while the least level of trust belongs to the psychologists, principal and teachers. The fact that big number of students consider that their school doesn't undertake or they don't know whether any measure for reduction, suppression or eradication of violence is undertaken is disturbing, but they mostly agree with the statement that violence can be best prevented by applying preventive measures and by mutual action of all parts of society, i. e. by cooperation of students, teachers, parents and wider social community. Finally, there is an expressed fear at students from the possibility to experience the school violence.

However, we have to mention that, no matter the fact that the researches of this phenomenon are very significant not only for determining its etiology and phenomenology, but also for conception of the preventive programs which can contribute to prevention and reduction of the school violence, we consider that our research, as the other researches which deal with this problem, still cannot offer the right and complete Figure about the diffusion of violence. This is because many students refrain from being completely honest, scared that the surveys are not anonymous or even because of some other reasons, like fear, distrust, ignorance, or even and unfortunately disinterest. Also, our research couldn't include all the aspects of violence, for example, the teachers attitudes towards violence, characteristics of violence in rural environments, which would determine an eventual influence of the environment on the scope and forms of violence, the status of the children/ students who are witnesses/ observers of violence, etc., so we leave that as a recommendation to some future researches related to this subject.

Despite the rapid emergence of multidisciplinary research that examines the impact of school violence, effective school-based interventions to ameliorate safety are needed. Unfortunately, although big number of strategic documents are adopted in our country to prevent violence and that the current laws and bylaws prescribe obligating rules which the educational institutions and other competent authorities have for prevention and protection of students and children from violence in the educational institutions – the level of violence is still high. That leads to a conclusion that the mentioned documents are not consistently applied in practice, and that there is still some confusion when it comes to responsibilities, potential measures to apply, there is a lack of recording of the violence cases and preventive and repressive measures, measures of intervention applied by the schools are erratic, their efficiency is not supervised, etc.

Having in mind the scope, the intensity, forms and increasing tendency of the violence level in schools, it is clear that in the future it is necessary to pay more attention to this problem, and that above all implies a consistent application of the adopted Protocol and other strategic documents and acts in practice.

The suggestions, i. e. recommendations which we suggest for more efficient battle against this problem imply: deeper and continuous cooperation of students, parents and teachers in solving the problem of the school violence; raising awareness of students, parents and all the staff in recognizing violence and the significance of preventing it, which also implies giving information to the mentioned persons about the rights, duties and responsibilities which are prescribed by legislative, bylaw and other general acts related to this subject; improving knowledge, skills and abilities of school staff, professional services, parents and students which are necessary for timely and efficiently response to violence; development of preventive educational programs in order to create a tolerant, non-violent atmosphere, as well as development of value orientation, i. e. moral education.

Having in mind that violence is a reflexion of overall social situation, there is no doubt that this problem can be solved only if all the society is involved in its solving, and that implies that prevention and protection of children/ students from violence should be one of the priority tasks of all the society, i. e. of the country.

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II PART.
ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURIAL SKILLS

ENTREPRENEURSHIP, EDUCATION AND ORGANIZATIONAL CULTURE

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ABSTRACT

This paper explains entrepreneurship and entrepreneur as synonyms and symbols of economic, technological and social progress of a country. We presented a role of education system, as an inevitable and endless source of possibilities for new knowledge of a modern entrepreneur. We explained the programs of trainings especially designed for entrepreneurs, owners and managers of small and medium enterprises. We pointed out to the possibilities of developing market relations in education and establishing the education services market, for limiting the monopoly of the state and public education, increase in freedom in choosing the higher education institution, raising the quality and efficiency of education, as well as for hiring various sources for education financing. The results of a research, which was done by the Chamber of commerce of Serbia, are given, and they relate to the needs of economy for adequate knowledge and skills. The role of organizational culture was defined, causes that influenced the significance of organizational culture, as well as the elements and kinds of organizational culture.

***Key words**: Entrepreneurship, Education, Skills, Organizational Culture*

***JEL Classification:** L26, I21, I23, I25*

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INTRODUCTION

Entrepreneurship, as an entrepreneur's activity, can be described as a dynamic process of constant changing and economic structure and its efficiency in which the individuals take over the risk connected to the results of a business action. He invests capital and time, employs other people, designs a business project, realizes it and controls it, only to, in the end, when he pays all the participants, gain a profit. He counts on profit, but in generating it he relies on his personal abilities, because no one guarantees him profit. He must be brave, careful, rational and psychic. The lack of profit is his failure that not only costs him financially, but socially and psychologically as well. Odds for profit and faith in his success are his main motive.

To the questions of how ambitious entrepreneurs succeed in recognizing and directing the chances to their side, what makes them different from others; if there are rules and principles that can help their success etc. we can say that the key to success is dynamic entrepreneurial process (Ilić, 2003:1). Moving forces in entrepreneurial process are: opportunities, entrepreneur and entrepreneurial team, resources, adjusting and balancing, as well as integration and completeness. Entrepreneurs live in the conviction that in every problem lies a potential opportunity. Entrepreneur is able to recognize what other people need and then to create some their (new) need. He is able to anticipate market trends and recognize opportunities that other are unable to see. Entrepreneur thinks freely and individually and believes that his business idea has a market value. (Kastratović, 2008:2).

Renowned economist Joseph Shumpeter added a notion of innovation to the term entrepreneur, seeing an entrepreneur as someone who researches new combinations and unexplored technologies. In the book "Innovation and entrepreneurship", a leading analyst of entrepreneurship Peter Dracker emphasized: "Innovations are specific entrepreneur's tools, means with which they exploit change as opportunity for various businesses and various services". Definition which contains some of the tendency towards risk and innovations was given by Marej Lonj and Jan Macmillan, researchers of entrepreneurship – entrepreneurship as creation of new enterprise.

According to the group of authors, entrepreneurship implies a constant need for changes, and timeframe necessary for changes is shorter, which implies that innovations and entrepreneurial activity must apply if entrepreneurial thinking is directed and encourages risk, decision-making in absent moments, the attitude according to which one should introduce innovations in all pores of activities in unstable fields (Karavidić et al., 2010:3). Entrepreneur is a person who, by applying new ideas or innovations, as well as taking over the business risk in an enterprise places its products/services at the market in order to gain profit. An entrepreneur is a person who creates a new enterprise.

Who are real entrepreneurs of modern times and what do they actually do? Peter Drucker, an esteemed writer and analytic emphasized: „Ones are eccentrics, others are conformists, some are fat, and others are slim. Ones are worried, others are relaxed; some drink often, others do not; some have magnificent charm and warmth, some are ice cold“. It is difficult to imagine a more diverse group of people.

Entrepreneurship and entrepreneur have today become – in developed countries of market economy and in leading countries in transition – synonyms and symbols of economic, technological and social progress. A critical component and a backbone of market-oriented democratic society are small and medium enterprises and private entrepreneurship, which are becoming a foundation for constituting of „entrepreneurial society“- a bridge to switch from managerial society to entrepreneurial society. Entrepreneurship and management and entrepreneurial innovation and flexibility become base and main mark of entrepreneurial management, no matter if it is a large or small enterprise, production or service organization, government or non-government institution. Without the expansion of private initiatives of small and medium enterprises, as well as accepting European and world market criteria, no one can at national scale – regardless of the character and scope of international financial help and support – expect economic prosperity, social welfare and real democratization of society.

In order for a modern entrepreneur to be successful, he or she has to have the ability to design and plan business actions, abilities of initiative and innovative thinking, has to be a good organizer, has to know how to motivate people, to know how to transfer responsibility and control directly, to be patient, systematic and persistent. In an optimal way he has to manage people, financial and material means and information.

Entrepreneur can transfer many responsibilities to other people, but he has to maintain general control over business actions. This is why, besides abilities of initiative and leadership, he has to be able to manage as well. Successful entrepreneur has to be a good manager, because in the beginning, in the growth phase of an enterprise, he does all the functions in business process (planning, organizing, leading and control). By development and growth of an enterprise, the level of necessary managerial knowledge is greater.

The official attitude of European Union is that small and medium enterprises are extremely significant from the aspect of their contributions. Around 30% of European SMEs put growth as their main goal. (Kastratović et al., 2008:4). European Union encourages the work of small and medium enterprises by various measures:

- by decrease of bureaucratic limitations and simplification of procedures of founding an enterprise by simplified accounting above all,
- giving greater influence to entrepreneurs on forming business regulations,
- simpler approach to financial sources that open new jobs,
- removing the various market limitations,
- encouraging research, innovation, counselling and trainings of entrepreneurs,
- encouraging business activities in foreign markets –internationalization and euroisation of business activities.

Development of world economy faces the trends like these problems: lack of resources, aging of population with further development of globalization process. In revised strategy until 2020 EU intends to realize a smart, sustainable and economic growth. The growth of economy is expected to provide: growth of employment, productivity and social cohesion (Milošević et al., 2014:5).

EDUCATION ADAPTED TO ENTREPRENEURS

In countries with market economy and in certain countries in transition, in which around 90% of economic subjects are represented by small and medium enterprises and independent stores, universities and other scientific and educational institutions and associations, and they are the main part of so-called developmental coalitions, which contribute mostly to directing of development and advancement of business of small and medium enterprises at local, regional and national level. Demands, values and principles of entrepreneurship and knowledge connected to management of small enterprises involve the concept of integral education system, especially in teaching of high schools and faculties, as well as in various forms of informal education subsystem (education of employed and unemployed). National professions' nomenclature is subject to constant changes.

It is highly desirable to have in our country as well the projecting of whole concept of education for entrepreneurship, adjusted to the society of market economy, which will be compatible with the practice and modern tendencies in Europe and the world. Especially significant is the increase in creativity, problem-solving skills and acquiring practical abilities and skills. The priority should be given to the programs and forms of educating and training of unemployed young for starting their own business.

Development of education system is essential for the progress of entrepreneurship. The researches, done in most developed countries, confirm dependence of economic and social progress on development of education system. In estimating the solvency of a country, among other things, education and research systems of that country are appraised. Education system represents the inevitable and endless source of possibilities of new knowledge necessary for modern entrepreneur.

This is why education has a triple task (Group of authors 2004:6). Firstly every man needs to be able to recognize and develop his possibilities and to harmonize his tendencies with them and his lifestyle. Secondly, every man should transfer traditional and actual values of a community to which he belongs, in order to harmonize his lifestyle and nature and social environment. And finally, every man should be prepared for the right vocation which will enable him to realize the chosen life path.

Besides official education, chosen according to the tendencies and abilities, entrepreneurs need educational system which will offer various forms of functional education – lifelong learning.

Programs of trainings that are specially designed for entrepreneurs, owners and managers of small and medium enterprises, should incorporate adequate mastering of techniques and skills of modern management, especially management of changes, as well as functional management, marketing management and human resources management, and in certain areas research and development management as well.

It is necessary to provide adequate elementary business education for those who want for the first time to realize certain business idea, as well as training to those entrepreneurs who just founded their own company. It is necessary to initiate and realize the programs of education for owners of private small and medium enterprises and entrepreneurs relating to introducing the possibilities and advantages of new instruments and methods of financing which are expected to be available in the following period, as well as the skill of financial management and managing accounting.

Regarding the significance of application of modern information and communication technologies, it is also desirable to acquire knowledge in this field in the sector of SMEs, including the employees, and especially acquiring new skills, knowledge and abilities connected to development of electronic business.

Encouraging the production with SMEs for export, should include business concept of branch clusters. Cluster represents a critical mass of an enterprise in a certain branch and at a certain location (country, region), i.e. a special system of connecting and organizing of an enterprise which will advance its competitiveness, productivity and innovations (Kastratović et al., 2008:7). In practice clusters can have various forms, but most of them include a group of enterprises, suppliers of specialized inputs, components, equipment and services and enterprises in connected fields. In Europe, especially significant clusters connected to the sector of SMEs, where business, interest and strategic joining of producers in one field, servicers and distributors is dominant. Small enterprises can have significant benefits from participating in a cluster, especially in the domain of cooperation between enterprises, innovative activities and access to specialized resources.

Encouraging export of SMEs implies educating owners, managers and employees in small and medium enterprises for a successful presentation at foreign markets. The increase of competitiveness and export performances of SMEs will benefit from having access to relevant information: researching the foreign markets, especially foreign competition; appropriate promotional activities, especially organized presentation at foreign fair trades and on-line connecting with foreign buyers and partners via Internet.

PRIVATIZATION AND EDUCATION

Privatization as a notion in developed economic countries is known for a long period of time and relates to modernization of the existing, through decrease of public sector, and by that the financial burdening of state.

For countries in transition, privatization signifies a complex economic and social transformation. Privatization in education is inevitable, as well as in any other field, it inevitably includes the field of education, labor market and employment. Private initiative in education is compatible with the private initiative in other areas. Common, main and inevitable criteria of success of an entrepreneur, regardless of the field, are performance, quality, time, expense and profit.

In most of the countries of market economy, as well as in the leading countries in transition, private and public education exist as parallel and relatively equal sectors of the education system and national education politics. They are less of disloyal competition, and more of partners in satisfying various education needs of the society, enterprises and an individual. It is obvious that for establishing unity of public and private education, because both should contribute to satisfying individual, corporate and social education needs, as well as more complete realization of the right to education which is in the function of realizing the right to work by employment. Researches show that in these countries private formal and informal education (from the primary school to university) includes 10-25% of pupil and student population, with the tendency of growth, especially at the level of middle expert and university education. (Group of authors 2004:6).

Expansion of private education and more complete state regulating of their status in the education system and in national educational politics, but in the politics of labor market and employment, in many countries and constitution in labor legislature, as well as group contracts and other instruments of social partnership, is directly connected with the orientation of these countries for enforcing the private entrepreneurship and competition, i.e. privatization in general and advancement of product, process and services quality. Especially in countries in transition, greater possibilities for developing market relations in education and establishing of education services market, for limiting the state’s and public education’s monopoly, increase in freedom of choosing schools and characters of education, for increasing the quality and efficiency of education, as well as activating various sources for financing of education.

In the Republic of Serbia, the state enabled by laws that, besides the state, primary, secondary and higher education institutions can be founded by “other legal and physical persons”. In public but also in official politics, there are many misunderstandings but also open disagreements when it comes to demands for more complete and cheaper regulating of roles of status, character and conditions for founding and work, especially of financing of private education institutions. The unnecessary gap between private and public institutions of higher education is still present, it is like students acquire “private or public knowledge”, and not that whichis available due to accredited study plans and programs, according to the Bologna Declaration. Working in small groups, mentor and tutor work, modernly equipped space, adequate professional practice are just some of the factors that will influence their choice.

Private education is considered to be a private matter of individuals – students and their parents. Student has to have the right to freely choose private or public education institution, as well as the right to, regardless of the fact that he attends a private or public education institution, pay the annual amount of education expenses. The state would have to recognize the expenses per student to private schools and faculties as well, the same as for public education institutions.

The state cannot be liberated from obligation to cover the education expenses of students until the level of public institutions. That is the right of students and the obligation of the state. In the other case, parents whose children continue their education in private education institutions, should be liberated from paying the contributions for education. The issue of possibility of founding mixed, private-public education institutions is also present, or for giving concessions to private, legal and physical entities for certain education institutions, i.e. their parts/units.

We can expect that along with the measures of intensifying the process of privatization and democratization, the favorable conditions for privatization and deregulation of education will be created, as well as for democratization and decentralization of such a vital segment of society in which the preparation and development of human resources is done. According to the research of renowned professor dr Bezdanov, without unity and equality of private and public education and democratization of the right to education, especially of employed and unemployed, there is no economic or social progress of society.

THE NEED OF ECONOMY FOR ADEQUATE KNOWLEDGE AND SKILLS

In this part of the paper we showed some of the results of research done by the Chamber of commerce of Serbia in cooperation with the regional chambers of commerce, with the subject of researching the needs of economy for knowledge and skills. (CCS, research management Đurić, 2012: 8). The research was done in the period from April to July 2012, because of understanding the needs of employers for staff. Research was realized by interviews, distribution of surveys to the members of boards of associations and Chamber of Commerce of Serbia and economic entities in cooperation with the regional chambers of commerce.

Research included the sample of 151 economic entities from the territory of the Republic of Serbia. If we look at it from the aspect of the number of employees, 128 small and medium enterprises (up to 250 employees) and 23 large enterprises (over 250 employees). Small and medium enterprises were the priority, considering that large enterprises already have developed recruiting system, human resources management system and assessment of the needs for skills and knowledge. The results of the research showed that in the enterprises majority is comprised of employees with finished vocational high schools, a bit less that finished gymnasiums, even smaller number is of those who are qualified employees and the smallest number of highly educated employees with Bachelor, Maser or Doctoral degrees.

Here are some of the interesting results of the mentioned research (www.pks.rs/sadržaj/f).

To the question "Who is responsible for human resources, additional education and trainings of employees in an enterprise?" 151 enterprises gave answers (128 SME and 23 large). In majority of enterprises they said: 44% director/manager is responsible for human resources, 17% the owner, 16% human resources management, 14% human resources department, 2% external consultant, 6% someone else, and 1% no one.

Only in small and medium enterprises one person does many jobs at the same time, it is logical that in 61% of cases human resources are managed by director/manager or owner. That is why we emphasize their own education and functional education in the area of HRM, in order to be able to advance the competencies of employees and to motivate them to get further education and trainings.

To the question “Do you have means allocated to additional education and trainings of employees in your annual financial report?” 51% answered affirmatively and 49% negatively. A high percentage of enterprises that, in their financial plan, have the means allocated to additional education and trainings of employees causes a justified question to which extent these means are really used in those purposes. If there are planned means for education that should imply the creation of the plan and program of employees’ trainings so that their primary obligations would not be interrupted. That would mean that an enterpriseshould have one person or a whole team of people monitoring and analyzing the needs for trainings and making the program, which is more likely to exist in large enterprises than in SMEs.

To the question “Do you use subsides for additional education and trainings of employees or other kind of free educations?” 77% said that they do not use subsidies, 125 uses them and 11% are not familiar with them. This question directly relates to the authorities of the state in encouraging of employment through additional vocational trainings of employees. Since 77% replied that they do not use the subsidies for additional education and free trainings, we can say that they are not enough familiar with programs that the state offers, i.e. National employment service. First of all we think of the training programs that are directly offered to employers.

The research conducted by the Chamber of commerce of Serbia gave the following results: in direct conversation with the enterprises’ representatives they found out that there are cases when enterprises apply for subsidies for opening new jobs, but the local NES has not got enough funds, i.e. the funds allocated to this purpose at the annual level are spent in the first half of the year. At the level of the state i.e. resource Ministry of education, science and technological development, the system of continuous education of adults is not arranged, there is no appropriate legal framework, and the strategy and action plan of educating adults are non existent, and the strategy and action plan of educating the adults are not conducted in full capacity. We should question the effects of active employment measures and promote more those that are shown as being good, in order for economy to use the state’s subsidies for education and trainings of employees in larger amount, especially having in mind the fact that the means are from the budget of the Republic of Serbia and means that Serbia got based on participating in projects financed from EU funds.

To the question “Do you have required competencies (skills and knowledge) necessary for working on a specific job?” (this relates to what is written in internal documents of an enterprise, and it implies the necessary competencies for doing a specific job) 79% of entrepreneurs said that they do have required competencies, 17% has them only for certain jobs and 4% do not have required competencies. However this high percentage of enterprises that said they have the required competencies for certain jobs, should be taken with reserve, because it is possible that they were determined only in documents (Systematization of jobs and Labor contracts), and that in practice employees do not have the necessary knowledge and skills for doing a certain job.

To the question of the number of days spent for additional education and trainings during the year, over 10 days had 31% of managers, 28% of professional staff and 19% of other employees. 17% of managers, 19% of professional staff and 9% of other employeeshad trainings lasting from 6 to 10 days. 21% of managers, 26% professional staff and 28% of other employees had trainings lasting from 1 to 5 days per year.One thing that should definitely be corrected is the fact that a large number of interviewed enterprisesdo not possess a developed technology for determining the needs for trainings and assessment of effects of trainings conducted, and that is why they do not have an established system for human resources management. Monitoring, analysis and satisfying the needs of economy for certain skills and knowledge is impossible if at the state level (macro level), and at an enterprise level there is no established system for determining needs and assessment of effects of realized trainings.

To the question of time when the additional educating is realized, in 64% of cases it was mostly during the working hours, in 18% mostly after the working hours, in 15% strictly during the working hours and in 3% strictly after the working hours.

Based on this we can conclude that the employers consider that the motivation of employees for trainings will significantly decrease if the trainings are done after the working hours. On the other hand if the trainings are done during the working hours several times a year, there is the question of satisfying work tasks. The solution that could be acceptable for employers and for employees is that the trainings start during the working hours and continue until finished. In this way work would not be affected and the employees would not lose much of their free time. By introducing the system of acknowledging qualifications got through work, trainings and professional trainings organized by the employer, employees would be motivated to get professional education and participate in trainings even after their working hours. Experiences from France show that the employees are motivated for attending trainings even after the working hours because the new knowledge are acknowledged as acquired qualifications which is a part of group contract.

To the question of improving work performances of employees upon completed additional trainings or educations 82% of interviewees confirmed that there is improvement, and only 1% answered negatively, and 17% of them do not keep score. For those who confirmed that the educations and trainings had a positive impact on improving the work performance, we do not know clearly whether the practical check was done on them using the newly acquired skills in practice, and if they are necessary for a specific job or maybe the assessment of education necessary for a certain employee was wrong. On the other hand, the percentage of those who do not have any data on whether the training contributed to improvement in work performance is high (17%). This signifies that trainings are done on the go, and that their real effect is not assessed in practice which can point to the irrational usage of means for trainings or unrealistic understanding and planning of trainings.

To the question of how often the employees attended trainings in the last two years and benefits of the trainings – 54% said that they usually educate themselves (literature, internet), 33% attends seminars and conferences and 33% internal educations. The smallest number of interviewees said that they never or very rarely acquire new knowledge and skills through additional, formal education, professional trainings, mentoring, through practical expansion of knowledge and internal trainings with external or internal lecturers. Responses to this question say that the employees still rely mostly on their own resources and motivation for adopting of new competencies and that on the other hand scarcely use possibilities given by continuous education of adults (even 72% rarely or never got additional qualifications via formal education). One of the reasons for this is the fact that the Law on education of adults has not been passed yet and that systematically there is no solution for the issue of professional education of adults through retraining, additional qualifications, education and acquiring of qualification based on knowledge and experience gained through work.

Seminars and conferences are considered to be partially useful by 36% of interviewees, 33% considers them to be useful if they are a part of formal education system and 31% that internal educations are partly useful. These data once again show that employers and employees are not familiar with the advantages of professional development trough formal education of adults, and the solution to this problem should be looked for in urgent establishing of cooperation of the state and partner institutions.

TYPES OF ADDITIONAL EDUCATION AND TRAININGS NECESSARY TO ENTERPRISES

Based on the mentioned research, conducted by the CCS, we have the results that relate to types of additional education and trainings necessary to enterprises. The necessary trainings for 40% of management are business processes' management, communication skills and resources management. As for desirable topics 57% interviewees considers that to be management at strategic level, 56% supply and logistics and 55% analysis and control of business. As less important trainings 23% of managers say that those are finance for employees that do not work in finance, 20% rules of business in EU and 18% changes management. As unnecessary trainings 20% of managers consider finance for employees that do not work in finance, 15% supply and logistics and 6% analysis and control of business. When we talk about the employees, 22% considers communication skills as necessary trainings, 15% rules of business and quality management, 52% considers communication skills to be desirable trainings, and for 48% of them time management and stress management are desirable trainings and for 47% sales. Less important trainings for 45% of employees are resource management, 41% growth management and 41% management at strategic level. 49% of employees consider finance for those who do not work in finance as unnecessary training, 48% management at strategic level, 40% analysis and control of business. Differences in attitudes given by the managers and employees point to the fact that both categories of interviewees support trainings concerned with their level of responsibility in an enterprise.

To the question of which characteristics are considered to be significant for an enterprise, 74% of managers said loyalty to the economic society, 67% focus on results, perseverance and efficiency, 67% readiness to take initiative in suggesting the new solutions and accepting innovations. 44% of managers consider mobility inside an enterprise to be desirable trait of employees, 44% positive reactions to changes/innovations in an enterprise and 41% readiness and openness to increase or change of current activities. 7% of managers consider readiness to learn as less important traits of employees, 6% mobility inside the economic society and 3% readiness and openness to improving of business process in current circumstances. As necessary characteristics 2% of managers see the readiness and openness for improvement of business process in current circumstances and 2% readiness to take risk for own initiatives and positive reacting to changes/innovations in an enterprise.

In the category of employees 63% says loyalty to an enterpriseis a necessary personal trait, 55% focus on results, perseverance and efficiency and 41% mobility inside economic society. 56% of employees said that positive reacting to changes/innovations in an enterprise is desirable, 56% readiness and openness to improvements of business process in the current circumstances and 48% readiness for life-long learning. 12% of employees considers readiness to take risk for own initiatives to be less important trait, 17% readiness for taking initiative in suggesting new solutions and 12% readiness for life-long learning. Unnecessary characteristics are thought to be readiness and openness to improvements of business process in the current circumstances by 6% of employees, readiness and openness to increase or changes of current activities by 6% and readiness for life-long learning by 4%.

Answers to the questions on employees' traits in enterprise's development show that both categories of interviewees, managers and employees, replied this answer from the aspect of their own positions in an enterprise, so for the necessary employees' traits that the managers think are unimportant, the employees see them as desirable and vice versa. All the traits and skills characteristic for employees that possess personal initiative, are efficient, loyal , accept changes and new things in business necessary for the development of an enterprise, so everything that falls under soft skills which can be of great use to employees regardless of their job.

ORGANIZATIONAL CULTURE

Organizational culture is the cause of detailed assumptions, that a specific group gave, discovered or developed, and which has adapted to the environment during its work, but also to the internal factors. Causes have proven to be well and valuable enough to be accepted by new members and make them think and feel equally in the same situations (Pržulj, 2000:9)

The beginning of studying of organizational culture is connected to the name *Andrew Pettigrew* who, in the seventies of the last century, was the first to point out to the possibilities of using the culture in analysis of an organization. The most significant samples that influenced the significance of organizational culture are: a) decrease in competitive abilities of American economy; b)Japanese economic successes; c) change of values; d)studying the factors of success of introducing organizational changes.

Organizational culture is sill a concept that is not researched enough, which transferred from introduction and elaboration phase into a phase of development and critical consideration. Other terms are used in literature as well, like for example; «entrepreneurial culture » and «corporate culture » etc.

Organizational cuture is interpreted as a result of historical process, whose flow and result is importantly determined by human decisions and actions. As a complex phenomenon, created through time of cohabitation of one social whole, organizational culture consists of two grous of elements. Invisible elements constitute the foundations of a culture, that cannot be easily seen and they can only be used to draw conclusions. Visible elements are accessible to the environment and among them one can differ: value, ideals, norms, symbols, stories, customs, traditions etc.

The content of a culture is importantly determined by the type of task of an organization and culture of professional groups way of management and allocation of power in an organization, as well as detailed premisses on time, space and man. Many theoreticians used differen criteria according to which they determined the types of organizational cultures (Kastratović, 2008:2).

Table 1.Types of organizational culture according to DillKennedi

	Type of organization's culture	Market - risk	Feedback	Characteristics of the culture
	«Macho culture of tough people»	big	fast	Cult: Player (star) Climate „all or nothing“ Protective rituals Value: Risk
	«Hard work – great pleasure»	small	fast	Cult: team Client-oriented Game rituals Value: Scope, amount
	Culture of risk	big	slow	Cult: Technician Technology-oriented Conference ritual Value: Experience
	Culture of procedures	small	slow	Cult: Bureaucracy Procedure-oriented Hierarchical rituals Value: Continuity

Source: Kastratović, 2008:68

Table 2.Types of organizational cultures according toTavčar

RESPONSES	**FAST**	**BUSINESS CULTURE** **Culture of diligent work, »negotiation culture«** Risks are small and divided; feedback is current; basic values are users and their needs; decision-making process is fast and simple; the success is measured in quantity.	**POWER CULTURE** **Culture of risk, »man’s culture«** It is characteristic for operating the stock market, fashion world, professional sport, in general for people who are prone to riskand dynamic work; risks are great, success and failure come over night; reasonable risk is a virtue, caution is weakness, being a fighter is essential; time is strictly determined..
		Role models are successful managers, sales people, agents; associates are pleasant and open, group cooperation is successful; culture attracts active people, who want fast results.	Role model is a firm, managing person; competitors enter a severe competition, they are prone to hazards and gambling, they are short-sighted and superstitious.

	SLOW	**PROCESS CULTURE** **Bureaucratic culture, »bureau culture«** It is characteristic for administrative service, administration, large enterprises and banks, insurance companies; individual risks are small, results are almost nonexistent; form is more important than the content; complete execution of every task and taxes are essential.	**SYSTEM CULTURE** **Culture of lee, »architectural culture«** It is characteristic for service sector and large projects, military, construction, large systems; risks are very high, feedback is very slow; decision-making process is centralized; thoughtfulness and determination are its values.
		Role models/leaders protect an organization from (unknown) dangers; culture attracts meticulous and neat people, who like details and they check all the changes and influences	Firm, self-conscious and calm role models, who endure long-term insecurities; associates respect authorities and technical possibilities, exchange experiences, support each other and reject reckless behavior
		SAFETY	**RISK**
		MEMBERS' FEELINGS	

Source: Kastratović, 2008:69

Numerous researches and comparative cultural analysis in many developed countries have shown that enterprises can build their own system of values and culture and by doing so they can facilitate processes of internal integration and external adaptation.

According to the University professor dr Živka Pržulj, «Successful enterprises do not employ some extraordinary men, but them being extraordinary is based on the way how the people are treated, how, in those enterprises, the job is done and what the relations are like among management and employees and employees and clients».(Pržulj, 2000:9)

CONCLUSION

Entrepreneurship is a dynamic process of continuous changing of economic structure and its efficiency in which individuals take the risk connected to results of business actions. Entrepreneur is a person who by applying new ideas or innovations, as well as taking over the business risk in an enterprise places his products/services at the market in order to gain profit. A critical component and a backbone of market-oriented democratic society is made from small and medium enterprises and private entrepreneurship, which are becoming the base for constituting of „entrepreneurial society“ – a bridge to be crossed from managerial society into entrepreneurial.

Development of education system is important for advancement of entrepreneurship. It is also desirable in our country as well, to project an entire concept of education for entrepreneurship, adjusted to the society of market economy, which will be compatible with the practice and modern tendencies in Europe and the world. Besides the regular education, chosen according to tendencies and abilities, entrepreneurs need an education system that will offer various forms of functional education – life-long learning.

It is necessary to provide adequate business education for those who want to realize for the first time certain business idea, as well as training to those entrepreneurs who have just founded their enterprises. It is necessary to initiate and realize the programs of education of owners of private small and medium enterprises and entrepreneurs that relate to getting acquainted with the opportunities and advantages of new instruments and financing methods, which are expected to be available to them in the following period, as well as skills of financial management and management accounting.

Results of the research done by the CCS have shown that in the enterprises majority are employed with finished secondary vocational schools, a bit less with gymnasiums, and even less workers are qualified, while the smallest is the number of highly educated employees with finished bachelor, master and doctoral studies. It is obvious that employers and employees are not acquainted with advantages of further education through formal and informal education of adults, and the solution to this problem should be found in urgent establishing of cooperation of the state and partner institutions. By introducing the system of recognition of qualifications got through work, trainings and educations organized by employer, the employees would be motivated for professional trainings and participation in those trainings even after the working hours.

Organizational or entrepreneurial culture is extremely important for understanding the people’s behavior in organizations. Numerous researches and parallel cultural analysis in many developed countries have shown that enterprises can build their own system of values and culture and by that facilitate the process of internal integration and external adaptation.

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KNOWLEDGE MANAGEMENT TECHNOLOGIES AS RESOURCES OF INTELLIGENT BUSINESS

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ABSTRACT

The subject of this paper is the knowledge that is recognisable and identified as a key organizational resource and technological bases for knowledge management that provides competitive advantage, creates flexible and dynamic work environment and improves the performances of the business system. The purpose of process of knowledge management is to make business system intelligent and find alternative ways of acquiring and using the knowledge in order to secure a long-term competitiveness in a global and turbulent environment. Considering that knowledge management is a new discipline, the future of process of knowledge management demands understanding the trends in technologies of knowledge management. In that sense, this paper has a goal to represent the systems for creating and discovering knowledge, systems for keeping and formalization of knowledge, systems for organization and distribution of knowledge and systems for knowledge application. Having in mind the area of research, this paper uses: descriptive method, inductive and deductive methods, as well as basics of logic method that enabled this research to draw certain conclusions on the subject of research, and we also studied professional, domestic and foreign literature. Knowledge management system which has these mentioned technologies implemented in the paper enables the technical solution to gather, store, analyse and disseminate knowledge. The contribution of the suggested solution is seen in identifying of strategically critical knowledge for the business system, organizing efficient data flow which would provide competitiveness at the market, possibility of solving managerial issues, efficient gathering of necessary information which can be of significant strategic importance in business decision-making and expertise of high level which presents the best thoughts of top experts in certain area.

Key words*: Knowledge, Knowledge Management System, Information and Communication Support, Intelligent Business*

JEL Classification: *D83, M21, A10, O32*

UDK: 005.94

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INTRODUCTION

Modern society's economy is transformed from information society to the society of knowledge. Knowledge of all employees, which they turn into a market value, represents a resource, whose value can be measured and according to that they represent the foundation of intellectual capital of a business system. Knowledge is relevant information that becomes a dominant factor of economy of modern society, it comes from the experience and is based on the knowledge from the past based on which we can perceive events and situations.

Researches in the area of business success of the companies showed that what a company knows, the way in which it uses its knowledge and to what extent at all managerial levels and especially the speed in which it acquires new knowledge, today represents and gives an advantage to the company in relation to its competition in the business environment.

Seen from the strategic level, it is necessary to manage knowledge in order to create an environment that encourages the usage, generating, division and exploitation of knowledge.

Through application of knowledge management in practice, business systems tend to achieve their goals and the reasons for introducing the systems for knowledge management are ranked according to the most important benefits (Karlsen, Gottschalk, 2004:3-10):

- Increase in profitability and income (67%);
- Protection of talent and professionalism (54%);
- Improvement of services and client’s satisfaction (52%);
- Securing company’s market share in fighting the competition (44%);
- Shorter time of creating new products (39%);
- Entering the new market segments (39%);
- Expenses reduction (38%);

Largest amount of knowledge is transferred orally and via direct communication, between 50 and 95 %(explicit and experience). In this way, larger part of knowledge is lost, so most companies use around 20% of organizational knowledge. Considering this fact, it is very important to find and keep the rest of unused knowledge and turn it into intellectual capital. Finding and keeping the rest of unused knowledge can be achieved by application of new information-communication technologies (ICT) that achieve creating of appropriate environment in which knowledge will be systematically gathered and used with the goal of generating new ideas that create space for innovation. There are many models of management and transfer of knowledge as well as capitalization of knowledge, but what is important; knowledge management must be adapted to organizational structure of business system and its processes. In that sense this paper will present an intelligent system which:

- stores explicit knowledge,
- have the ability of intelligent behaviour and reasoning in a way that is similar to humans,

- provide possibility of electronic communication, team work and cooperation, knowledge exchange, experiences and experts' opinions and
- enable solving management issues, efficient gathering of necessary information that can be of significant strategic significance in business decision-making.

LITERATURE

Knowledge management is an approach that appeared in expert and professional conferences in the mid-90s. It has been developed by theoreticians of management Drucker (Drucker, 1999), Nonaka, Takeuchi, (Nonaka, Takeuchi 1986) Senge (Senge, 1990), and Stewart (Stewart, 1997). Fast development of information and communication technologies contributed to fast development of knowledge management. Researching on the business at the speed of thought and how to build „a digital nerve system“, they spotted that hardware, software and communication standards have changed business and the behaviour of buyers (Gates, Hemingway, 1999,) and predictions that knowledge will change more in the next ten years than it has in the last half of century came true. „Information systems will keep and store the history of corporations, experiences, skills and knowledge that the employees possess. Information systems and not people will become the new foundation of corporate structure. Employees will be freer to come and leave work whenever they want, but the value of their experience will be installed in the systems that helped them and that will still be there for their successors“ (Applegate et al., 1988*).*

DEFINITIONS

In professional literature there is a large number of definitions on knowledge and knowledge technologies but this paper separates the important ones, for exploring this area.

First definition of knowledge as „justified true belief” is set in Plato's work Teetet (Nonaka, Takeuchi, 1995:21.). Modern philosophy agrees that the Plato's definition of knowledge is fairly good and real so that knowledge as „justified true belief“ can be a much clearer guideline to scientists.

Knowledge is information that has a useful content, it is relevant, it is checked in practice and by its application we achieve problem solving. During time, the information is accumulated, most of them fail, gets outdated, and knowledge is by nature dynamic and grows. Often the notion of intellectual capital is connected to knowledge and brokers insist on these connections, which is true (Barth, 2000,).

Knowledge management is a concept that promises and an instrument that helps organizations provide environment that supports knowledge creation, its distribution and application (Maier, 2007). Artificial intelligence, as a technology which manages knowledge, can be defined as a result of current knowledge that come from different scientific areas and are transformed into a form that enables solving problems while expert system represents a computer program that looks like human expert on well-defined specific task, based on knowledge (Liebowitz et al., 1992).

KNOWLEDGE MANAGEMENT – COMPONENTS AND ELEMENTS

Knowledge management represents a process which helps the business systems to use the knowledge it has in the most efficient way possible. In the context of information technologies knowledge is relevant information and it is used in problem solving within the business system. It can be *implicit (tacit)* knowledge which is personal, informal and undocumented knowledge. It is comprised of skills, judgement and intuition that people own and cannot simply explain and present, and it is based on personal education and gained experience. *Explicit knowledge* is clear, formal, systematic and easily used in communication and transferred.

Components of knowledge management are program and hardware equipment (software and hardware), network, data ware, orgware and human resources. These can also be seen as parts of information systems which contribute to the possibility to create knowledge, accumulate it, purify it, store it, manage it and distribute it.

Basic elements of infrastructure of knowledge management that represent the main trigger of knowledge development are (Figure 1):

- Human resources – Top managers are necessary for understanding, synthesis and interpretation of unstructured knowledge;
- Business processes – It is necessary to have previously clearly set business processes and showed work flows in business systems; and
- Information and communication technologies – Provide gathering, transformation and distribution of knowledge and its usage and quick exchange regardless of the location -Internet, intranet, extranet, e-mail, groupware.

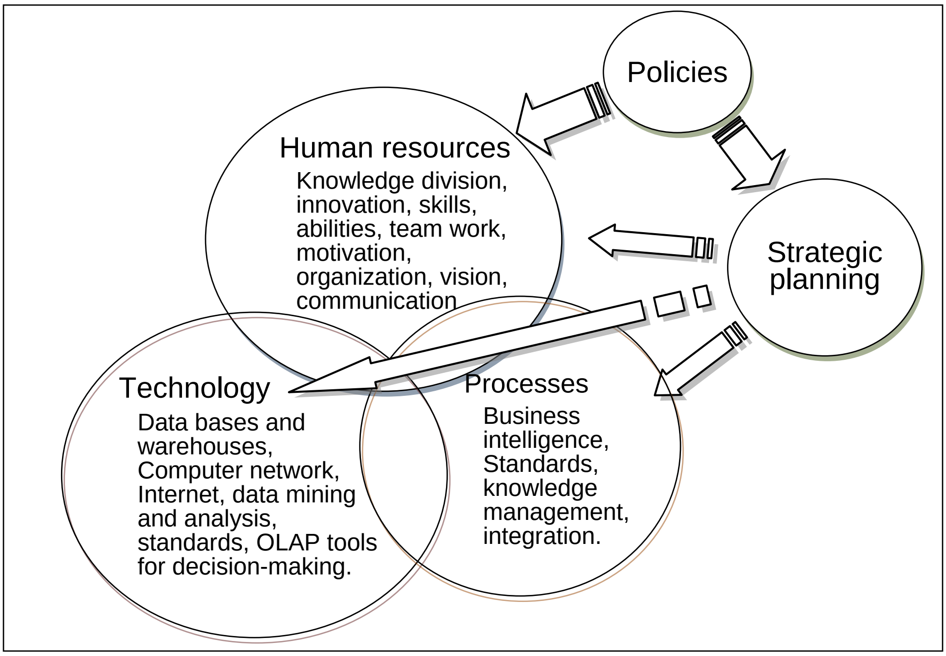

Figure 1. Elements of knowledge management infrastructure

Source: http://www.eknowledgecenter.com/articles/1010/1010.htm (18.06.2014.)

KNOWLEDGE MANAGEMENT SYSTEM

Technological foundation that enables knowledge management in a business system is called knowledge management system. These systems function with the support of modern technology whose selection is a key moment for implementation of knowledge management strategy in a business system (Figure 2).

For a successful implementation of knowledge management system it is necessary to own information on infrastructure necessary for taking care of, creating and storing knowledge and increase in speed of creation and transfer of knowledge via information technologies (Davenport, Prusak, 2000a).

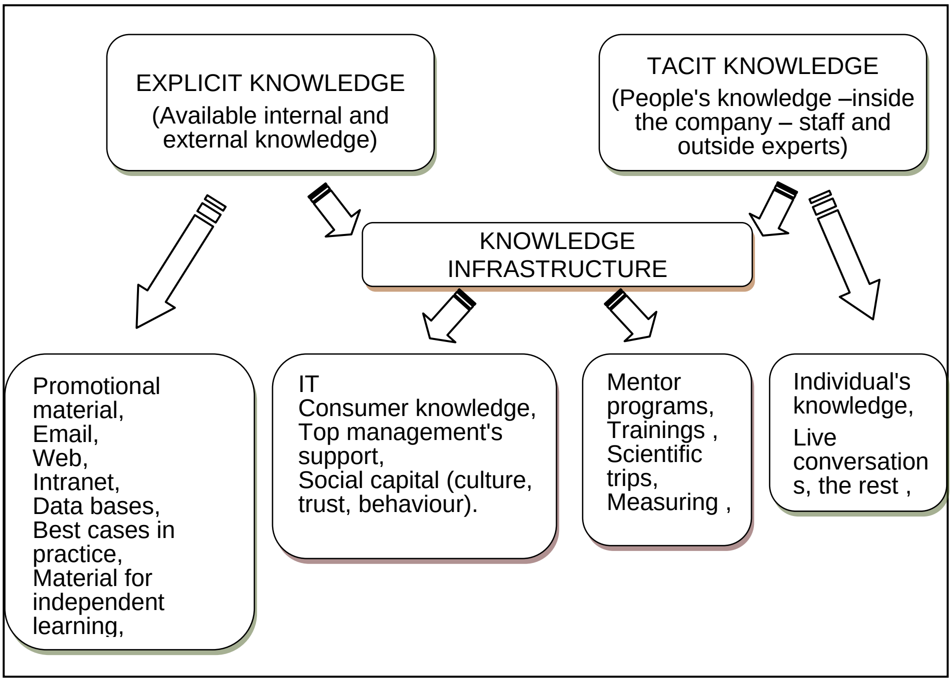

Figure: 2. Knowledge management system –Logical model

Source: Authors

Knowledge management system is supported by information and communication technologies which combine and integrate functions for contextualization and explicit and tacit knowledge through an organization. Primary goal of this system is to integrate knowledge from the past into current activities with the purpose of increasing the efficiency of a business system. The ultimate goal of knowledge management system is to provide support to dynamic learning of an organization and efficient functioning (Gottschalk, 2005:98-118).

CREATING AND GATHERING OF KNOWLEDGE

For projecting and building of database it is necessary to gather and extract knowledge of experts from the problem field, and then transform it into a shape good for efficient usage with the help of information technologies. This process of activation is called knowledge engineering. There are many ways to acquire knowledge: activation, research, connecting, adapting and networking of knowledge.

Activation – represents the purchase of knowledge i.e. purchase of organizations or individuals who possess knowledge. Organizations are bought for generating better income, expanding the business, introducing new products and services, creating new markets, and more often for gaining knowledge that the higher management level possesses. Besides purchase one can rent a source of knowledge e.g. hiring consultants for managing certain projects. Hiring experts with necessary knowledge provides retaining of knowledge as a permanent value in a business system even after an expert leaves.

Research – represents forming of special teams for research work and development. Positive side of this way is that these teams are usually not burdened by short-term profit goals, so the research gift and creativity are at a significantly higher level than in the other parts of an organization.

Connecting – represents connecting of experts in various fields and with various experiences and generating of creative solutions is expected. This way is very demanding when it comes to necessary time and efforts to sync the group's members and start giving results, but it can give outstanding business results.

Adapting – represent a quick acceptance of new knowledge, skills and changing the existing way of working because of the fast development and application of new technologies, introducing the competitive products, adapting to social and economic changes etc.

Knowledge networking – represents generating of knowledge by connecting the individuals into groups with different interests who communicate via informal, self-organized communication networks within an organization. Communication is done via telephone, e-mail, groupware with the goal of exchanging information, knowledge and problem solving. By modern development of communication channels, the quality of organizational knowledge rises, this raises organizational culture by creating a significant organizational capital.

There are many ways to gather knowledge and put it into function of business system:

- Knowledge mapping – list of all employees in a business system that possess a certain kind of knowledge. It is done based on surveys, interviews and research within an organization.
- Best practice – determining the appropriate way to solve an issue after evaluation and suggesting more solutions,
- Acquired knowledge – writing down the acquired knowledge and its preparation for using it in other similar situations,
- Assessment method – list of criteria and instructions for its usage for assessment of the given situation,
- Exchange with external environment – organizations do not have to be in the same field but there is knowledge which can still be exchanged.

TECHNOLOGIES OF KNOWLEDGE MANAGEMENT SYSTEM

There is a large number of technologies and tools for knowledge management. While choosing the tools that will be integrated in the knowledge management system of a business system, it is necessary to consider its application and possibilities. We suggest using methodology of assessment of tools according to the following characteristics of tool type (for creating, organizing and division of knowledge), (Hlupic, 2003):

- Tools' application (general or specific),
- Tool type – for creating, organizing and division of knowledge,
- Knowledge type (structured, unstructured).
- Form of knowledge – text, numbers, graphics, audio\ visual recordings, Figures,
- Methods that a tool uses for knowledge management – different depending on the tool type.

This paper will deal with systems for knowledge management that are classified based on realization of knowledge management process (Figure 3):

- Knowledge Discovery Systems (KDS);
- Knowledge Capture Systems (KCS);
- Knowledge Sharing Systems (KSS);
- Knowledge Application Systems (KAS).

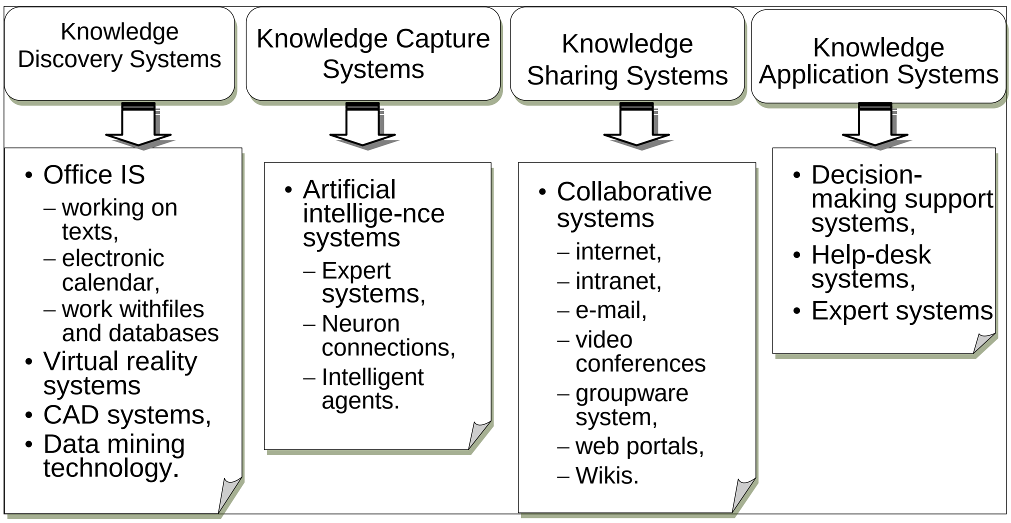

Figure 3. Classification of knowledge management systems

Source: Authors

Knowledge management systems are used for support and development, different forms of information and communication technologies that develop organizational learning by creating, storing, coding and distributing explicit and implicit knowledge. The most important knowledge management systems that are focused on support to business connected to creating information and knowledge, and defining and organizing data base of a business system are:

- Systems for the automation of official business;
- Systems of artificial intelligence;
- Technologies for communication and collaboration and
- Business intelligence system.

SYSTEMS FOR THE AUTOMATION OF OFFICIAL BUSINESS

Systems for the automation of official business (Davenport, Prusak, 2000 b:1-9) represent warehouses of explicit knowledge. Information necessary to employees for performing everyday business is often available in the form of a document, Graph or video recording. Document management system enables managing, filing, administration, searching and deleting of documents. Its basic mark is to make, with the minimum of effort, knowledge and information available, which are kept in documents in the desired context. These document management systems are often a part of intranet.

SYSTEMS OF ARTIFICIAL INTELLIGENCE

Artificial intelligence or AI is a multidiscipline scientific area that studies the mechanisms of intelligent behaviour through projecting, development and evaluation of artificial creations in which those intelligent mechanisms are installed. Areas of research have the goal of developing machines which will have the ability to behave intelligently and computer programs which will reason in the way similar to humans. Artificial intelligence works best when it uses well-made basic IT system and a successful project should include all usual assumptions of any project: good designers, good programmers, network administrators, database analysts etc. When a system is introduced into an organization every project manager should follow the influence the artificial intelligence will have on the company in order to be sure of what benefits does an organization have by its introduction.

Intelligent systems are expert systems, artificial neuron networks, intelligent agents, and systems for working on natural language, voice recognition systems.

Expert system one of the areas of artificial intelligence that found a wider application in practice are expert systems. They represent an intelligent computer program and the Figure of expert's knowledge, so that they can individually reach a decision or offer an intelligent advice (Wickramasinghe, Lubitz, 2007:156).

Expert systems are used in problem solving; they use expert knowledge and deduction so they can find a similar solution to the problem even when data are incomplete.

Expert system is the highest phase of development of applications of information system; they own all characteristics of communication such as: base, methods for upgrading information and user interface. The name expert comes from the fact that these systems act as top experts in their areas and designing and building of these systems is done by an expert whose title is knowledge engineer.

The name expert system and not expert program, comes from the fact that it is comprised of multiple problem-solving parts:

- Knowledge base;
- Inference engine;
- Communication interface;
- Global database;

Knowledge base – Knowledge base includes facts, relations between facts and possible methods for problem solving in the field of a given application. Modern knowledge base represents the most complex form of structure and data organization and it is a source of precious and unreplaceable various information and data on business processes, competition, human resources, products etc.

Under the knowledge base we imply a database where information is gathered, organized, divided, searched and then used. More and more business systems dedicate their time to build their own knowledge bases that usually cover only a small part of knowledge because it is very expensive and long-lasting procedure.

Knowledge bases integrate more data sources into one knowledge base that includes:

- Explicit knowledge (structured internal knowledge)
- Implicit knowledge (internal informal, undocumented knowledge possessed by employees)
- External knowledge (products, services, competition)

Nowadays knowledge bases are becoming more and more significant for widening of our knowledge on various things (searching the web via browsers) then for knowledge management especially of those bases that are available online. Main problem of knowledge bases is a constant need to upgrade the base i.e. the checking of outdated information, then adding new information. Wikipedia has grown into one of the significant knowledge sources, which has thousands of associates.

Inference engine – Software able to organize information from knowledge base and based on that to draw conclusions. It functions in such a way that it takes the facts from the knowledge base and combines them with information got from the users with the goal of drawing certain conclusions. The way in which it simulates human thinking is the way in which he uses the control strategies, that decide at which moment it should apply some of the rules from the knowledge base to the new facts got during consulting with the user.

Communication interface – part that enables dialogue between the decision-maker (manager – user) and the system. On one hand it is there for the user to provide information which system could not obtain from the knowledge base, and on the other it enables the user to ask for additional explanation for every decision of the expert system on matters such as what conclusions led it to make such a decision.

Global database –work memory for noting the current system status, entering data for a specific problem and relevant elements from the work so far. It keeps the facts and conclusions obtained during the current expertise. It is different form knowledge base because it contains information related only to the current issue of deciding. Numerous bank soft wares use them today as a part of intelligent solutions for investment management or decision-making in air traffic.

BUILDING THE EXPERT SYSTEMS

The process of building an expert system is called knowledge engineering which includes a group of methods and procedures related to gathering, computer presenting and memorising, as a usage of human knowledge in solving the complex problem situations. This process includes a special kind of interaction between the designer of expert system, knowledge engineer and one or more people who are experts in a certain problem area for which the expert system is being designed.

Process of building the expert system includes: tools for building the expert system, experts, knowledge engineers, managers experts who participate in building the expert system and managers users, who use the set expert system.

Tool for building the expert system ***is*** a program language which is used by knowledge engineer and\or programmer in order to build the system. Specialized tools for building the expert systems, called shells are developed. These tools are different from conventional program languages because they provide appropriate ways for presenting the complex concepts and knowledge elements and are comprised of all the available service programs (editors, debuggers, tools for extraction of knowledge, Graphs etc.).

Expert systems realize three main tasks:

- Give answers to the users' questions,
- memorize (add knowledge)and present knowledge in a certain problem area in the knowledge base,
- use expert system's knowledge for problem solving.

Characteristics of an expert system are:

High level expertise – is an important trait of expert system, which is a help in problem solving. This expertise represents the best thoughts of top experts in the given area, collected and installed into a program so that in the process of problem solving they can lead to precise and efficient solutions.

Ability of predicting – is a trait that comes from the possibility to use expert system as a model for problem solving in the given area that will as such give answers to the problems and show how those answers are going to change depending on the new situations.

Overall knowledge built in the expert system, gathered through interaction with the key staff in some service, department or field, in such a way that it paints the current policies and way of functioning of that group. In this way, this collection of knowledge becomes a permanent inscription of synced and best methods and procedures that managers use while solving a problem. Even when these people leave that company their knowledge will be saved. Collected knowledge in this way becomes institutional memory, which eases (but never totally removes) the lacks that arise by frequent changes in human resources.

Possibility of training – is another important trait of expert system. Expert system can be formed in such a way that it provides training to the new staff. They already have certain knowledge and skills but it is necessary to transfer the knowledge and experience gathered and kept in knowledge base which is in the form of institutional memory. It is necessary for a program to have the ability of fluent friendly dialogue with a man as well as the built-in methods of learning. Expert system can be adjusted for training of professional men as well as introducing the beginners with the job.

ARTIFICIAL NEURON NETWORK

Structure of artificial neuron network has been designed to imitate neurons in the brain. They are made of so-called synoptic connections and knots that they connect where the entrance signal is transformed according to the set function. Neuron networks take the entrance signal through the layers of the knots, giving an exit that depends on the networks' geometry and the set function. Neuron network can „learn“ by alternately letting the signal go through it and then in the returning connection it is changed, until one gets a desired exit. Because of this, some artificial neuron networks like perception and Hopefield's networks gained great popularity and a certain application.

They are used in voice or movement recognition in series of software solutions, while filtering the electronic mail and deleting spam messages, with radars or security cameras, while „digging“ for information in data bases, and more modern hospitals use artificial neuron networks for labour organization, shifts and accommodation of patients but also for diagnosing the illnesses.

WEB – INTELLIGENT AGENTS

We could not imagine the modern life without World Wide Web (WWW) because it enables us to find whatever we are looking for on it, but the problem is that is no longer an easy job to do. We are surrounded by a great amount of information that is impossible to accept, view, process and use in a quality way without help. There are numerous programs that help us work with a large amount of information in order to find what we need and are interested in.

Agents represent software that has the ability to individually, without user's intervention, complete the set task and report the user upon its completion or appearance of an unexpected event. In this context, the interaction with the environment means that the agent is able to react to the input got by the sensors from the environment and can perform actions that change the environment in which agents act. The environment in which agents act can be physical (real world) or software (computer on which it is installed or internet).

When we say intelligent agents we usually mean the autonomous software which based on „observation“ of the environment directs its activity to an actual goal. Intelligent agents can be completely simple, but also very complex, and today they are found in the most of soft wares that we use every day, for example in Microsoft Office package. They gained a specific application on line with browsers like Google. They are constant program entities with a special purpose. This means that the agents are different from subprograms; agents have their own ideas on the completion of tasks and their own schedule (Franklin, Graesser, 1996).

Depending on the domain of application, agents differ, however they can still be classified in several characteristic classes such as:

- Collaborative Agents;
- Interface Agents;
- Mobile Agents;
- Information/Internet Agents;
- Reactive Agents;
- Smart Agents;
- Hybrid Agents.

Agents' technology is more and more significant and they are being used to solve real problems in commercial applications. Agents have a wide application from very simple systems such as filters for electronic mail, programs for intercepting and removing the computer viruses to very complex applications such as software for air traffic control.

Areas where agent based applications are applied are the following: production, processes' control, telecommunication systems, air traffic control, transport management, meteorology, filtering and gathering the information, management of information flow, electronic trade, business processes management, medicine, entertainment industry, computer games etc.

TECHNOLOGIES FOR COMMUNICATION AND COLLABORATION

Technologies for collaboration provide to the business systems a possibility of team work and cooperation. Communication tools enable the users to access to knowledge and to communicate among them by using the internet, intranet, extranet etc. Knowledge networks, discussion groups, forums, Web 2.0 services, enable the exchange of knowledge, experiences and opinions of experts in electronic form. Electronic telecommunications inspire team work, especially in the area of refreshing the knowledge. Teams can use the same documents at the same time or different, at various locations. Participants in the communication can exchange data in audio and visual forms which enables the participants to work together and exchange files. Web portals of knowledge represent places where various kinds of information are stored and accessed in order to educate the users.

Internet enables three types of activities:

- Electronic mail,
- Participating in discussion groups and
- Browsing the websites.

Electronic mail or e-mail is the most common form of personal communication and it represents a fast and a cheap way of communication between users in various places in the world. It is the most used service of the Internet after Web service. Combination of hardware and software that connects to different types of networks is called Gateway and they enable communication of users with different e-mail systems.

Discussion groups represent gathering around a certain topic, they are open to anybody who wants to join. Before participating actively a new member has to spend some time as an observer. They enable communication to many people from various countries; they can discuss and cooperate in real time. The person who takes care of discussion groups is called a moderator. His or her authorities are different and special for every group, but most often he can warn users about the rules violation, he directs the debate in the sense that he does not approve messages of the users who are „off topic“ and he also has a role f a peace maker, if the argument gets too heated, he can evict someone from the group or ban them from entering it etc. Moderator has a very important role in setting the topics in his discussion group, so it is important for that person to have necessary knowledge and skills when it comes to the topic that the discussion group is taking about.

Searching represents a powerful tool for fast spreading of information because it enables looking for information, reading newspapers, checking bank accounts, buying books, listening to music, playing games.

Online social networks give to the companies a large potential for doing business and have greater chance to note the business success. Considering that the social networks represent communities of people with similar interests, the company is expected to behave as an integral part of that community and to use similar ideas by creating the community that is made from the users of their products or services.

BUSINESS INTELLIGENCE

By applying the business intelligence concept in knowledge management it is inevitable to mention the element of successful business systems' strategy because it enables easier and better solution of managerial problems. Business intelligence systems represent an infrastructure that is made of methods, software tools and applications for efficient gathering of the necessary information from a large amount of information found in various databases.

Successful management of the business system depends on the skill of doing managerial functions such as planning, organizing, managing and control. Therefore exceptional tools for the needs of knowledge management are algorithms of business decision-making, which makes it possible to get, from the existing data that the company owns, to some completely new information that are of great strategic significance in business decision-making.

Business intelligence implies gathering of business data, their collection at one place and analysing. This enables the insight into company's achievements and the way they were accomplished, and it also points to the potential to be used. So, business intelligence is not only an additional instrument but an exceptionally important one, essential foundation in management of business processes and competitive advantage (Medić, 2013:83).

Business intelligence can be defined as acquiring and exploiting of knowledge based on the facts, with the purpose of advancing the strategic and tactical business advantage at the market and it is considered that intelligent business rests on information that are transformed into knowledge and eventually to profit (Varga, Ćurko, 2007:122.).

Business intelligence systems do not exist as a finished product (Firestone, McElroy, (2003:37-38). They imply applications and technologies that enable access and analysis of the data and information on business of an organization. Business intelligence system is made from:

- Back-end systems which include Data Warehouse and
- Front-end systems which include analytic tools (OLAP and Data Mining tools, requests and reports).

Notion of business intelligence unifies methodologies, technologies and platforms for data warehousing, OLAP (Online Analytical Processing) and. Data Mining. Data Mining (DM), together with OLAP and *Data Warehouse* (DW) represents a foundation of functioning of the decision-making support system.

Business Intelligence program tools enable:

- Accessing data from one or multiple sources,
- Data overview,
- Data analysis,
- Distribution of knowledge got by an analysis.

DATABASE

Foundation of the decision-making support system is an analytic database - Data Warehouse (DW), whose primary function is reflecting processes and rules of doing business of whole organization. As an effective and efficient support to management, DW cleans and aggregates data from the operational systems and puts them to dimensional databases that represent repository of consistent historical data, easily accessible and prone to effective manipulations. Thus organized data are used to assess the condition of business situations, trends, projections and alternatives in purpose of decision-making support (Balaban, 2006).

Data Warehouse systems (DW) use denormalized data, which enables a much faster completion of requests over such data. Data warehouse (Inmon, 1995) represent subject-oriented, integrated, time-variant and non-volatile group of data, and the ultimate goal is the support to the management while making decisions. Subject-orientation refers to the certain organizational activities and processes of decision-making instead on the current operations. Integration refers to the centralized database which contains data from different sources internal, external and personal. The trait of being non-volatile means that DW does not change permanently, but periodically it adds new data depending on the business needs.

OLAP is a part of systems' tools and it gives answers to the questions if some of the assumptions got from database are true or not. OLAP analysis is essentially a deductive process. While Data Mining approach tries to find some connection between data and it represents an inductive process.

PROGRAM TOOLS FOR REQUESTS AND REPORTS

OLAP is a powerful multidimensional tool which enables fast responses to the set requests. Multidimensional database model which uses OLAP enables complex analytic and ad hoc requests with a very short response time. Nigel Pendese (Pendese, 1998) suggests that Fast Analysis of Shared Multidimensional Information (FASMI) is more alternative and more precise description for OLAP:

- Fast – system has to enable a response to the users’ request, within five seconds, and within one second for simpler requests and within maximum of twenty seconds for the most complicated requests.
- Analysis – system has to support any business logic and statistical analysis that is relevant to the application and end user.
- Shared – system provides consistency and security of data in case of multiple users’ access the data.
- Multidimensional – system provides multidimensional, conceptual view of the data, including full support to hierarchy and multiple hierarchies.

PROGRAM TOOLS FOR ANALYSIS AND PLANNING

Data Mining identifies trends in data that cannot be discovered by simple analyses. The term Data Mining is often used to mark the two scientific notions of discovering and predicting. Discovering represents providing the explicit information that is understandable for user, while predicting represents predicting of the future events.

Data Mining satisfies essential business needs like predicting, analysis of the production lines, financial consolidation, profitability, and product mix analysis – applications that use the existing data, desired or extracted data necessary for a specific analysis.

DM can be defined as a nontrivial extraction of the implicit, previously unknown and potentially useful information from data. (Frawley, et al., 1992:213-228) or as a science about extraction of useful information from a large amount of sets of data or databases (Hand et al., 2001).

KEY BENEFITS OF ICT APPLICATION IN KNOWLEDGE MANAGEMENT

A more efficient system for knowledge management in organization is achieved through implementation of new technologies and development of appropriate ICT infrastructure, which creates conditions for efficient decision-making.

Like for every other project and new system, the knowledge management system poses a question what the benefits for the company which introduces such a system and its employees are:

- Encouraging creativity, team work and research approach to doing business,
- Better usage of existing knowledge inside the company,
- Regular business processes analysis,
- Learning from experience ,
- Decrease of loss of intellectual capital,
- More efficient usage of mutual knowledge base,
- Connecting experts,
- Individual developing of new knowledge,
- Better synergy with knowledge transfer,
- Improvement of collaboration between different departments and locations,
- Development of strong internal benchmarking (corporate experts)brainstorming and similar methods,
- improvement of the process of managing documentation that bears the knowledge in business system,

- creating the project documentation,
- Annulments and rotation of jobs do not harm the business process; access to expert knowledge makes organization less vulnerable to job fluctuations.
- Increase of products' quality, and users' satisfaction with the quality of products and services.

Key benefits for the employees:

- Recognizing experts in work environment,
- Possibility for better professional development by organizing trainings and other forms of education,
- Creating new competencies, knowledge and abilities,
- Better work performance,
- Development of personal expert networks,
- Creating flexible and dynamic work environment,
- Connecting people with common interests,
- Faster problem solving,
- Increase in pleasure and motivation of employees and creators of new knowledge,
- Knowledge by using intranet, internet and Web.

CONSLUSION

The key challenge for business systems of 21st century is surely a non-material capital – knowledge, which business systems have and which can be turned into value at the market. Successful world companies have a developed practice of knowledge management that creates motivated workers, makes expert knowledge available which enables faster and more quality problem-solving, contributes to better productivity, competitive advantage and increases the market values.

According to the researches so far, that have been conducted in our area, it is determined that in the business systems in Serbia the application of knowledge management concept is used at a very low level. The purpose of this paper is to present information and technological trends, based on the modern theoretical achievements of the leading authors, as main instruments that encourage the development of the knowledge economy.

The topic of this paper is not whether it is necessary to manage knowledge, but in which way it should be done and how to manage processes that include knowledge. In that sense, we suggested technologies that will enable business systems to do business activities better than the competition.

Suggested systems are: systems for automation of office business, systems of artificial intelligence, technologies for communication and collaboration and business intelligence systems. They manage knowledge quality in order for it to become transparent in the business system. These technologies enable acquiring and transfer of knowledge, creating knowledge bases, transferring knowledge through entire business system, providing knowledge necessary for quality business decision-making. Then providing development and creating the new knowledge and distributing it to newly employed, in the function of successful business systems management.

Suggested systems and technologies also enable the employees, at their management levels, to have an easy access to the knowledge, either from their own sources or the relevant environment, which they need for quality decision-making. In this way a contribution is made to fulfilling the overall goals of an organization, attainment of the essential savings and significant progress in work and competitive advantage.

By mutual application of information technologies and employee's knowledge, it is possible to develop and implement a system for knowledge management, and the result of this application is changing completely the way employees' work, where every employee is now a knowledge employee.

Knowledge management system in which the following technologies are implemented:

- Identifies the strategically critical knowledge for a business system,
- Organizes efficient flow of knowledge in business system in order to provide competitiveness at the market
- Enables a technical solution which gathers, stores, analyses and disseminates knowledge,
- Creates corporate culture where cooperation, division of knowledge, innovation and efficiency are an integral part of doing business
- Enables solving managerial problems, efficiently gathers necessary information that can be of great strategic significance in decision-making,
- Expertise of high level that represents the best thoughts of top experts in a certain area,
- Possibility of prediction– used as a model for problem solving in certain area that gives answers to the set problems,
- Develops of knowledge of professionals and trains new employees.

The contribution of this paper is seen in actualization of the topic of knowledge management application in modern business systems in our region. Business systems can use information technologies for intelligent management of their resources of knowledge, in order to contribute to increasing the performances and capital, reduction of redundant jobs, increasing the competitive advantage and creating innovation space.

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KNOWLEDGE AND IMPROVEMENT OF DOMESTIC ENTERPRISE BUSINESSES

Milenko Ceha, PhD[14]

ABSTRACT

Successful business actions of one organization will in the new century depend on the attitude of the organization toward the growing need for knowledge and for the appliance of the newest technological achievements in organization managing. The main task of the modern organization is to improve the knowledge of its employees, as this improves productivity and business quality. The main task of modern business activities is achieving business excellence, which is a basic precondition of growth and the development of an enterprise, and the result of the coordinated actions of all functions in a company. The organization which wishes to achieve business excellence and a world class of products has to accomplish a symbiosis of its own development goals, customer requests, as well as feedback to the demands of the community. One of the leading problems of the domestic economy is an inadequate usage of knowledge. The reason for this is in the effect of the negative consequences of transitory recession, but also the inability of the domestic enterprises to adequately accept changes in the environment and react to them.

Key words: *Management, Knowledge, Productivity, Quality, Business*

JEL Classification: *I25, M11*

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INTRODUCTION

Changes in the market area most directly affect the way of thinking related to enterprise management. The concepts defined in the 20^{th} century are not flexible enough for the challenges of the 21^{st} century. The results of the World Economic Crisis indicate the fact that certain management methods and techniques must be improved in order to meet the requests of a turbulent market. To be able to establish, sustain and develop a competitive advantage on the market, an organization must be ready to learn, which implies that an enterprise must follow the ongoing events on a market and in science, with the goal of achieving business excellence. The enterprises must follow not only direct competitors but also those which are the best in their areas, even if they are not direct competitors.

Modern society is a knowledge society, and knowledge is the most important business resource. A knowledge society essentially has to be a society of organizations, and the basic task of management is to make knowledge more productive. According to Drucker (2003:198), a knowledge society is a competitive society, as knowledge is available to everybody, and everybody is expected to find their own place, to improve themselves and to have certain aspirations. The main task of modern organizations is to improve the knowledge of their employees as this is the way to improve business productivity.

In a modern economy, knowledge becomes a tool for achieving results in social and economic development – knowledge is applied to knowledge. The basic social group today is knowledge users, or persons capable of putting knowledge in the function of accomplishing business activities.

Modern business activities can also be observed as entrepreneurial economics. The emergence of entrepreneurial economics was enabled by new areas of management appliance – in new enterprises, small companies, in non-economic activities, in small businesses, in areas of system innovations. In an entrepreneurial economy, all organizations, regardless of the character of their business activity, should act in an entrepreneurial manner and implement basic postulates in their organization structure. According to contemporary views, an entrepreneur no longer has to be the individual who is the business owner. The entrepreneur can also be the individual who is employed by the employer, but who possesses performances characteristic for entrepreneurial behaviour. In that sense, a model of corporative entrepreneurship was developed which stresses team work whose members are motivated to work on achieving success and accepting risk.

A modern organization must be globally oriented, it is under the influence of global competition and thus it must be clearly oriented toward global action. It is a global corporation, a corporation whose source of growth and development is sought in global proportions, recognizing the reality of the global market, global competition and global products. A modern business organization functions in an environment made up of society, people, customers and stakeholders. In relation to society, an organization should develop a reputation, act ethically and realize transparent communication. In regards to people, an organization should create opportunities for work and development, a balance between work and life and pride in belonging to an organization. In regards to consumers, an organization must create an extra value of products and services and to provide excellent services. In regards to stakeholders, an organization should provide a return of investment, profit optimization and sustainable financial development.

A modern organization should be innovative, as innovation is the basis of business development. The degree of innovation influences the achieving of a competitive advantage. Furthermore, financial success on the market implies total innovation. Innovation is not considered to be just technical innovation, but a system of innovations in the domain of organization management. Today, innovations are more turned toward marketing and the organization than towards the technical component. Innovations in the area of payments, sales, distribution, product presentation, etc., equally influence the increasing of gross income and technical innovations.

Along with innovations, the essence of creating the competitiveness of a modern business organization is the constant improvement of business quality. Today quality represents a category which is much more than simple technical understanding, much wider than an engineering approach and which includes numerous different approaches: technical, market and managerial. In the widest sense of the word, quality represents a set of all product features and characteristics related to the satisfying of a defined or expressed need. The contemporary understanding of quality implies a multi-dimensional approach – quality is no more uniquely determined, it consisted of several aspects which mutually create the conditions for accomplishing a synergetic effect which effects a market position. The universality of such a comprehended concept of quality consists in its possibility to provide, at the same time, market spreading, work productivity incensement, reducing costs and an increase of the quality level. The business practice of most successful world corporations indicates that there is a high degree of correlation between the positive opinion of interest groups on enterprises and business quality.

Generally speaking, there are two basic ways to accomplish the goal of business excellence. One way implies the building of the total quality management (TQM) concept, and the other implies an implementing of the integrated management system (IMS) concept. The development of the TQM concept represents a method based on quality building which is founded on knowledge and the work productivity of each individual in an organization. For the development of the quality concept in Japanese economy, along with the Deming company management based on Suharto accomplishments, applying the philosophical principle of Kaizen was also very important. This involves a permanent, systematic and organized improvement of company products and services, or a constant improvement of business quality. The TQM concept pays special attention to the human factor. Man is the bearer of knowledge and work, he is a worker, but also a manager responsible for applying and improving quality. Branson emphasizes the following:

The implementation of integrated management systems implies an integrating of international quality management standards (QMS), environment management safety (EMS), employees management safety (OHSAS), and others, whose basis is an applying of the given standards requests. Regardless of which approach is applied, quality is the main factor of competitiveness, which is based on a constant improvement of organization knowledge productivity.

The applying of quality concept management also implies the process approach, which represents a basic postulate of the modern organization management model. Process implies any series of activities which leads to accomplishing organizational goals. Occasionally, this is rendered into the process of creating a product or service for consumers. The spreading of such an approach was created by introducing the concept of internal users or costumers, when those who are not directly connected to the market are motivated to improve the organizing of work processes. The process approach implies managing based on a process – individual activities are not considered, but rather the activities which make up the process. The processes are then unified in a mega process – the starting point is the need to primarily observe the organization as a whole. The process approach enables a more efficient organization management. All processes in the organization can be divided into three large groups: the managerial process, the basic process, and the support process.

Management is the most responsible for the business operations of an organization. The greatest responsibility of the management is to adequately manage the resources of an organization in the aim of making a profit. Management is expected to maximize results in the production process by using all available resources. A modern organization cannot operate successfully if it does not improve knowledge productivity. In that sense, the responsibility of management is basically the responsibility to achieve the business excellence of an organization based on constant improvement of business and the knowledge of all the employees in the organization.

When discussing domestic enterprises, we have to emphasize that they are mostly non-competitive, as they are insufficiently productive and have an ineffective approach to quality management. Productivity and quality are interconnected, and quality is based on knowledge, as quality starts and ends with education.

THE ANALYSIS OF DOMESTIC ENTERPRISES BUSINESS INDICATORS

The domestic economy is non-competitive which is also valid for most domestic enterprises. Other transitional countries have the same problem.

One of the reasons for the insufficient competitiveness of domestic enterprises is undoubtedly the problem of transition recession which the Republic of Serbia is facing. The companies from the countries in transition are burdened by the negative effects of the transition process. The transition process imposes the necessity to change ownership structure, carry out market and organizational transformation, realize economic liberalization and the stabilization of the economic system, which in turn impacts a reduction of business volume, an increase of unemployment, the loss of certain markets and a decrease of exports. The countries from countries in transition need time to overcome all these changes and to adapt to the global market demands.

The transition from a planned to a market economy requires time. It is generally accepted that there is no existing “general model” of transition – each national economy has its own features which mainly determine the pace of economic changes, as well as the hierarchy of priorities related to the directions of the transition process. The improvement of competitiveness of one national economy within the global economy is closely related to economic development, increase of employment and efficient economic activities based on the imperative of productivity increase.

Due to the specific nature of transitional processes, transitional economies are very sensitive to certain forms of undertakings in the socio-economic area – the question of competition, worker rights, the protection of consumer rights, environmental protection, etc. Serbia, as a country in transition, also faces these issues as well as the needs of an adequate solving of problems related to the mentioned activities. Most Central and Eastern Europe countries have during the transition process faced the issues of structural changes and unemployment increase. The transition process also requires change in labour force structure, especially from the standpoint of the harmonizing of the knowledge and skills of individual employees with organizational and technological requests, which are on a significantly higher level. There is a great unemployment problem in all transition countries, especially the unemployment of young people, as a consequence of general economic relocating.

In the market economy in which wages and prices are formed freely on a competitive market, the possibilities for profit gaining are the key factor which determines which products will be produced and to which amount. Profit directs all business resources but it also creates a constant pressure on the management of a company to achieve improvement. The companies which have the least production costs have the highest profit and they develop on the account of the inefficient companies which have big production costs. Thus, business productivity is the imperative of a modern economy. The reason for non-competitiveness can be found in the fact that the Republic of Serbia still has an insufficiently developed free market. In regards to competitive relations, free competitiveness is implied, but in most transitional countries state monopolies (public companies) still dominate. Also, it is evident that there are in transitional countries enterprises which use their connections with the state administration to satisfy their own interests.

Even though the intensity of the process of transition has lasted over twenty years, the results in a part of the development of industrial relations in Serbia are not satisfactory. Serbia has inherited an unfinished market system (the functioning of the goods and services market without a labour force market and a capital market), and a relatively irregular model of ownership of companies (state, public, private and cooperative ownership which has existed analogously but in unequal proportions) which has influenced the fact that transition is being developed too slowly. Along with the large number of unemployed workers, there is another significant segment of an economic surplus of workers which are only formally employed, particularly in public enterprises and which would be let off when the public sector is restructured. In the domestic economy, previously there was the belief that work efficiency is ruining work places and that less efficient work opens new positions.

On the other hand, the global economy is a reality, while the imperative of doing business in the global economy is a permanent increase of productivity in all the key resources of business (primarily work and knowledge). The issue of the non-competitiveness of companies from transitional countries has a direct connection with the internal organization of those companies. Namely, a significant number of problems which burdens companies from transitional countries is of an organizational nature and is related to an inadequate speed of adapting to the new business philosophy, which implies that the winner takes all no matter the country of origin. The winners are the organizations which can produce products of standard quality in accordance with market requests, which can provide extra value for the customer and which constantly improves their business activities, focusing on development and productivity. Quality and productivity are factors of competitiveness inaccessible for a larger number of domestic enterprises.

In the domestic economy, the major employer is still the state – the largest number of employees work in state or public companies and the productivity in those organizations is as a rule lower than in private corporations. The socialist-state organizations sector has hampered the development of the domestic economy during the nineties of the previous century – inappropriate ownership structure has prevented an internalization of businesses – and today public companies are a source of political party employment and the state monopoly of a financially weakened state.

According to the new World Economic Forum Report (2) which included 148 world countries, Serbia was ranked on the 101st place which represents a decrease related to the previous year, when it was ranked 95th. This year Serbia was in the company of Algeria (100th place), Guyana (102nd place), Lebanon (103rd place) and Argentina (104th place). Serbia was in a worse position than all the countries of the Western Balkans. From all the countries of the region, Bulgaria was positioned 57th, Hungary was on the 63rd place, Romania was 76th, Greece 91st and Albania on the 95th place.

The domestic economy is not exporting enough, primarily due to the fact that domestic enterprises are not competitive enough on the international market, and the problem with an insufficient competitive ability is poor business productivity. Productivity is poor due to the equipment and technological solutions being obsolete on one hand, and inadequate employment on the other, especially in the public sector. Thus, ‘weighty’ public enterprises are encumbered with excessive administration, and the public sector is bureaucratized and unproductive.

Regarding business productivity in Serbia, the effective work hours in public companies in administration counts 3 hours and 45 minutes and on the field it is 25 minutes longer. At the same time, in private companies, the effective working time counts 7 hours and 18 minutes, meaning 4 hours longer while the salaries are in average smaller by 6,500 RSD, according to the analysis of the Centre for Economic Research.

Productivity in Serbia is 42 percent of the European average. The reason for this is an insufficient organization of business, technological backwardness and a lack of knowledge, and the consequences are a lack of competitiveness, a decline in consumption and employment. The most productive enterprises are those with the highest quality of equipment and machines. These are pharmaceutical companies and part of the food industry and companies with foreign capital, which make up 8.5% of the domestic economy. Suffering the most is the metal industry where machinery is approximately 35 years old. The percentage of write-offs is 36% which is almost double the percentage related to the write-off average in the EU countries. Even Croatia and Romania are at an advantage with a write-off percentage from 19% and 24% (3).

The average age of equipment is 29.5 years, which is two decades older than the EU average. This was determined on a representative sample of 154 small, medium and large companies within six industries with similar manufacturing programs. The criterion was Austria due to its similarity with Serbia regarding the natural, social and population features. The companies lagging behind are in the area of textile (35 years) and machine industry companies (34.5 years). Pharmaceutical enterprises had the least delay - 21 years (4).

In the quality area, the situation in Serbia is slightly similar to the Western Balkans region. Regarding the quality management system in Serbia in 2012, 2,831 organizations certified according to standard ISO 14001 (5). Regarding the region, Serbia was behind Hungary, Romania and Bulgaria in regards to the number of certified organizations.

In regards to the countries of Central and Eastern Europe Serbia is a country with a minimum participation of foreign direct investitions. Serbia is positioned far behind Romania, Poland and Bulgaria, which are among the ten most attractive locations for investments.

The model of economic growth and development of Serbia should be based on three columns – increased investment, support for an export-oriented economy and investments in infrastructure. According to such a model, private and public investments should grow annually by 9.7%. For this to happen, we have to have an attractive economic environment. Economists have agreed that Serbia needs a new model of economic growth. The new model, where the stress would be on exporting, should enable the following:

- An increase of investments to 25% of the GDP in 2015 and 28% of the GDP in 2020 with an average annual growth of total investments from 9.7%,

- The share of consumption should decrease by 92.5% of the GDP in 2011 to 81% in 2020, and the share of goods export by 27.6% of GDP which was in 2009 an increase on 65% in 2020,
- The deficit of current payments should decrease by 7.1% GDP in 2010 to 3.3% in 2020,
- The real average annual growth of GDP of 5.8% and the domestic market demand to increase by 7.7%,
- The GDP value in 2020 should be 52.7 billion Euros or almost 8,000 Euros per capita,
- The summary production growth by 50.4% and about 430,000 new work places would be available (6).

To achieve these goals, it is needed, besides the infrastructural framework, to act from the level of business organizations. One of the most significant problems of the domestic economy which largely causes the poor market performance of Serbian enterprises on the international market is an inadequate usage of modern methods and management techniques, which is mainly related to the knowledge needed for an efficient management of an enterprise. A more adequate usage of knowledge represents the most significant direction for the improvement of competitiveness of domestic business entities.

ANALYSIS OF ATTITUDES OF DOMESTIC MANAGERS RELATED TO THE POSSIBILITIES FOR BUSINESS IMPROVEMENTS

The attitude of the managers of domestic enterprises to the role of knowledge in the process of improving business quality is best explained through the results of research. Based on the results (page 8) the opinions of the managers of domestic business entities related to the appliance of Corporate Social Responsibility (hereinafter: CSR) (Research of the attitudes of experts and managers of organizations was done in the period from June until October 2010 on the territory of Serbia with the goal to gain the opinion of the managers about the appliance of the concept of Corporate Social Responsibility), the basic factors of business improvement are the following:

1. Specialization of employees – 27.6%,
2. Improvement of the quality of business activities – 17.3%,
3. Applying modern methods and management techniques – 11.2%,
4. Development and appliance of modern information technologies – 10.2%,
5. Increase of business productivity – 8.2%.

The necessary elements for the development of competitiveness of the domestic companies are the following:

1. A permanent specialization of management and employees knowledge – 22.2%,
2. Appliance of modern methods and management techniques – 21.2%,
3. Standardization of business actions quality – 14.1%,
4. Purchase of modern technological solutions and equipment – 12.1%,
5. Importance of investing in marketing – 9.1%.

The major obstacles in the development of competitiveness of domestic companies are the following:

1. A lack of financial capital – 24.7%,
2. Lack of knowledge – 21.6%,
3. Outdated equipment and technology – 15.7%,
4. Lack of resources – 8.8%,
5. Insufficiently supportive business environment – 8.8%.

The given factors and limitations define the environment in which the process of organization managing is carried out.

In regards to the aspect of improving knowledge productivity, the responders ranged their organizations as follows:

- Organization based on knowledge – 30%,
- Traditional organization– 30%,
- Organization which creates knowledge – 22.5%,
- Organization based on resources – 17.5%.

The largest number of responders – 66.7%, stated that the employees in their organization were on specialization training during the last year, and 33.3% answered the opposite.

As areas of specialization, the employees stated the following:

1. quality – 25%,
2. human resources management – 22.5%
3. development – 20%
4. business communication – 17.5%
5. marketing – 12.5%,
6. benchmarking – 2.5%

The largest number of managers – 51.28% - was on specialization during the last year, and 48.72% were not. As specialization areas the managers stated:

1. Development – 34%,
2. Quality – 18.8%,
3. Human resources management – 15.6%,

4. Business communication – 12.5%,
5. Marketing – 12.5%,
6. Benchmarking – 3.1%,
7. Technical systems management – 3.1%.

The results of the given research indicate the fact that the improvement of a competitive advantage of domestic enterprises is under the direct influence of the development of quality management and the corporative social responsibility concept. The results also indicate the necessity of building stable relations between knowledge management, quality management and productivity increase as basic assumptions for achieving a competitive position on the market.

Over 50% of the respondents consider that their organization is the one in which knowledge has the leading role (organizations which create knowledge - 22.5% and organizations based on knowledge – 30%). Also, 57.1% of the organizations implement a system of quality management according to standard ISO 9001. In fact, the business practices of most successful world corporations show that there is a high correlation between the positive opinion of interest groups about the enterprise and the business activities quality.

GUIDELINES FOR IMPROVING THE BUSINESS ACTIVITY OF DOMESTIC ENTERPRISES

Without an adequate and continuous appliance of knowledge in the process of managing an organization there is no economic development, nor can competitiveness of the national economy be established. According to widespread opinion (8), managers working in a modern knowledge economy must be persons capable (in the case of the depreciation of knowledge, which become obsolete for 50% from 3 to 5 years) of constantly acquiring new knowledge. This fact illustrates the new role of education – education must permeate the entire society. Thus, education and knowledge are the new factors of competitiveness.

The question of improving organization management knowledge is closely related to the issue of highly educated experts at the level of the national economy. With 6.5% of the college educated population, Serbia is not only at the bottom of the educational level just in Europe, but also in the entire region. EU Strategy in all EU countries must have at least 40% highly educated persons by the year 2020.

And yet, the state has to create a minimum of the needed conditions for continuous business, a free flow of supplies, people, knowledge and capital, based on the implementation of the institutional infrastructure which favors the market model of earning without the influence of the state on economic flows. It is especially important to stress that the economic sphere must be freed from the influence of political actions, especially those with a short term character.

The main problem in the area of management in domestic business entities is management based on outdated managing techniques and principles. This is especially evident in the domestic enterprises which are privatized by domestic capital owners. There is a similar situation in the sector of public companies, though some enterprises stand out, these being mostly high-tech companies (e.g. Telekom Srbija). The situation is better in the enterprises privatized by foreign investors, where modern methods and management techniques are easily applied, which significantly influences their competitiveness in the country as well as in the region and in international business activities. This regards the appliance of management standards and integrated management systems, as well as techniques such as benchmarking and reengineering, and some managing concepts such as CSR and marketing relations.

The applying of modern management methods and techniques and knowledge specialization of manager and employees creates a prerequisite for developing competitiveness (66.7% of the managers stated that their employees, during the previous year, were attending some type of specialization, while 51.3% stated that they were on specialization). Especially important is the fact that education for quality is also highly regarded by the employees (order of specialization is quality – 25%, human resources management – 22.5% and development – 20%) and by the managers (order of specialization is development – 34%, quality – 18% and human resources management – 15.6%).

The understanding of the significance of specialization in the area of quality is important because of the fact that the concept of integrated management systems, as well as the concept of total quality management, contains important elements of CSR. Thereby, the education for quality and appliance of the concept of quality has a direct impact on developing the concept CSR in domestic enterprises. The results of the research indicate the fact that 21% of the tested managers applied CSR by way of integrated management systems.

The improvement of knowledge in the area of entrepreneurship is extremely important for domestic enterprises, due to the fact that the domestic economy has been in the transition period for a long time. The appliance of the entrepreneurial concept and implementation of entrepreneurial strategies, and especially of corporate entrepreneurship, is extremely important for establishing the competitiveness of domestic enterprises. It is important to emphasize that several interest groups must be engaged with the issue of improving the process of education for management: the state through its institutions and ministries, the universities, entrepreneurial associations, as well as the media which can have a positive influence on creating an appropriate environment for starting small businesses. The results of research engaged in the issue of developing entrepreneurship in young people indicate the following:

- As a reason for not starting a private business, the respondents answered that they were lacking the right idea (78.42%) which implies that in promoting the entrepreneurship concept in colleges, it is necessary to insist on developing entrepreneurial skills in students;
- Most of the students (82.91%) consider that in the Republic of Serbia at the moment there is no appropriate environment which encourages young people to start their own business. As the reason for this attitude, students

noted the following limitations which hinder them and those are repeated in new research: a lack of funds – 30.08% (2012), 31.59% (2011), 32.26% (2010); an unstable political and economic situation – 29.75% (2012), 28.91% (2011), 29.75% (2010); high taxes – 20.30% (2012), 23.77% (2011), 20.30% (2010);

- From the total number of respondents in a 2012 research, as many as 84.64% consider that the state should have a leading role in stimulating young people to start their own business. As key ways of support from the state, the respondents highlighted the following: soft loans, and education and laws/regulations related to young people as entrepreneurs.

The results of the researching of manager attitudes show the fact that the main problems which are related to a more comprehensive and more systematic approach in applying modern methods and managing techniques are the following:

- A chronic lack of funding,
- World economic crisis effects and
- A slow applying of modern achievements in the area of management.

The domestic managers (24.7%) perceive the largest problem to be the lack of financial capital, and this unremitting problem is spurred on by the negative effects of the world economic crisis which has significantly impacted the domestic economy which was already damaged by the transitional recession.

The results of countries which have ended the transition process indicate the necessity of foreign investing in the economy, as well as a dominant position of private capital in regard to state capital. Without constant investing in production, there is no progress in the economy, and in a transitional economy the major investors are foreign corporations. Even the consequences of the world economic crisis and transitional recession are significant as a lack of resources do not necessarily have to be an obstacle to development. A good example of this are experiences from Japan, as the Japanese people have solved the problem of resource poverty by a constant improvement of knowledge using the already existing and proved knowledge from the West with the tendency to improve the existing concepts and techniques. Man, as a bearer of work and knowledge, is in the focus of attention. This example has been followed by Western enterprises.

The most important direction of action in the functioning of the competitiveness development of domestic business organizations is a more adequate usage of knowledge in organizations. The main task of education in the area of managing techniques and skills is the learning of knowledge which is necessary for a successful managing of businesses or enterprises with the goal of increasing work and knowledge productivity.

The issue of the knowledge improvement of domestic managers is of a multidimensional nature. The first dimension of observing this problem is the common opinion that managers have no need for constant, or rather, life-time specialization. Specialization is carried out only by those employees who have a need for this and who are mostly employees on a lower-ranking work place in the business hierarchy. The second issue, which is even more dangerous, is the fact that marketing is an area where untrained and incompetent individuals are engaged, mostly persons hired arbitrarily for that job position. Also, the marketing sector employs various engineer profiles, as well as lawyers, sociologists, psychologists, and others, and a small number of classic economists, or management-oriented individuals.

Domestic enterprises must build the process of entering the global market on applying international experiences, international standards and an internationally recognized business practice. The process of business internalization must start on the domestic market, based on the struggle with international competition.

According to Pernick and Wilder (10) the value of each nation is worth as much as the worth of its students. The high technologies sector requires scientists, mathematicians, engineers, economists, politicians and other experts who can build the future technology. This kind of future is possible to realize only by educational programs which represent a link of the economy and ecology. What is necessary is a good cooperation between universities and institutes on one hand, and the authorities on the local and national level on the other. Along with classical education, what is also needed is an exchange of information between the interested parties which can be realized through some forms of informal education as well via the Internet.

The successful business activities of a modern organization in the new century will depend on the attitude of the organization toward the increasing need for knowledge and the appliance of the newest technological achievements in organization management, but also on the ability of the organization to realize a transfer of information toward interest groups of users in the most efficient way.

CONCLUSION

Knowledge is the basic business resource which enables the other business resources to be productive. The main task of a modern organization is to enable all the employees in an organization to have access to knowledge and to improve the productivity with their own knowledge. A group of individuals which are improving knowledge productivity represents a modern organization oriented toward the global market. Also, the human potential is the most important business resource in a modern organization. To succeed in an efficient use of human resources for an organization it is necessary to establish an adequate level of understanding between the employees and the management. The management of an organization must build an organization which enables an exchange of information and a creating of innovations. Cooperation in the global economy must be conducted between all countries on the global level which implies that each country and business organization takes a part of the responsibility for general benefit. All organizations must cooperate in creating prerequisites for sustainable development on a global level.

Economic progress and the economic development of the Republic of Serbia require the development of a competitive economy based on knowledge, new technologies and innovations. Globalization is the only path for all transitional countries, whereby there is a stress on the development of industrial production. Furthermore, the logic of global competitiveness must be incorporated in the business policy of all domestic enterprises. Quality, differentiation of products and interactive marketing communication represent the major elements for forming sustainable and competitive brands.

The habits inherited from the past have created an improper attitude towards education, especially knowledge – the fact that knowledge is the most important business resource which needs to be constantly improved is not taken under consideration. That means that companies from transitional countries are still not applying all foreign business experiences and modern management techniques in the aim of constant business improvement.

A global direction for enterprises from the western Balkans region is to direct medium sized enterprises with relatively good positions in the region towards the global market. The issue of improving the competitive ability of domestic enterprises has become a basic business imperative, as the real condition in this area has been critical for many years.

Domestic entrepreneurs are aware of the fact that a permanent specialization of knowledge and the appliance of modern methods and managing techniques represent a basic direction for improving business activity at a global level. In regards to specific action related to a constant specialization of manager knowledge, attending specialization in domestic enterprises are mostly middle level managers from narrowed down areas such as quality, IT, languages, and business communication, which is an inadequate situation.

Domestic managers must become more effective and thus affect the effectiveness of the employees as well. In an organization based on the knowledge productivity of each employee, this also makes the whole system more productive. To improve their businesses, domestic enterprises must rapidly access the adopting and applying of modern methods and managing techniques. But this is easier said than done. Namely, the improvement of the business competitiveness of domestic enterprises in terms of accomplishing goals of business excellence requires a mental transformation of the employees, especially the executive management.

Insufficient experience related to the applying of modern management concepts and techniques, regardless of foreign experience, an inadequate marketing approach and a lack of marketing technology knowledge lead to the fact that domestic enterprises cannot keep pace with international competitors. An innovation of knowledge according to worldwide experiences is the significant factor of the improvement of domestic enterprises business activities.

The companies which are actively and continually applying modern management methods and techniques have a significantly better chance to strengthen their competitive ability on the global market and to take up a stable market position with further growth perspective. According to Masaaki Imai each delay in the appliance of the newest technologies can be very expensive, and a delay in applying the newest management techniques is also very expensive.

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RESEARCH BY SATISFACTION WITH KNOWLEDGE AND SKILLS IN REAL BUSINESS SYSTEMS

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ABSTRACT

The application of modern business and new technological developments require educated people who constantly learn, who are innovative and creative, and improving own competence in accordance with technological developments and global developments. In today's information society, duration of knowledge is shorter than ever and it is necessary to continuously adjust educational curricula to the needs of a modern economy and society. The aim of the research presented in this paper is to analyze the problems faced by employees in the workplace, concerning the lack of specific skills and knowledge in order to find the mechanisms to overcome that problem.

***Key words**: Knowledge, Education, Satisfaction*

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INTRODUCTION

Knowledge is the most significant human resource. The process of acquiring knowledge contributes to individual improvement and the development of certain abilities essential for inclusion into social processes. Developed societies aspire to create "a society of knowledge". The fact that "a knowledge based society" is simultaneously "a permanent learning society" implies that education on the whole must be considered in a broader context (Spasić, 2007).

Considering the process of globalisation and technology advancement, "life-long" learning (permanent learning) has ceased to be just an empty phrase.

Knowledge must, above all, serve the function of economic development and the development of society in general, that is, it must be practical and usable. This requires engagement of a higher number of researchers, transfer of knowledge and combination holistic approach to knowledge and narrow specialization. The Republic of Serbia has not developed such a system in which education would serve the function of economic development. Therefore, there is often a deficit or surfeit of certain occupations in its labour market.

THE PLACE AND CONDITIONS OF RESEARCH

The research programme covered a sample of 35 economic entities both from private and public sector (small and medium enterprises, large economic systems, domestic and foreign companies), with different ownership structures, different number of employees and different economic sectors (health service, agriculture, tourism and catering, public administration, civil engineering, industry and services).

The research was conducted through a survey of employees, based on a sample of a total 138 respondents, during the period from March to July 2013 on the territory of the Republic of Serbia. The results of examining the entire sample are enclosed, and they are classified according to the organization, gender, educational structure, length of service, age, position in the organization.

THE RESEARCH METHODOLOGY

The research strategy was based on a combination between qualitative and quantitative methods. We endeavoured to shed light on the complexity of impact and effect of different factors on employee satisfaction, with the aid of a survey specially constructed for the research needs.

The aim of this paper is to explore the following dimensions of employee satisfaction:

- Employee satisfaction with proficient and practical knowledge
- Employee satisfaction with skills
- Employee satisfaction with initiative.

These parameters were considered from the aspect of the current and desired state.

Information on the respondents and their personal traits implied acquiring the data we considered to be the most relevant ones to the research issue, and they refer to the following eight independent variables:

- Gender
- Educational structure
- Age
- Length of service
- Activity of the work organization
- Position in the organization
- Size of the organization
- Ownership structure of the organization

The general hypothesis we established is:

HG: Employee satisfaction with proficient and practical knowledge, skills and initiative depends on the employees' traits, the size of the organization and its ownership structure.

The data were processed using suitable mathematical statistics methods. The basic methodological plan was based on correlation between general variables concerning qualification levels, length of service, activity of the work organization, position in the organization, gender (independent variables) and satisfaction with the level of knowledge possessed related to the field of work, satisfaction with possessing computer technical knowledge, satisfaction with skills, the knowledge of foreign languages, taking the initiative, career advancement (dependent variables).

VARIABLES

Independent variables

The size of the organization was observed through six categories:

- up to 10 employees
- from 10 to 50 employees
- from 50 to 100 employees
- from 100 to 500 employees
- from 500 to 1000 employees
- over 1000 employees

The ownership structure was observed through four categories: private, national/public, joint-stock company and LLC (* Limited Liability Company).

The activity of the work organization was observed through seven categories: medical, legal, technical, philological, organizational (administrative) and other.

It was explored within the sample whether the gender of the respondents affected the considered hypotheses (male respondent and female respondent)

There were five differentiated age categories: up to 25; 25-34; 35-44; 44-55 and over 55 years.

Five categories of educational level were observed:

- primary school
- secondary school
- higher education
- master degree
- PhD (Doctor of Science)

The position in the organization was observed through five categories:

- worker
- expert
- lower-level managers (first-line managers)
- middle-level managers
- top-level managers

The length of service was observed through five categories:up to 5 years; from 5-10; 10-20; 20-30 and over 30 years.

There was a questionnaire made up for the research needs, with 15 variables observed in two states, the current one and the desired one. For each question there were five offered answers which represent attitudes categorized according to Likert skale (A type of attitude scaling that consists of a series of claims devoted to different aspects of a certain attitude. It is given to a respondent with the task of expressing the level of their agreement or disagreement for each and every claim, in a five-level scale, as a rule, in a following way: „ I strongly disagree ”, „ I do not agree ”, „ I do not have an opinion (undecided) ”, „ I agree ”, „ I strongly agree ”.):

- „I strongly disagree”,
- „I do not agree”,
- „I do not have an opinion”, („undecided”)
- „I agree”,
- „I strongly agree”.

Dependent variables were observed from two aspects, current state and desired state:

- I am satisfied with the level of knowledge I possess related to my field of work
- I am satisfied with the skills I possess in my field of work
- I am satisfied with my knowledge of foreign languages

- I am satisfied with my computer technical knowledge
- I am satisfied with my communication skills
- I am satisfied with my initiative
- I must prove myself in my enterprise
- I would advance in my career better if I had managerial knowledge and skills
- I can apply all my knowledge at work
- I can decide how to do my job
- Taking initiative is important in my enterprise
- I could have a better position with more knowledge
- I could have a better job position with a higher education degree
- There is a career advancement opportunity in my enterprise
- I think I could advance better if I had additional knowledge/ skills

DESCRIPTION OF THE SAMPLE

The number of employees in the organization - The highest number of respondents is from organizations with more than 1000 employees (26%), whereas the lowest number of respondents (5%) is from organizations with 500 -1000 employees, 23% of all respondents come from organizations that have 100-500 employees, 17% of them come from organizations with 50-100 employees, 16% are from organizations with up to 10 employees, and 13% from organizations with 10-50 employees.

Ownership structure - According to the sample data, the highest incidence of respondents is that of LLC -30%, 27% of them are from public utility companies, that is, public agencies and organizations, 21% are from joint-stock companies, and 22% of the respondents are from private enterprises.

Educational structure - 43% of the respondents have higher education, 2% of them finished primary school, 41% have high-school education, and 14% have a master degree.

Age - The highest percentage of the respondents (38%) is between the age of 35 and 44, 33% are between the age of 25 and 34, whereas only 4% of the respondents are up to 25 years of age, 17% are between 44 and 55 years old, and 8% of them are over 55 years old.

Position in the organization - 50% of the respondents are in the position of a top-level manager, whereas only 5% are workers, 20% are in the position of a middle-level manager, 13% are in the position of a lower-level manager, and 12% of all the respondents are experts.

Length of service - 30% of the respondents have 10-20 years of service, 27% have less than 10 years of service, that is, 5-10 years of service, whereas only 8% have more than 30 years of service, 19% have 5 years of service, and 16% have 20-30 years of service.

Activity - Economic activity is present with 46% of all the respondents, philological activity with 1% of them, legal with 12%, technical with 14%, medical with 1%, organizational(administrative) with 5%, and other with 20%.

Gender - The incidence of female respondents in the sample is somewhat higher than that of the male respondents and it is 67%, whereas 33% of the respondents are of the male gender.

Reliability of a measurement scale can be observed from a number of aspects. The most frequently shown indicator is the internal consistency of the scale, that is, the level of inter correlation among its components, shown through Cronbach's alpha coefficient. It is considered optimal when this coefficient is higher than 0.7 which was realized in this case because Cronbach's alpha coefficient was 0.842, table 1.

Table 1. Reliability Statistics

Cronbach's Alpha	N of Items
0,842	30

RESULTS AND DISCUSSION

Table 2., shows Pearson coefficient of correlation between independent variables (professional qualification, hierarchical position, age, activity, length of service, ownership structure and the number of employees) and dependent variables (satisfaction with skills , knowledge of foreign languages, computer technical knowledge, satisfaction with communication skills, satisfaction with the initiative, satisfaction with the necessity of self-proving, satisfaction with managerial skills, decision making opportunity, compliance with the attitude that an education degree increases the chances of a better job position and compliance with the attitude that career advancement is in relation to knowledge).

There is a noticeably weak positive correlation between professional qualifications on the one side and knowledge of foreign languages and computer technical knowledge on the other, which was to be expected. There is also a weak negative correlation between professional qualifications and the need of managerial skills, which means that the higher educated are less satisfied with them, as well as a weak negative correlation between professional qualifications and compliance with the attitude that an education degree contributes to acquiring a better job position (higher level of professional qualifications- lower level of compliance).

There is a mild positive correlation between hierarchical position and satisfaction with the initiative on the one side and career advancement in relation to one's knowledge on the other , which could be explained by the fact that a higher position in an organization provides more opportunities to show one's initiative and knowledge, which ensures career advancement for such respondents.

There is a mild negative correlation between one's age and knowledge of foreign languages, which means that those respondents more advanced in years are less satisfied with their knowledge of foreign languages. There is also a mild positive correlation between one's age and decision making opportunity in business, which is explained by the fact that those respondents more advanced in years are more independent in their work.

It could be said that there is a weak correlation between activity and computer technical knowledge.

There is a mild positive correlation between the length of service and decision making opportunity in business, which is explained by the fact that the respondents with more years of service are more independent in their work. They are also more satisfied with the opportunity to take initiative and their communication skills.

There is a correlation between satisfaction with one's communication skills and ownership structure and a mild correlation between the number of employees and satisfaction with one's communication skills.

Table 2. – Correlation between independent and dependent variables-the current state

Pearson Correlation										
	Sat. with skills	Sat. with know. of foreign langu-ages	Sat. with computer skills	Communi-cation	Initiative	Must be proven on work	Need more manag. Know-ledge	Decision making	Univer. degree-better job	The progress depends on know-ledge
Educat. level	0,088	,318(**)	,274(**)	0,055	0,09	-0,026	-,169(*)	0,111	-,219(**)	0,079
	0,302	0	0,001	0,519	0,294	0,76	0,047	0,194	0,01	0,356
Position	0,085	0,089	,171(*)	0,109	,200(*)	0,08	0,021	0,141	-0,117	,197(*)
	0,319	0,298	0,044	0,202	0,018	0,349	0,803	0,098	0,172	0,02
Year	0,088	-,207(*)	-0,131	0,107	0,13	-0,002	0,032	,201(*)	0,034	0,019
	0,303	0,015	0,126	0,213	0,128	0,982	0,705	0,018	0,694	0,824
Type of activity	-0,147	-0,034	,239(**)	-0,15	-0,106	-0,023	0,027	-0,112	0,038	0,052
	0,085	0,692	0,005	0,079	0,215	0,791	0,755	0,192	0,656	0,547
Experien	0,148	-0,11	-0,014	,172(*)	,175(*)	0,001	-0,048	,243(**)	0,015	0
	0,084	0,201	0,867	0,044	0,04	0,995	0,578	0,004	0,864	0,999
Owner	,218(*)	-0,012	0,167	,317(**)	0,108	,199(*)	0,032	0,136	-0,095	0,041
	0,01	0,887	0,05	0	0,206	0,02	0,709	0,113	0,266	0,633
Num. of emplo-yees	0,055	0,011	0,112	,179(*)	0,091	0,106	0,063	0,095	-0,012	0,038
	0,525	0,9	0,191	0,036	0,286	0,215	0,463	0,269	0,89	0,662
N	138	138	138	138	138	138	138	138	138	138
**				Correlation is significant at the 0.01 level (2-tailed).						

COMPARISON OF THE CURRENT AND DESIRED STATE OF SATISFACTION WITH ONE'S KNOWLEDGE AND SKILLS

Since it was confirmed that there is a significant difference between the current and desired state for all the respondents, it was analyzed which group contains a higher mean value: 1-I strongly disagree, 2- I do not agree. 3- I do not have an opinion (undecided), 4- I agree, 5- I strongly agree.

By a summary of the mean values of satisfaction it can be seen that the mean value of satisfaction with the actuality of one's knowledge, contemporary computer technical knowledge, one's business initiative, ability to make decisions at work, communication skills, working skills, knowledge of foreign languages, one's self-proving at work, managerial skills, applying one's knowledge, the importance of taking initiative at work, the significance that is given to knowledge at work, the importance that formal knowledge through certificates has for career advancement, opportunity to advance and the correlation between career advancement and possession of knowledge , is lower in one's current than in one's desired state, which can be interpreted as a wish of an average respondent to improve their knowledge and skills.

Table 3.shows the mean values of satisfaction with one's knowledge in the current and desired state, where the factor of satisfaction in the current state is marked as no 1, whereas the desired state is marked as no 2.

Table 3. Comparison of the mean values of satisfaction in the current and desired state on a sample of 138 respondents

	Factors of satisfaction	Mean	Std. Dev.	Std. Error Mean
Pair 1	Satisfaction with knowledge1	3,833	0,925	0,079
Pair 1	Satisfaction with knowledge2	4,746	0,499	0,042
Pair 2	Satisfaction with computer knowledge1	3,877	0,970	0,083
Pair 2	Satisfaction with computer knowledge2	4,659	0,547	0,047
Pair 3	Satisfaction with the initiative1	3,877	0,962	0,082
Pair 3	Satisfaction with the initiative2	4,681	0,540	0,046
Pair 4	Ability to make decisions1	3,558	1,074	0,091
Pair 4	Ability to make decisions2	4,587	0,601	0,051
Pair 5	Satisfaction with communication skills1	4,225	0,837	0,071
Pair 5	Satisfaction with communication skills2	4,732	0,548	0,047
Pair 6	Satisfaction with skills1	3,978	0,908	0,077
Pair 6	Satisfaction with skills2	4,688	0,551	0,047
Pair 7	Satisfaction with language skills1	3,138	1,280	0,109
Pair 7	Satisfaction with language skills2	4,348	0,917	0,078
Pair 8	Self-proving1	3,746	1,101	0,094
Pair 8	Self-proving2	4,413	0,869	0,074
Pair 9	Satisfaction with managerial skills1	3,754	1,093	0,093
Pair 9	Satisfaction with managerial skills2	4,442	0,912	0,078
Pair 10	Applying knowledge1	3,645	1,126	0,096
Pair 10	Applying knowledge2	4,645	0,626	0,053
Pair 11	Importance of one's initiative1	3,580	1,213	0,103
Pair 11	Importance of one's initiative2	4,522	0,664	0,057
Pair 12	More knowledge a better job position1	3,580	1,132	0,096
Pair 12	More knowledge a better job position2	4,297	1,007	0,086
Pair 13	A degree a better job position1	3,420	1,272	0,108
Pair 13	A degree a better job position2	4,297	1,117	0,095
Pair 14	Advancement opportunity1	3,638	1,244	0,106
Pair 14	Advancement opportunity1	4,630	0,793	0,068
Pair 15	Advancement correlated to knowledge1	3,768	1,135	0,097
Pair 15	Advancement correlated to knowledge1	4,601	0,824	0,070

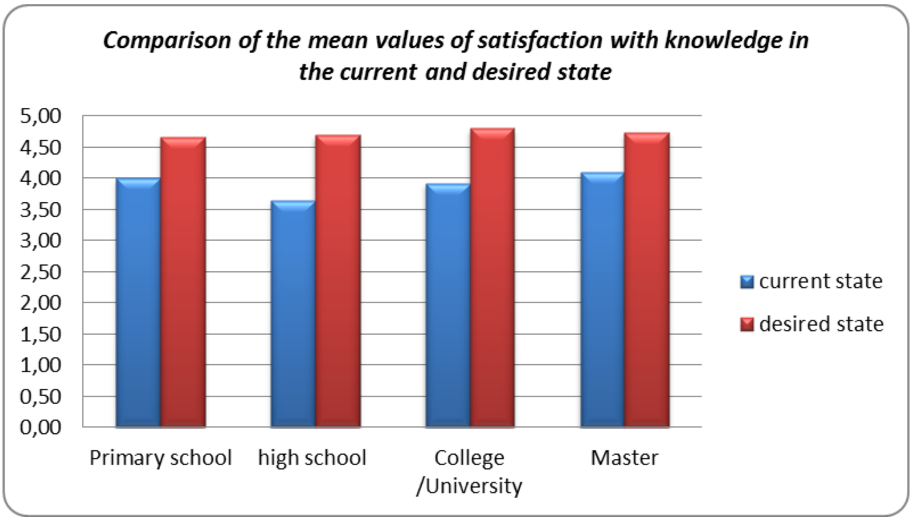

Figure 1. Satisfaction with one's knowledge depending on educational structure

Figure 1. represents a diagram of satisfaction with one's knowledge depending on educational structure from an aspect of the current and desired state. It is noticed in the diagram that the respondents with a master degree of education show the highest level of satisfaction with knowledge. It is interesting to observe that the respondents with the lowest level of professional qualifications, primary school education, also showed a high level of satisfaction with knowledge, which indicates that they have a suitable job position that does not require them to have a higher level of knowledge. The highest and the lowest level of education show less difference in satisfaction with knowledge in the current state compared to the desired state than the respondents with high-school education and higher levels of education.

Analysis of dependent variables depending on the category of independent variables by comparison of category means through ANOVA METHOD.

To answer the question: Do results of measuring satisfaction with knowledge, skills, knowledge of foreign languages, computer technical knowledge,... vary depending on independent variables, we performed a one-factor statistical analysis ANOVA. One of the hypotheses of this one-factor analysis, ANOVA, is that the variances of groups that are compared are similar. For that to be established, Levene's test of homogeneity of variance is used, and it comes down to the testing of the null hypothesis:

H0: variances are equal (there is no hard evidence that there are significant differences between variances for different levels of professional qualifications).

H1: differences between variances are significant.

Table 4.presents Levene's test of homogeneity of variance, with the aid of which one can assess the equality of variances in results in each of the categories of professional qualifications.

Table 4.-Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Satisfaction with knowledge1	8,069	3	134	0
Satisfaction with skills1	3,988	3	134	0,009
Satisfaction with communication1	2,739	3	134	0,046
A degree a better JP1	2,819	3	134	0,041
Advancement opportunity 1	3,718	3	134	0,013
Knowledge improvemenet1	4,933	3	134	0,003
Satisfaction with language skills2	4,946	3	134	0,003
More knowledge a better JP2	8,479	3	134	0
A degree a better JP2	9,108	3	134	0
Advancement opportunity2	8,581	3	134	0

Columns represent Leven's F statistics (Levene Statistic), freedom degrees (df1 and df2) for pairs of independent and dependent variables and statistical significance (Sig. is p-value). When „Sig." is higher than 0,05 , it denotes the validity of the null hypothesis, according to which there is no hard evidence that there are significant differences between variances for different levels of education. In other words, in such a case, the hypothesis on homogeneity of variance is not refuted. In our case the value is Sig>0.05, which means that there are no significant differences between variances for the variables which assess satisfaction with the knowledge of foreign languages, computer technical knowledge, taking initiative, attitude that one must prove oneself, attitude on the need of improved management knowledge...language skills, coputer skills, communication skills, initiative... and for the variables that assess satisfaction with knowledge and skills , the value is Sig<0,05.

In such cases, since we do not have equal variances for all four groups of independent variables of "education level" (there are no Doctors of Science), we will apply robustness testing (in which median is used in place of the mean value) instead of ANOVA statictics.

The ANOVA table, table 5, shows the sum of squared values of the mean value of the results (Sum of Squares), the number of freedom degrees (df), the value of F distribution, standard deviation (Mean Square) and statistical significance or p-value (Sig.). When the statistical significance is lower than 0.05, there is a statistically significant difference between the mean values of dependent variables in six groups of values of the independent variable. In our case, for satisfaction with the knowledge of foreign languages (Satisfaction with language skills1), the current state, satisfaction with computer technical knowledge(Satisfaction with computer skills1), the current state and satisfaction with the knowledge of foreign languages (Satisfaction with language skills2) ,the desired state, we have the value Sig. < 0.05 and for those variables there is a statistically significant difference between the mean values of the given variables in four categories of different levels of professional qualifications. The null hypothesis, according to which the mean values for different categories of levels of professional qualifications are equal, applies to the rest of the dependent variables.

Table 5. ANOVA

		Sum of Squares	df	Mean Square	F
Satisfaction with language skills1	Between Groups	23,076	3	7,692	5,12
	Within Groups	201,308	134	1,502	
	Total	224,384	137		
Satisfaction with computer skills1	Between Groups	13,426	3	4,475	5,193
	Within Groups	115,48	134	0,862	
	Total	128,906	137		
Satisfaction with language skills2	Between Groups	8,634	3	2,878	3,615
	Within Groups	106,671	134	0,796	
	Total	115,304	137		

Figures 2, 3 and 4 represents the graphical display of the ANOVA analysis.

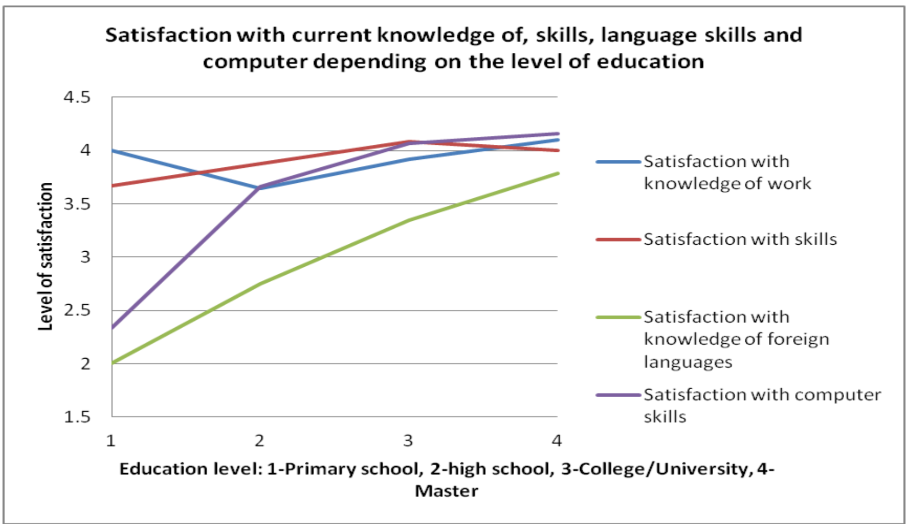

Figure 2. Satisfaction with knowledge, skills and language and computer skills depending on the level of professional qualifications

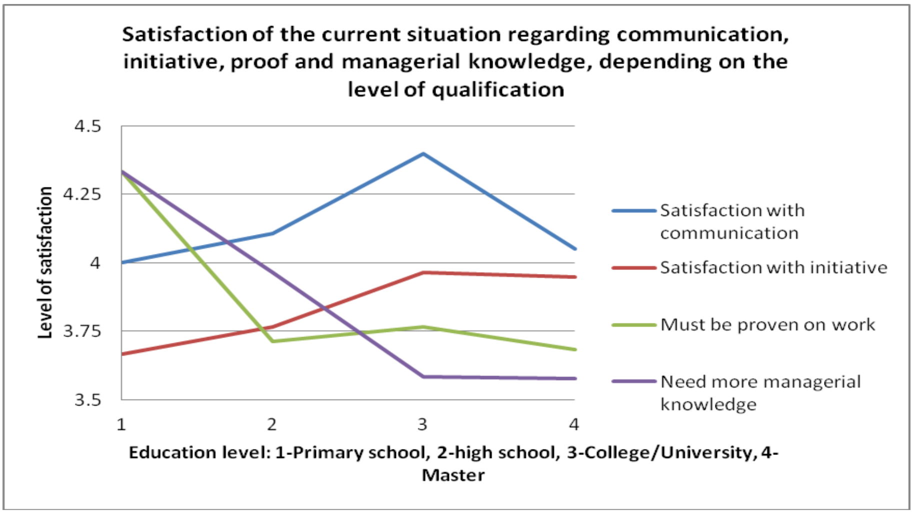

Figure 3. Satisfaction with communication skills, initiative, ability to prove oneself and the level of managerial skills depending on the level of professional qualifications

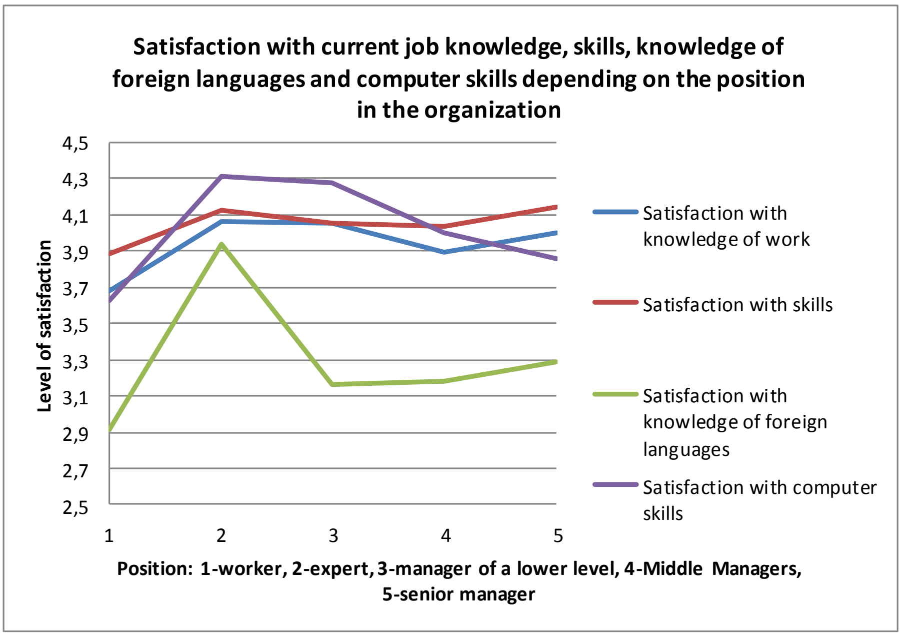

Figure 4. Satisfaction with knowledge, skills and language and computer skills depending on the position in the organization

The results of the research have shown that:

- There is a weak correlation between higher levels of professional qualifications and better knowledge of foreign languages and computer technical knowledge, and a weak correlation between a higher level of professional qualifications and less need for managerial skills. There is also a weak correlation between a higher level of professional qualifications and compliance with the attitude that a degree does not contribute one’s acquiring a better job position
- There is a mild correlation between a higher hierarchical position and a higher level of satisfaction with the opportunity to take initiative and career advancement due to one’s knowledge
- There is a mild correlation between the respondents more advanced in years and a lower level of satisfaction with the knowledge of foreign languages, a mild correlation between the respondents more advanced in years and satisfaction with the opportunity to make business decisions, which is explained by the fact that the respondents more advanced in years are more independent in their work.

It can be said that there is a mild correlation between activity and computer skills, having in mind that the respondents in technical and organizational activities express a higher level of satisfaction with computer skills.

There is a mild correlation between the length of service and satisfaction with the opportunity to make business decisions, which can be explained by the fact that the respondents with more years of service are more independent in their work. They are also more satisfied with the opportunity to take initiative and communication skills.

There is a correlation between satisfaction with communication skills and ownership structure and a mild correlation between the number of employees and satisfaction with communication skills.

For dependent variables-satisfaction with language skills (the current state), satisfaction with computer skills (the current state) and satisfaction with language skills (the desired state), there is a statistically significant difference between the mean values of the given variables in four categories of different levels of professional qualifications in such a way that the level of satisfaction with language and computer skills increases with a higher level of formal education.

Satisfaction with current computer technical knowledge and the opportunity to make business decisions greatly vary depending on the position in the organization. The highest level of satisfaction with computer technical knowledge is present with those respondents who are in the position of experts compared to those in the position of workers. The biggest difference in the opportunity to make business decisions is between the position of workers and that of experts. It can be noticed that even the top-level managers didn’t express a high level of satisfaction with the opportunity to make business decisions (the level of satisfaction with the opportunity to make business decisions being between “ I have no opinion(

undecided) “ and “ I agree”) and the level of their satisfaction is lower than the level of satisfaction with decision making opportunity of the experts, when one would expect for those values to be of the highest level in their position. That could indicate that decision making in the highest positions in the observed enterprises is influenced by some other factors and limitations as well.

One can conclude that satisfaction with the current state of language and computer skills greatly varies depending on age structure. The highest level of satisfaction with the knowledge of foreign languages and computer technical knowledge is present with the respondents of the 25-34 age group, and after that there is a decline in the aforementioned satisfaction , which brings us to conclusion that the respondents more advanced in years are considerably less satisfied with their language and computer skills.

Satisfaction with the opportunity to make business decisions greatly varies depending on the length of service of the respondents. The biggest difference is between the fewest years of service, 1-5 years (the lowest level of satisfaction) and 20-30 years of work (the highest level of satisfaction).

Satisfaction with computer technical knowledge, communication skills and the fact that one must prove oneself at work, greatly vary depending on the respondent’s activity. The biggest difference in the level of satisfaction with computer skills is between medical and administrative (organizational) activity on the one side (the lowest level of satisfaction) and legal activity on the other (the highest level of satisfaction). It can be noticed that a higher level of satisfaction with computer skills is present in legal than in technical activity, which could well be a consequence of higher expectations and bigger demands for computer skills in technical activities. The biggest difference in satisfaction with communication skills is between administrative (organizational) activity (the lowest level of satisfaction) and legal activity (the highest level of satisfaction), which was to be expected. As far as for the differences in satisfaction with the fact that one must prove oneself at work, the biggest difference is between legal activity (the lowest level of satisfaction) and medical, economic and technical activity(the highest level of satisfaction). It can be noticed that legal activity shows the highest level of satisfaction with communication skills, and the lowest level of satisfaction with the fact that one must prove oneself at work.

There is no significant difference in satisfaction with knowledge, skills, language and computer skills, communication skills, taking initiative, self-proving opportunity and the level of managerial skills, advancement opportunity, advancement opportunity based on knowledge improvement and opportunity to make business decisions, depending on one’s gender.

Thus, the general hypothesis has been proven.

CONCLUSION

It can be seen by a summary of the mean values of satisfaction that the mean value of satisfaction with the actuality of one's knowledge, contemporary computer technical knowledge, showing initiative at work, opportunity to make business decisions, communication skills, working skills, language skills, self-proving at work, managerial skills, apllying knowledge, the significance of the initiative at work, the significance of knowledge in one's job, the significance that formal knowledge through certificates has for career advancement, advancement opportunity and the correlation between advancement opportunity and possessing a lower level of knowledge in the current than in desired state, which can be interpreted as an ambition of an average respondent to improve both their knowledge and their skills. This further addresses to the need of improving the process of advanced training of employees, which would increase the satisfaction of employees , and thus ensure a better working environment which is a prerequisite for stability and growth of one organization.

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FACING THE FUTURE WITH NEW KNOWLEDGE AND ENTREPRENEURIAL SKILLS

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Slavko Karavidic, PhD[18]

ABSTRACT

The aim of this paper is, by means of theoretical-empirical research, to reveal the need of the Serbian economy for knowledge and skills, encourage the identification and mapping of an organization's intellectual potentials and generate new knowledge and skills.

Different types of formal and informal education, which encourage fresh thinking and a new knowledge of scientific importance as well as entrepreneurial skills, help to create a value chain and business intelligence for the future.

The creative potential of human resources is the only growth potential and basis determinant of economic and economic development at an age marked by many changes, innovations, technological advances, telecommunications equipment, complicated and accelerated business processes, followed by a lack of social power, etc.

According to research, the general conclusion is that the Serbian economy needs the following: transferable skills and knowledge and a new vision of multidisciplinary, transdisciplinary competencies largely as a result of participation in the forms of non-formal education.

Thus, the future belongs to those who are willing to learn.

***Key words**: Knowledge, Skills, Education, Development, Innovations*

***JEL Classification**: I 21*

UDK: 005.94 331.363 331.41(497.11)(083.41)

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INTRODUCTION

The future is always a new lesson and a warning, a request of the times we live in.

The source of the future is not in the past, but in the present – the present is the future which has begun. Namely, the future is what is being developed now.

Nothing can replace man, his knowledge and skills, on the path to the future, as well as the development of his creative potential. Knowledge is the prerequisite of survival and development, and ignorance is the greatest secret, a great obstacle for planning (projecting) the future.

Knowledge, as an organization wealth, is defined as competence, that is, a volume of activity, and consists of five interdependent competencies:

- An explicit knowledge acquired by formal communication;
- Skills – the art of know-how acquired by training and practice;
- Experience is based on success and the errors made in the past;
- Values are the filter showing us if we are doing what is right;
- Social networks – man’s relations with other people and cultures.

Education is a group of activities which serves to create the future of society by building a value systems, as well as knowledge and skills, by the following:

- Defining and nurturing values and language, literature and culture and understanding other cultures; acquiring technological and other knowledge;
- Forming the needs and abilities for self-education and continuing education;
- Forming psychological and physical personality traits for independent, as well as team work;
- Overcoming the traditional attitude towards knowledge, through constant needs for a complete and quality education, and not just favoring formal education as a social status element, et al.,.

Education should not be submerged in social life, but rather, it should stimulate creativity and expose the reality of social life (Kokotović, 1994:83).

The degree to which people can develop their capacities and learn continuously, will be the main factor and the critical component of success.

The creative strength of knowledge and intellectual potential in the developed world is the key factor of productivity, competitiveness and economic success. The system is built by integrating chains and codes of rationalism and value norms, in which “man can assert himself” by way of employing knowledge and creative freedom. The cult of pure reason, “I think, therefore, I am”, has produced the cult of knowledge which has become the turning point of the New World and the New Age.

The world has long ago comprehended the significance of knowledge and the fact that knowledge is the main factor of development as well as a comparative advantage, and competitiveness as a system of attributes and traits of market production factors is reduced to the application of knowledge and skills of the market factors, as well as their ability to use this knowledge and skills in an appropriate and methodical way.

Namely, permanent training as a continuing process is joint protection for both the employees and the company (Radović-Marković, 2011).

A CHANGE OF ATTITUDE TOWARDS KNOWLEDGE AND EDUCATION

How to develop a system for acquiring knowledge? How to preserve intellectual capital?

Education significantly raises the level of knowledge and intellectual tendencies, as well as helping people to overcome their personal identities and choice of life-style, increasing the overall ability of people to deal with life problems.

In that context, we can seek the answer to the issue of the attitude of the organization towards knowledge. There are two types of knowledge concentrated in an organization:

- First, scientific-research – creative knowledge which is most often of an expert character, but also implies internal creative knowledge and skills within a framework of development and research centers of various types;
- Second, this is a concentration of professional and work knowledge and involves skills of acquired education.

The professional knowledge acquired within regular education has a functional significance and for the most part represents the enduring work ability of every individual. This kind of knowledge inevitable contains a certain degree of generality and depending on the level, they are suited to the age when it was acquired.

Acquiring new knowledge is a key point of development, which from the aspect of man can be comprehended as an increase of knowledge, skills and experiences in the development of the total personality, as a process of progressing towards maximum potential adapted to demands and the age. The time dimension reflects the consigned future.

In the light of all the changes, the development of information, communication and technology has changed and an attitude towards learning has been formed. The acquiring of knowledge and learning is increasingly focused on the way how to obtain information, how to analyze it, pass it on, and affirm capacities.

We must not forget that in the age of an IT revolution there is a danger of appropriate information being interpreted as a form of knowledge which can only cause confusion and a collapse of the system (Pavić, 2007:122).

Information before knowledge means collapse and confusion, and knowledge before information means development and progress.

The condition for knowledge is the skill of forming an attitude.

The degree to which people can develop their capacities and learn continuously will be the main factor and the critical component of success. The more complex and creative the job is and the more independently it is carried out the larger is the tendency to acquire new knowledge. In the process of a permanent innovation of professional education, employees are increasingly becoming self-initially involved, as they invest in their education, according to their aspirations and interests.

In order to move forward the development of society toward an educated society and increase professional mobility as a factor of economic development, it is necessary, along with formal education, to also develop a system of informal education.

The transition to an IT society has as one of its main traits assessing knowledge as one of the highest social values, and on the other hand, contemporary technologies are in the function of the “production” of knowledge and skills, and primarily information and communication technology. Education, i.e., learning which includes the application of information and communication technologies is called e-learning, and when educational contents are learned online, this learning process is called online learning.

E-learning is intended for all age groups, which is its basic advantage, considering that the classical forms of studying include elderly people (Radović-Marković, 2007).

Thus, new ways of receiving and processing information in the area of knowledge transfer, that is, placing knowledge adapted to new development implies corporation education with all the possibilities of linking knowledge (electronic libraries, distance learning, the Internet, etc.).

Developing an inclusive education environment implies choosing new technologies which can respond quickly to changes related to the permanent development of information resources (Radović-Marković, 2012).

ADULT EDUCATION

In the conditions of rapid demographic, social-political, economic and scientific and technological changes, the significance of adult education is exceptionally increased. It has a vital role in the economic development of contemporary society and opens a space for an efficient participation of citizens in resolving various social, professional, family and individual problems. The acquiring and use of knowledge, especially in the adult area, has become the key for resolving the most significant social and individual problems.

Economic changes, rapid technological development, the needs to democratize a polarized and unequally developed society, problems of a political, social and economic character have caused adult education and permanent education becoming one of the most current topics, as it is adult education which is seen as a basic way of resolving some of these issues. Adult education policies are an inducement to creating a culture of learning, social organizations and economies based on knowledge as well as promoting individual abilities and achievements (Karavidić, Čukanović-Karavidić, 2008:57).

Adult education is a social activity and a process of satisfying the educational needs of people, regardless of the institutional organization, the contents, the level and use of methods. According to the contents, the organizing method and the aims of adult education are diverse and multifunctional and as such, adult education can be formal and informal, general and skilled, initial and continuing, regular and irregular. In the operative and practical, organizational sense, adult organization implies all formal and informal forms of education aimed at those older than 18 years of age without pupil or student status. Formal education is the educating which takes place in the school system – from elementary schools to postgraduate studies at universities based on accredited programs of education which lead to diplomas with acquired qualifications, competencies and educational levels. Informal education relates to all programs and activities of education and learning beyond formal education.

The key problems relevant for understanding and improving education in Serbia are the following:

1. A low level of economic development and a low level of gross domestic product;
2. A large disparity in the economic, demographic, and educational structure;
3. A low birth rate and a decrease of number of children and youth;
4. Poverty status of a significant part of the population;
5. A high proportion of youth up to 30 years of age in the total unemployment rate;
6. An adverse educational structure of the employed population;
7. An adverse educational and qualification structure of the unemployed;
8. An absence of a systematic approach in developing adult education (politics, strategy, institutions, staff and financial means).

Educating and training adults, promoting learning, skills and professional mobility are the basic instruments for a social and economic transformation, that is, accepting technological innovations, an increase of competency and competitiveness of the working-age population, promoting employment, social cohesion and development of individual needs and abilities and promoting life quality in general. It should accomplish the following:

1) Respond to the needs of the employment market and needs of the individuals for knowledge and skills;

2) Increase the value of human capital and create a basic support for the social and economic development of the country and its integration into a global, especially European economy;
3) Enable for individuals a full social participation;
4) Increase professional mobility and the flexibility of the work active population;
5) Prevent social exclusion and marginalization, strengthen social cohesion and the sense of belonging and identity;
6) Support individual development and self-fulfillment.

The policy and strategy of professional education and adult training and the identifying of their direct aims and tasks is based on the premise that adult education is the following:

1) A manifestation of life-long learning as an integral part of the total educational system;
2) A strong factor of economic development, an increased productivity and competitiveness of the economy, thus increasing employment;
3) An upgrading of the regular educational system (offering another chance to acquire relevant knowledge and skills);
4) An innovative mechanism of the system for education and learning (a quick reaction to the needs of the economy and the employment market and technological changes, in which new profiles, programs, skills, competencies are tested, which are flexible and open for new ways and forms of work and learning).

Thus, mental abilities, along with other abilities, must be maintained, enriched, and improved through independent learning and the self-development of adults.

How do adults learn?

- Formally, by attending lectures in classrooms;
- By informal discussion with professionals when needed;
- By reading books and literary works;
- By adapting to crisis situations and resolving problems by trial and error;
- By researching information and finding answers to certain questions in a team.

People learn by reacting to need. If there is a need and disposable resources for learning, then adults learn quickly and efficiently.

The process of teaching adults contains four elements:

1. specific experience,
2. observation and reflection,
3. abstract conceptualization, and
4. testing new knowledge.

The efficiency of learning depends on possessing abilities for four key elements of learning:

1. the ability of specific experimenting;
2. the ability of reflexive observation;
3. the ability of abstract conceptualization, and
4. the ability of active experimenting.

This basically means the ability of the practical application of ideas, the ability of imagination, for creating theoretical models and the ability to do what is right.

In a practical sense, this also implies the stimulating of creative thinking, the ability to communicate, innovate and develop new products, as well as detect and test business opportunities and incorporate them in long-term business, and leadership development.

LEARNING ORGANIZATIONS

Learning organizations are essential in the conditions of a turbulent environment and occur as a consequence of the need of the organization to adapt to contemporary, exceedingly variable conditions of business, representing a prerequisite for the survival and efficient functioning of organizations. Creating learning organizations is a long-standing and complex job, and the aim is to actively engage employees in the management process and resolve business problems by developing their creativity and competencies and in that way increase the efficiency of the organization and the total knowledge fund.

In practice, an entrepreneur with knowledge acquired by education identifies and maps the intellectual potential of the organization, and by generating new knowledge introduces new ways of work and applying technologies in the realization of the entrepreneurial organization business aims (Karavidić et al., 2013:261). In the process of creating a learning organization, among other things, attention should be given to reorganizing organizational capacities and the organizational culture.

A very significant element of organizational capacities is the social-emotional process which occurs in an organization – appropriate work conditions and chances for progress, an appropriate emotional climate, or in other words, an appropriate organizational culture.

At an age of increasing insecurity, a learning organization must be created in such a way to contest an unstable environment, while the parameter of organizational capacities enables training and the development of an efficient organizational response. Earlier research has shown that identifying and fostering entrepreneurial potential through the process of education can to a large extent contribute to long-term economic benefits.

By constant expansion of a knowledge fund, individuals become a special kind of implement for an organization. A fundamentally important concept for the future points to the need to change the outlook of the organization, in order to understand and use the ability of the employees to learn, and to carry out their commitments – the so-called synergetic effect, which implies harnessing the creative energy of the employees for skill development and a more creative and efficient application. This implies a multidisciplinary and process-orientated approach based on practical application.

An initial reaction should be conditioned by establishing a set of defined values which the organization should carry out. To create a worth of an organization is a complex process which demands a high level of knowledge and skills. This implies a continuing process of research and needs analysis of the organization for knowledge and skills but also a personal satisfaction of the employees through the realization of their individual potentials which are developed during all stages of education.

THE RESULTS OF RESEARCH OF THE NEEDS OF THE ECONOMY OF THE REPUBLIC OF SERBIA FOR KNOWLEDGE AND SKILLS

The research had the aim to analyze the needs of the economy for knowledge and skills in the function of developing human capital.

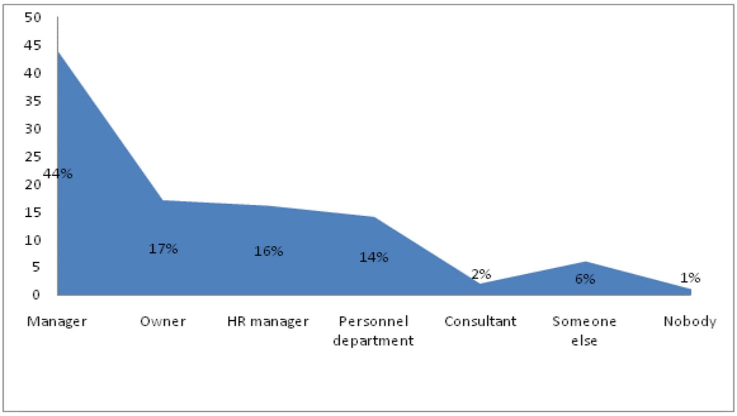
The target groups were small and large companies. The research was carried out in 2013, with the help of the students of the Faculty of Business Economics and Entrepreneurship (within the subject of Methodology of Scientific Research (master studies), on a sample of 138 companies from the territory of the Republic of Serbia: 125 small and medium-sized businesses (hereinafter: SMBs) and 13 large businesses were surveyed.

The main feature of the sample is that the majority of employees had a vocational school education, then those with high school diplomas, with is a smaller number of qualified workers, and a significantly less number of highly educated employees with undergraduate and postgraduate degrees.

Used for the needs of the research was a standard survey with a questionnaire of 20 questions which was used also in other regional countries. Questions 8, 9 and 10 especially dealt with two categories: managers and employees.

The questionnaire was filled out by 76 SMBs and 8 large businesses, while 49 SMBs and 5 large businesses responded to at least one or more questions.

The question “Who is the person authorized to deal with human resources and further education and training of the employees in the organization?” some 138 companies responded, of which 125 SMBs and 13 large businesses.

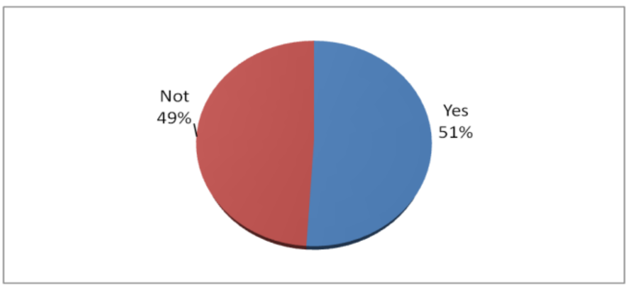


Graph 1. Persons who are responsible for human resources in organization

In the majority of organizations, 44% of the directors/managers are responsible for human resources, in 17% of cases this is the owner, in 16% the HR manager, in 14% of cases the personnel department, in 2% of cases the consultant, in 6% of the cases someone else, and nobody in 1% of the cases.

Considering the fact that a large number of SMBs and a significantly less number of large businesses took part in the survey, and that in a medium-sized company one person has multiple functions, it is logical that in 77% of the cases the resources are managed by a director/manager or the owner. It is especially important that this category is trained for recruiting and managing human resources as many things depend on their abilities, among other things: a) whether they can recognize competencies (knowledge and skills) needed by the organization, and which will contribute to growth and development, b) if they have the knowledge on how to improve the competencies of the employees, and c) how to motivate the employees for further training.

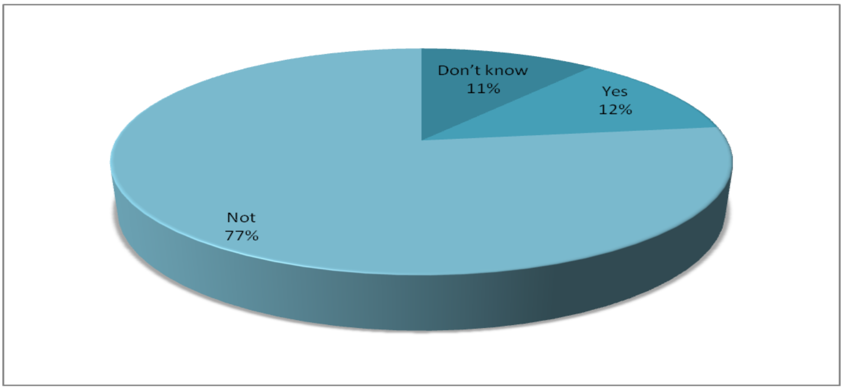
2. The question "Have you earmarked funds for further education and training of employees in your annual financial plan?" some 124 SMBs replied, along with 13 large businesses.



Graph 2. The financial plan provides funds for further education and training of employees

Even though a number of organizations had earmarked funds for further education and training, it is a doubtful how these funds were used for the mentioned purpose. If there are funds for education, this should also imply creating a plan and a training program for the employees so that carrying out basic activities can be enabled.

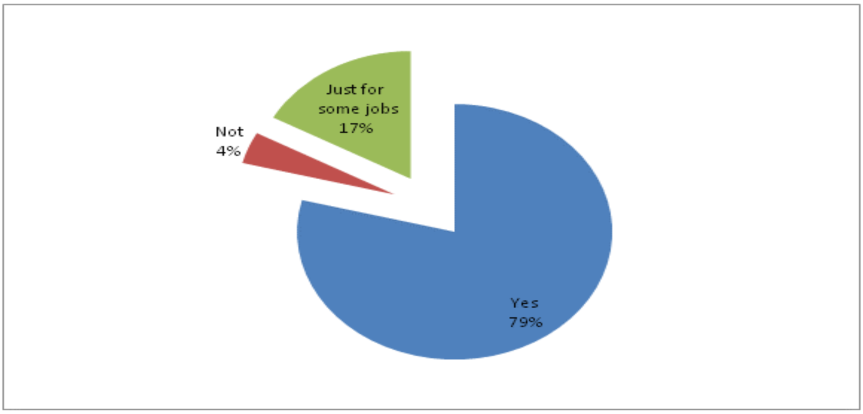
3. The question “Do you use subsidies for further education and training or other types of free training?” was answered by 124 SMBs and 3 large businesses.



Graph 3. Percent of using of subvention for further education and training of employees or some other kind of free trainings

This issue is directly linked with the mandate of the state to stimulate employment through further training, that is, requalification and additional training. As 77% of the respondents replied that they had no subsidies for further education and additional training, it can be said that business owners are not well-informed with state programs. In effect, more should be done on promotions so that the economy can to a larger extent use state subsidies for education and training, especially taking into consideration the fact that this involves funds from the budget of the Republic of Serbia and funds which Serbia has received based on participation in EU-funded projects.

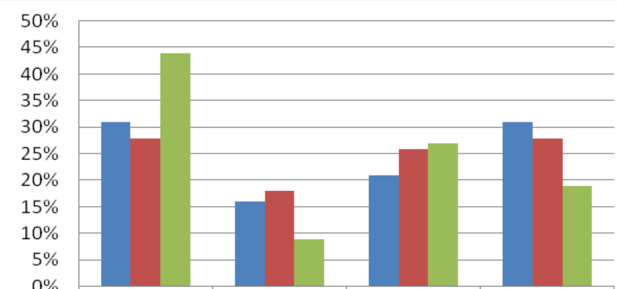
4. The question “Do you have defined competencies (skills and knowledge) needed to carry out certain jobs?” was answered by 125 SMBs and 13 large businesses.



Graph 4. Possession of competence for the job

Issues connected with defined competencies (knowledge and skills) are related to what is proposed in the internal documents of the organizations, and implies the needed competencies necessary to carry out certain jobs. Thus, 79% of the surveyed business owners stressed that they have defined competencies, 17% only for some jobs, and 4% claimed they have none. However, such a high percentage of organizations which claimed to have defined competencies for their work places should be taken with reserve as it is possible that they were defined only in certain documents (the classification of work places and contracts), and that in practice, employees lack the necessary knowledge and skills for carrying out specific jobs.

5. The query "Number of days spent on further education and additional training during the year" was answered by 111 organizations of which 98 were SMBs and 13 were large businesses.

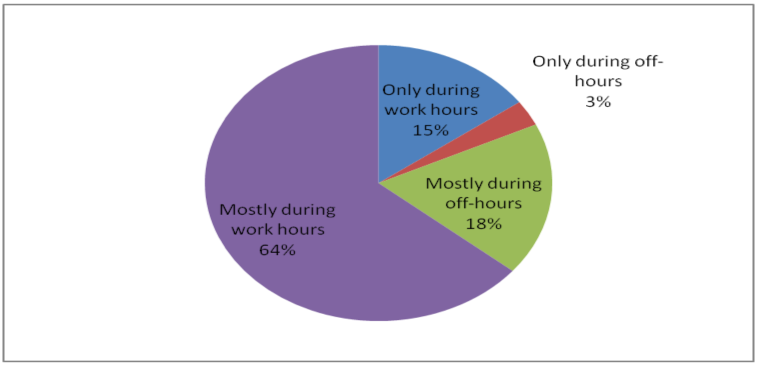


	No data	6-10 deys	1-5 deys	Over 10 days
Supervisors	31%	16%	21%	31%
Professional staff	28%	18%	26%	28%
The rest	44%	9%	27%	19%

Graph 5. The annual number of days spent for education and trainings

Based on the responses, we can see that 31% supervisors have 10 training days, as well as 28% of the professional staff and 19% of the other employees. Some 17% supervisors, 19% professional staff and 9% of the other employees had 6-10 training days. Some 21% supervisors, 26% of the professional staff and 28% of the other employees had 1-5 training days. A large number of the businesses surveyed have no methodology to determine training needs and the assessment of the effects of training, as well as no established system for staff management.

6. The question "When is further education carried out?" some 135businesses answered, of which 123 were SMBs and 12 were large businesses.

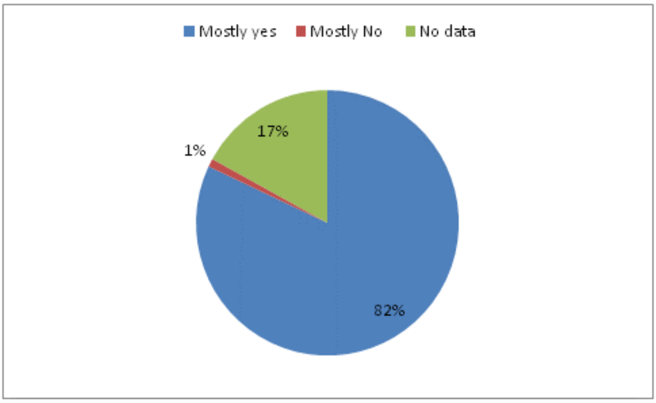


Graph 6. Time of education realization

Training mostly during work hours is carried out in 64% of the cases, 18% mostly during off-hours, and 15% of the cases exclusively during work hours and in 3% cases mostly during off-hours. Employers consider that employee motivation for training would be significantly reduced if training was carried out during work hours. On the other hand, if training is carried out during work hours several times during the year there is the issue of work quality. The solution which may be acceptable for the employers as well as employees would be to start with training during work hours and continue after work hours. By introducing a system of acknowledging qualifications acquired through work, training and professional training employees may be motivated for professional training during off-hours as well.

(French experience has shown that employees are motivated to undergo training during off-hours as well, as new knowledge is acknowledged as acquired qualifications which are an integral part of a collective contract.)

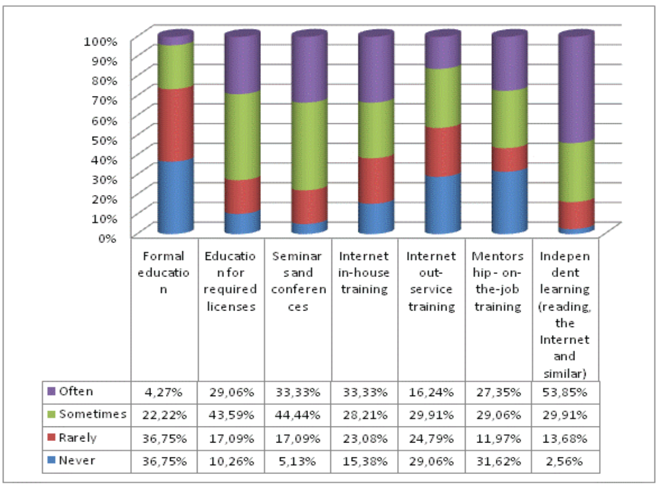
7. The question "Is the work performance of the employees improved after further education and/or training?" was answered by 135 companies - 122 SMBs and 13 large businesses.



Graph 7. Further education improve work preformance

Some 82% of the respondents gave positive answers, 1% negative, and 17% had no data. For those who confirmed that further education and training had a positive impact on improving work performance, it is unclear if an assessment on the use of newly acquired skills in practice was carried out and whether there were errors in training assessment for employees in a certain work place. On the other hand, there was a high percentage (17%) of those who lack any data on whether further training had contributed to a performance improvement. This means that education/training is carried out by inertia, and that the real effect of education/training is not assessed in practice, which can point to an unreasonable use of funds for education/training or to an unrealistic assessing and planning of needs for education and training.

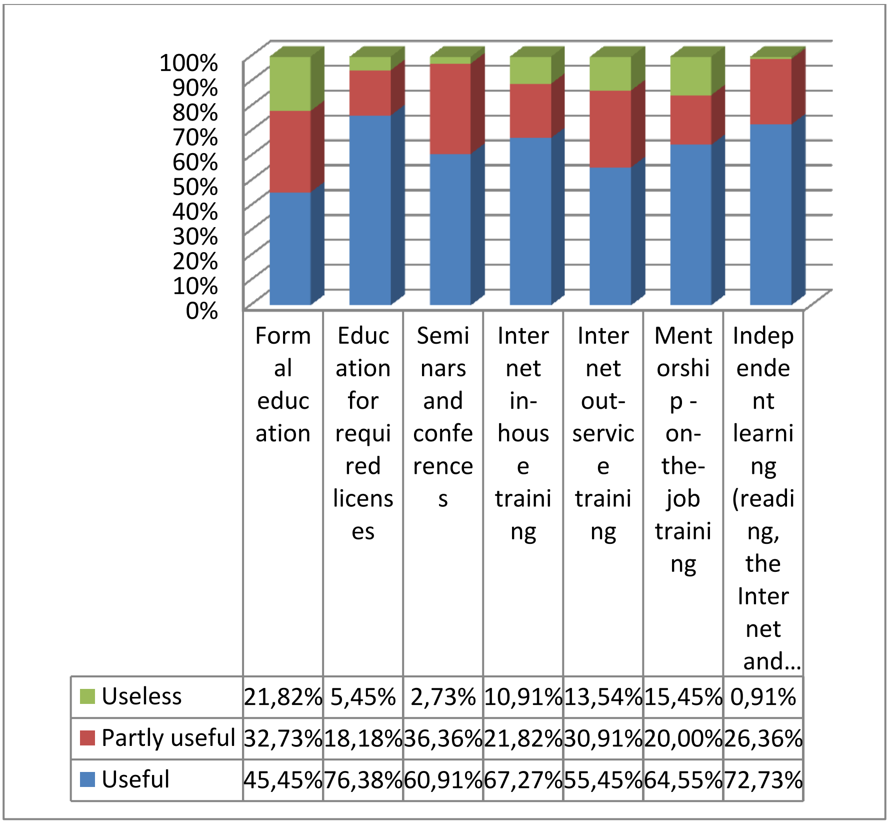
8. The question of how often the employees had attended training in the last 2 years and the effectiveness of training, some 92 companies responded, 90 SMBs and 2 large businesses.



	Formal education	Education for required licenses	Seminars and conferences	Internet in-house training	Internet out-service training	Mentorship - on-the-job training	Independent learning (reading, the Internet and similar)
Often	4,27%	29,06%	33,33%	33,33%	16,24%	27,35%	53,85%
Sometimes	22,22%	43,59%	44,44%	28,21%	29,91%	29,06%	29,91%
Rarely	36,75%	17,09%	17,09%	23,08%	24,79%	11,97%	13,68%
Never	36,75%	10,26%	5,13%	15,38%	29,06%	31,62%	2,56%

Graph 8. Frequency of attending of training in last two years

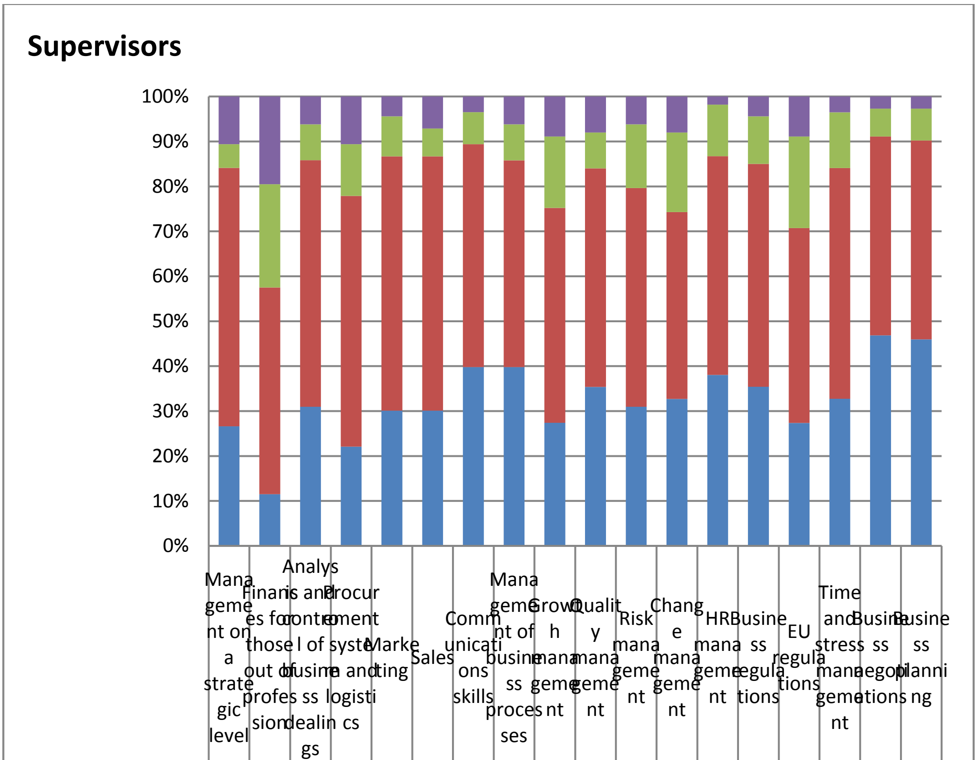
Regarding the frequency of training attendance, 54% of the respondents claimed that most often they acquire knowledge by independent learning (reading, the Internet and similar), 33% at seminars and conferences and 33% at in-house training sessions. Some 45% of the employees train at seminars and conferences, 44% through training for obtaining required certificates and licenses and 30% via in-house training. The least number of respondents claimed they never or rarely acquire new knowledge and skills via additional formal education (requalification and additional training), as well as mentorship learning through a practical conveying of knowledge and in-house or out-service training. The responses to this question indicate that employees still mostly rely on their own resources and motivation for adopting new competencies and that on the other hand, they use the possibilities which are offered by continuing adult education very little (as many as 72% rarely or never acquired additional qualifications via formal education).



Graph 9. Percent of usefulness of certain training

In answering the other part of the question linked with the effectiveness of certain training, 76% considers training for obtaining certificates and licenses as the most useful, 72% independent learning, and 67% in-house training. Some 36 % consider seminars and conferences partly useful, 33% underwent training through a formal system of education and 31% considered that internal training is partly useful. The least useful training was considered formal education.

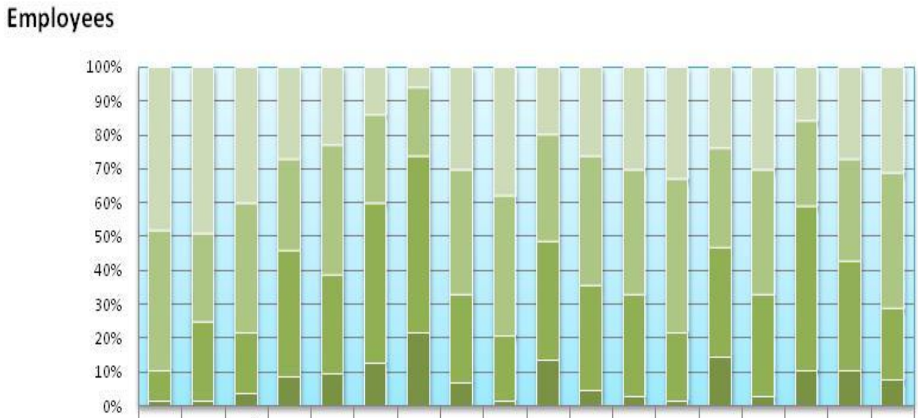
9. The question targeted separately towards the management and the employees on the types of further education and training needed by their businesses, some 84, of which 81 SMBs and 3 large businesses responded.



	Management on a strategic level	Finances for those out of profession	Analysis and control of business dealings	Procurement system and logistics	Marketing	Sales	Communications skills	Management of business processes	Growth management	Quality management	Risk management	Change management	HR management	Business regulations	EU regulations	Time and stress management	Business negotiations	Business planning
Required	10,6	19,5	6,2%	10,6	4,4%	7,1%	3,5%	6,2%	8,9%	8,0%	6,2%	8,0%	1,8%	4,4%	8,9%	3,5%	2,7%	2,7%
Less important	5,3%	23,0	8,0%	11,5	8,9%	6,2%	7,1%	8,0%	15,9	8,0%	14,2	17,7	11,5	10,6	20,4	12,4	6,2%	7,1%
Wanted	57,5	46,0	54,9	55,8	56,6	56,6	49,6	46,0	47,8	48,7	48,7	41,6	48,7	49,6	43,4	51,3	44,3	44,3
Unnecessary	26,6	11,5	31,0	22,1	30,1	30,1	39,8	39,8	27,4	35,4	31,0	32,7	38,1	35,4	27,4	32,7	46,9	46,0

Graph 10. Fields which need further trainings- supervisors' opinion

In the organizations surveyed, 40% of the management considers that training, business processes, communication skills and resource management is necessary, 57% considers that management on a strategic level is a useful topic, 56% are for procurement and logistics and 55% for analysis and business control. Some 23% of the managers consider finances for employees out of profession as less important training, 20% EU business regulations, and 18% change management. Financing for those out of profession is considered as unnecessary training by 20% managers, procurement and logistics by 15% and analysis and business control by 6%.



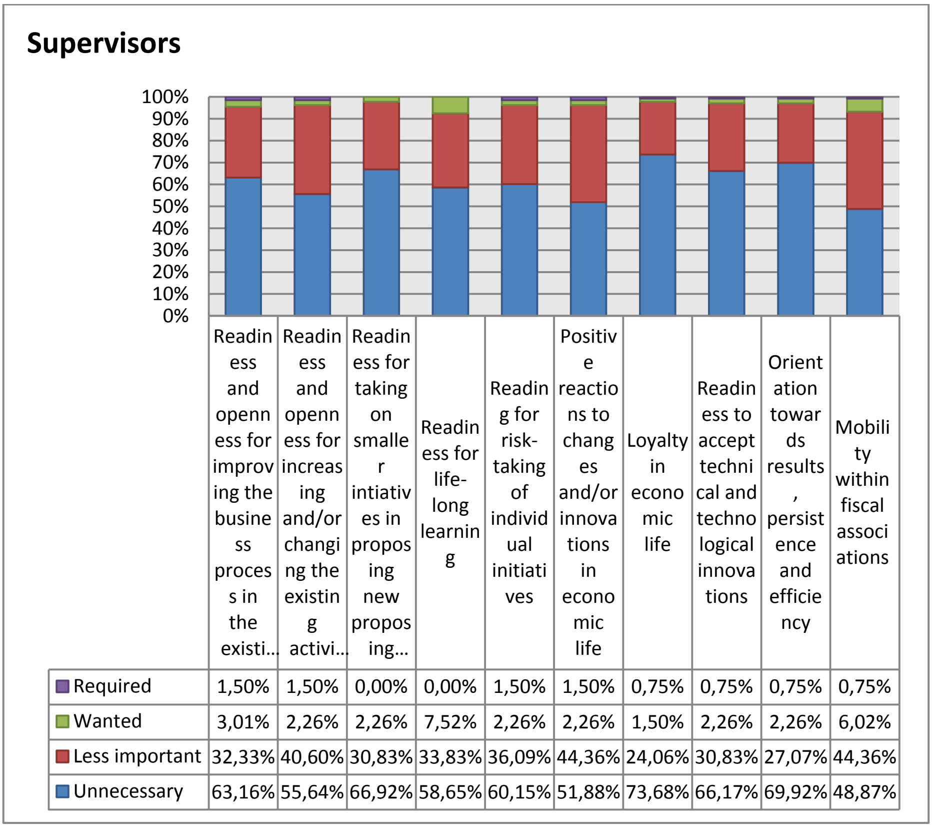
	Management on a strategic level	Finances for those out of profession	Analysis and control of business dealings	Procurement system and logistics	Marketing	Sales	Communications skills	Management of business processes	Growth management	Quality management	Risk management	Change management	HR management	Business regulations	EU regulations	Time and stress management	Business negotiations	Business planning
Required	48,0	49,0	40,0	27,0	23,0	14,0	6,0%	30,0	38,0	20,0	26,0	30,0	33,0	24,0	30,0	16,0	27,0	31,0
Less important	41,0	26,0	38,0	27,0	38,0	26,0	20,0	37,0	41,0	31,0	38,0	37,0	45,0	29,0	37,0	25,0	30,0	40,0
Wanted	9,0%	23,0	18,0	37,0	29,0	47,0	52,0	26,0	19,0	35,0	31,0	30,0	20,0	32,0	30,0	48,0	32,0	21,0
Unnecessary	2,0%	2,0%	4,0%	9,0%	10,0	13,0	22,0	7,0%	2,0%	14,0	5,0%	3,0%	2,0%	15,0	3,0%	11,0	11,0	8,0%

Graph 11. Fields which need further trainings- employees' opinion

In regards to employees, 22% consider communication skills required training, 15% consider this to be business regulations and quality control, while 52% consider communication skills as wanted, and 48% opt for time and stress management and 47% for sales. Considered as less important training for 45% employees is resource management, 41% opt for growth management and 41% for management on a strategic level. Some 49% of employees consider finances for those out of profession as unnecessary training, 48% consider this to be management on a strategic level, and 40% analysis and business control.

Differences in opinions brought up by managers and employees point to the fact that both respondent categories support the training which addresses their level of responsibility in the organization.

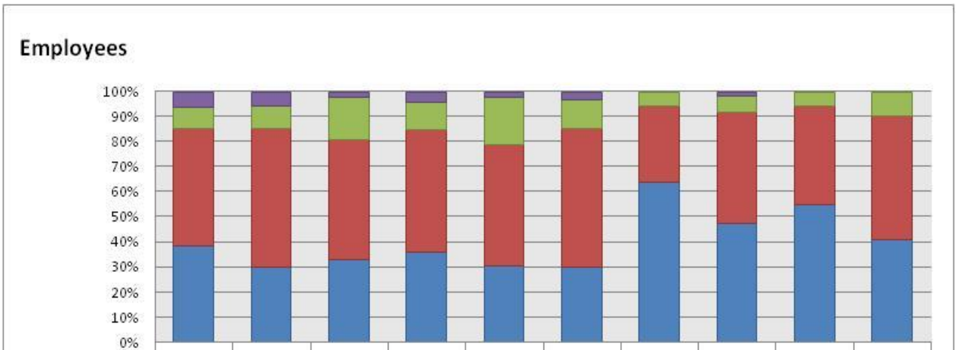
10. The question (separately for manager and employees) "Which characteristics do you consider to be significant for the organization?" was answered by some 109 businesses, of which 101 were SMBs and 8 large businesses.



	Readiness and openness for improving the business process in the existi...	Readiness and openness for increasing and/or changing the existing activi...	Readiness for taking on smaller intiatives in proposing new proposing...	Readiness for life-long learning	Reading for risk-taking of individual initiatives	Positive reactions to changes and/or innovations in economic life	Loyalty in economic life	Readiness to accept technical and technological innovations	Orientation towards results, persistence and efficiency	Mobility within fiscal associations
Required	1,50%	1,50%	0,00%	0,00%	1,50%	1,50%	0,75%	0,75%	0,75%	0,75%
Wanted	3,01%	2,26%	2,26%	7,52%	2,26%	2,26%	1,50%	2,26%	2,26%	6,02%
Less important	32,33%	40,60%	30,83%	33,83%	36,09%	44,36%	24,06%	30,83%	27,07%	44,36%
Unnecessary	63,16%	55,64%	66,92%	58,65%	60,15%	51,88%	73,68%	66,17%	69,92%	48,87%

Graph 12. Characteristics of employees significant for organization - supervisors' opinion

In the manager category, 74% assessed company loyalty as necessary traits of the employees, 67% opted for orientation towards results, persistence and efficiency, 67% for readiness for taking initiatives in proposing new solutions and accepting innovations. Some 44% of the managers consider mobility within an organization as a desirable trait of employees, 44% opt for a positive reaction to changes/innovations and 41% the readiness and openness for increases and/or changes in existing activities. Some 7% managers consider readiness for independent learning as less important traits, 6% opt for mobility within a company and 3% readiness and openness for improving the business process in the existing circumstances. Some 2% managers mark readiness and openness for improving the business process in the existing circumstances as unnecessary traits of the employees, 2% opt for the readiness to take risks for individual initiatives and a positive reacting to changes/innovations in the organization.



	Readiness and openness for improving the business processin the existing activities	Readiness and openness for increasing and/or changing the existing activities	Readiness for taking on smaller intiatives in proposing new proposing new solutions and intiatives	Readiness for life-long learning	Reading for risk-taking of individual initiatives	Positive reactions to changes and/or innovation sin economic life	Loyalty in economic life	Readiness to accept technical and technological innovations	Orientation towards results, persistence and efficiency	Mobility within fiscal associations
Required	6,45%	5,65%	2,42%	4,03%	2,42%	3,23%	0,00%	1,61%	0,00%	0,00%
Wanted	8,06%	8,87%	16,94%	11,29%	18,55%	11,29%	5,65%	6,45%	5,65%	9,68%
Lessimportant	46,77%	55,65%	47,58%	48,39%	48,39%	55,65%	30,65%	44,35%	39,52%	49,19%
Unnecessary	38,71%	29,84%	33,06%	36,29%	30,65%	29,84%	63,71%	47,58%	54,84%	41,13%

Graph 13. Characteristics of employees significant for organization- - employees' opinion

In the employee category, 63% assess loyalty to the company as a required personality trait, while 55% opt for orientation towards results, persistence and efficiency and 41% for mobility within a company. Some 56% employees considered a positive reaction to changes/innovations as wanted, 56% readiness and openness for improving the business process in the existing circumstances and 48% chose readiness for life-long learning. Some 12% of the employees consider as less important traits the readiness of risk-taking of individual initiatives, 17% chose readiness for taking initiatives in proposing new solutions and 12% readiness for life-long learning. Some 6% of the employees considered the personality traits of readiness and openness for improving the business process in the existing activities as being unnecessary, while 6% opt for readiness and openness for increasing and/or a change of the existing activities and 4% for readiness for life-long learning.

The answers to the questions regarding employee traits within organization development indicate that both respondent categories (managers and employees) replied from the aspect of their own positions in the organization, and thus, the traits the managers considered as being necessary were thought to be wanted or desired by the employees, and vice versa.

CONCLUSION

Generally speaking, it can be concluded that the knowledge and skills to carry out a certain job depends on whether the organization invests in personnel training, the type of training offered and on establishing a more permanent link between training and the other traits of the company.

The economic crisis has shown that the economy needs key competencies (skills and knowledge) which can be used within various professions, that is, in different work places.

Linking skills with a certain job implies also the ability of the employer to understand and recognize the skills and qualities of the employee and the need for training employees.

Research has shown that employers first opt for training the young and educated, as according to them, they are quicker to adopt new knowledge than older people and those less educated. However, it has been shown that after gaining employment, some organizations carry out checks whether the abilities of the employees match the work place.

The need to predict knowledge and skills which an individual must possess in to further improve them is especially stressed at times of economic crises and unemployment increase. The competencies (knowledge, skills and opinions) which should be developed are the following:

- communication skills;
- foreign language learning;
- mathematical knowledge and basic knowledge from the area of science and technology;
- electronic communication;
- social communication;
- an entrepreneurial spirit.

The growth of human capital (measured by the knowledge and skills of the employees) is one of the most important factors which determines long-term growth of the economy and implies a larger degree of innovation. Education is not an impression in wax which will dissolve, but rather, an imprint for the coming generations, and thus, understanding the aim of education and educational needs implies philosophical, economic, organizational, political, and ethical and ideas which must be ensued by the applying of appropriate educational methods.

Unfortunately, there is no precise data in Serbia on the number of adults which go through the system of education/training, requalification and additional training.

Also, there is a lack of data on the educational structure of the population. As those with high school education (especially vocational) mark the highest unemployment rate, the question of their competency is raised, as well as the need for the vocations they acquired.

Overcoming the existing situation, primarily unfavorable qualification structures of the unemployed, outmoded professions and inadequate abilities, largely implies a reform and innovating of the educational system, as well as maintaining condensed training systems. Some examples of good practices can give good learning results due to the Internet, as there are discussion forums and web pages which give access to a large number of examples which can satisfy the demands for education of certain businesses.

This implies a new understanding of the mission of education in development and the expansion of the economic system in Serbia, which in turn stimulates fresh thoughts and new knowledge of a scientific significance, by creating value chains and business intelligence. Creative human potential is the only developmental resource and the basic determining factor of economic development.

Thereby, we believe that the real knowledge for the future will be the ability to orient ourselves through a confusing and a complex age full of great changes, which can only be done by those who are ready to learn, and those who are not ready for this, considering they have nothing to acquire, will remain stranded in an setting which no longer exists.

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III PART.
EMPLOYMENT, UNEMPLOYMENT AND POVERTY

EMPLOYEE EMPOWERMENT IN ORDER TO ACHIEVE BENEFITS FOR THE INDIVIDUAL AND THE ORGANIZATION

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ABSTRACT

Employee empowerment is process which gives employees powers and abilities to think, express their creativity, take actions, control their work and make decisions autonomously. In this way, they take full participation in functioning of organization. Increases their sense of value to the organization for which they work and also have the opportunity for personal and career development. That one could activate and express their full potential, it is necessary to treat the individual as a comprehensive, mature personality, carrier of ideas and creativity, productivity and quality. Therefore, it is necessary organization ambience that respects person and treats employees as associate and partner of management. Employee empowerment increase their individual power, but also increase total organisation's power.

The research conducted for this paper is based on the premise that man don't employ to remain still in the same position and level, but seeking advancement opportunities, personal development, change for the better. He wants to develop his career, as the business improves his quality of life, social status, meets the need for respect, self-actualization and finally manage his own career. Workers of the future are the so-called „portfolio" workers, whose „portfolio" includes all their professional knowledge and abilities to work a variety of jobs, which are acquired during the life and career and which gives them the opportunity to change jobs. The aim of the research was to determine how many are now employees in the private sector involved in making decisions process and conduct certain business activities to an extent that goes beyond the normal requirements of their job.

***Key words**: Employee Empowerment, Career Development, Employee Portfolio*

***JEL Classification:** J24*

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INTRODUCTION

Modern market economy conditions impose the need for understanding the importance of human resources in an organization. Organization without real people is a passive, dead thing, and that is why it is said that organizations rely on people. As buildings and walls don't make a city, but the people, so it is with an organization. Employees are its most important and valuable resource, a resource that gives life to every organization. At the same time, employees are the start and the end point when it comes to improving the quality of business operations. The people, human resources and HR management have become the key words and the dominant preoccupations of modern managers and organizations in the highly competitive global market.

HR management includes the series of activities and management tasks, primarily focused on obtaining the necessary number of people with adequate competencies that are in accordance with position requirements. Employees are expected to develop specific knowledge, skills and abilities, creative and innovative options, which can be utilized by the organization in order to achieve its goals and to develop business. However, the individual is only a part of the story, which remains incomplete if managers do not activate his or hers employment potential by building a supportive organizational environment. A key to success of modern corporations lies in their ability to attract, encourage and develop potential of the people who create new knowledge as basis for some new products and services that will successfully meet the needs of modern consumers in the global competition.

In this sense, employee empowerment has become one of the key concepts in the approach to HR management in the 1990's. We can define it as a process where employees are given the authority, the ability to think, to express their creativity, to take actions, to control their work and to make decisions autonomously. The granting of such powers to employees increase their individual power, but also increase total organisation's power. The aim of this paper and the research was to show the importance of this approach for the organization and the employees and to determine how many are now employees in the private sector involved in making decisions process and conduct certain business activities to an extent that goes beyond the normal requirements of their job.

EMPLOYEE EMPOWERMENT AND ITS BENEFITS

In today's complex and turbulent world, organizations have to constantly adapt to new situations if they wish to continue to exist, survive and prosper. The current trend revolves towards developing the organization of constant learning, with quick and adequate response to market demands. Hence the entirely reasonable assumption that the organization of the future will have the need for people who quickly learn how to use the power of their intellect to understand new changes and problems, i.e. for people who have the imagination to find new solutions and suggestions, in a word – for creative people. The most important assets of a company are no longer the tangible assets, raw materials or capital; today those assets are the people and their knowledge, the so-called creative capital, the arsenal of creative thinkers whose ideas can be turned into valuable products and services. Inevitable changes that humanity will face during the nineties and the early decades of the 21st century require that we rely on our creative resources more than ever (Djordjevic, 2005:57). This is supported by the fact that, nowadays, only those who solve business problems in some new ways, those who continuously place new products on the market and those who have original ideas, manage to survive.

Workers are no longer seen as mere executors of work, but as a resource whose ability and potential set foundations for the competitive advantage of corporations. Managers are faced with a challenge how to increase the productivity of their employees. The solution that is offered to them is increasing the involvement of employees' work potential through various training and development, encouraging their initiative and creativity, timely informing, giving support and confidence to the employees and thus to their greater involvement in the life of the organization. Studies have also shown that there is a positive correlation between the greater engagement and the higher performance of employees.

There has always been a need for training the workers to perform a specific job. Some time ago, during the period of tayloristic approach to organization, employees were trained for simple, divided work operations, aimed at gaining speed and working skills. That approach is now obsolete – competencies and potential of employees get greater with training. Organizations accepted the training and education, i.e. job training, as one of the most effective ways of gaining competitive advantage. In order to achieve it, the training must include something more than mere development of basic skills. It means that training should be seen as a way of creating more extensive intellectual capital (Noe, Hollenbeck, Gerhart, Wright, 2006:208) in order to achieve competitive advantage. Organizations should see the investing in their employees as a good investment that will pay off in the future through increasing of financial performance of the organization. Training gives great results when it comes to organizational effectiveness and it contributes to productivity more than performance evaluation and feedback; only the setting of goals has a greater contribution (Dessler, 2005:152). The training process should be carefully researched and aligned with those goals the organization wants to achieve. The ideal situation occurs if employees' training does not only meet the needs of the organization, but also meets the individual needs of employees. In order to be motivated to participate in training programs, employees must be aware of the strengths and weaknesses of their skills and of the connection between training and improving their skills that will enable them to improve their job performance. In other words, training is useless if an employee lacks the ability and motivation to benefit from it (Dessler, 2005:156). The possibility to choose the program they will attend, and respect to that choice of an employee, contributes to his or her desire to learn. Experienced managers know that they should follow the aspirations and preferences of their employees, helping them in their personal and professional development.

In addition to motivational effects, development, i.e. professional improvement and promotion of educated and highly professional people, is among the primary factors considered when one has to select their work and organization, as well as in case of transition to another organization. Development increases job security, provides better opportunities for promotion and advancement, ensures recognition and professional affirmation, as well as better salary.

Certain sociologists and economists claim that some employees might become ’portfolio workers’ (Vidakovic, 2008:59) in the future. Their ’portfolio’ is consisted of all their expertise and ability to work a variety of jobs acquired during working life. Thanks to these abilities they will be capable of changing jobs. Hence, specialization is closely associated with opportunities for promotions. Promotion can be defined as a regular shift forward in the hierarchy of an organization, or from a lower to a higher position, from simpler to more complex, demanding and responsible job. Promotion brings salary increase to a person who has progressed. Transition to a different type of work is also considered as promotion. Criteria for progress should be clearly defined within the organization and all employees should be acquainted with those criteria because they have significant influence on employees’ degree of motivation for work and development.

A significant number of problems, which disrupt the organization in achieving its goals, inevitably occur. These problems vary a lot – from the activities of competitors that demand quick and adequate response, to the issues related to employees, deviations from plans, and delays in production, procurement and sales etc. All those problems require timely and appropriate solutions. Decisions taken in these situations solve individual problems and they should provide balance between work process and business operations, enabling achievement of goals, further functioning and reproduction of companies. Organization is not able to efficiently function or to survive without adequate, timely and high-quality decisions. Decision making is usually under the jurisdiction of managers who often improvise because they are overloaded with work and faced with a lack of time. Employees’ involvement and delegation of some responsibilities to workers should have positive effects that would eventually make them feel like valuable team members.

By the process of empowerment and involvement of employees, they get fuller participation in decision-making, distribution of power and delegation of authority which allows them to maximally affirm and express their creativity. Prerequisite for success and further development lies in creativity implementation which is the first step of innovation necessary for long-term success of an organization. Managers are responsible for creating the work environment that allows them to succeed in their creativity. An individual should be treated as a complete, mature person, as a carrier of ideas, creativity, productivity and quality in order to activate and express their full potential. Adequate remuneration, motivation of employees with respect to individual needs, open channels of communication in both directions in democratic culture and climate are of absolute necessity, as well. Organizational environment worthy of a man and treatment of employees as associates and partners of the management is a must. Qualities of top managers include knowing how to lead the people, how to create a favourable climate and how to motivate the employees to express their full potential at work.

To be able to independently make decisions, suggest solutions and to organize their work, employees must possess all necessary information. The benefits of well-established information systems for an organization and its individuals are: contributing to integrative climate, reducing conflicts, raising moral, improving performance and commitment of employees, developing stronger confidence and increasing their satisfaction with the job, which leads employees to achieve organization's objectives. Any organization that seeks stable operation and advancement must have an established and well-developed system of communication and information between and within all hierarchical levels. Today, we can say that there is no doubt that the level of information is, in fact, the level of modern organization's system development (Markovic, 2003:81).

Managers' fear of employee empowerment is not justified. Engaged employees are energetic; they invest a lot of passion in their work and that brings them joy. Such workers raise the morale of their team. This leads to positive financial results that are major concern of any management. In contrast, idle employees invest only their time, without any pleasure. They do just what they have to do. Engaged employees are in a state of emotional and intellectual satisfaction and they feel great attachment to the organization they work for. Through development of employees, the organization gains a number of advantages:

- It increases total potential of employees (abilities, knowledge, skills);
- It improves the motivation of employees and thus, performance and productivity;
- It provides long term competitive advantage and further business development;
- It allows multi-functionality, flexibility, and internal mobility of employees;
- It ensures the use of quality resources from internal sources;
- It has marketing effects on both external and internal labour market;
- It represents a good investment in future success with a small financial investment;
- It symbolizes an expression of responsibility towards society and the environment.(Przulj, 2007:199)

Benefits that organizations achieve by empowering their employees are numerous. Companies reach their goals with the assistance of satisfied and motivated employees, but the benefits workers receive while working in these companies must not be disregarded. They are being given the opportunity to improve themselves, to develop some new skills and to gain new, increasingly required, experiences. Employees become more multifunctional, more flexible and they adapt more easily to dynamic changes in the world of work. Contemporary living and working conditions do not involve 'secure job for a lifetime' anymore. Nowadays the only 'secure career' is the one that we build by ourselves.

METHODOLOGICAL-HYPOTHETICAL FRAMEWORK OF THE RESEARCH

THE SUBJECT OF RESEARCH

One does not search for a job where he will remain at the same position and level forever, but seeks to meet his needs for development and self-actualization, as the highest and most powerful human needs that increase with satisfaction. In this sense, the organization needs people in the same way as people need the organization and both can achieve goals only by joint efforts. Concept of employee empowerment is an ideal concept that any organization can implement in order to create satisfied employees, to enable them to achieve their individual goals and career development. At the same time, employee empowerment contributes to their productivity and work performance, improving financial results that are major concern of organization's management.

The subject of this research is the opinion of those employed in private sector in Belgrade about their authorization and engagement in their working organizations. People were asked to evaluate current situation in their companies and then they were given the opportunity to define how they would like it to be. Opinions in this research relate to the current status as well as to desired training opportunities, promotions, opportunities to express one’s opinions, ideas, initiative, to participate in decision-making process, to access to information, to organize their work by themselves, and to sense of responsibility towards the job.

THE AIM OF RESEARCH

The research had two main objectives:

1. Analysis of the current state of employees’ satisfaction in terms of their engagement and opportunities for progress in private companies in Belgrade and its comparison with a desired state.
2. Analysis of conditions for development private companies in Belgrade, with respect to company parameters such as its activity, size, age and educational structure of employees.

HYPOTHESES OF THE RESEARCH

H1: Employee empowerment has a positive impact on employees' development, satisfaction and productivity.

H2: The possibility of employees' development in Belgrade private companies depends on those companies’ characteristics.

METHODS AND TECHNIQUES OF THE RESEARCH

Analysing the applied methods and techniques of the research and, bearing in mind their strengths and weaknesses based on its subject, tasks and objectives set for the purpose of the hypotheses, the research was carried out using theoretical analysis and empirical method called 'a research method'.

Empirical research was conducted in three phases:

1. Collecting data from respondents in writing;
2. Sorting and grouping of data;
3. Processing data using method of statistical analysis (descriptive analysis, ANOVA and correlation) and interpretation of obtained data.

Specially designed questionnaire for the survey, in the form of Likert scale for measuring opinions, was used for data collecting. Results obtained by this method were compared to the knowledge obtained by theoretical analysis and that facilitated the execution of more complete findings and recommendations.

RESEARCH SAMPLE

A survey research process, in the form of Likert scale, was selected for collecting employees' information about working conditions in private sector.

The sample included employees of micro, small, medium and large private companies in Belgrade. The structure of the sample is as follows:

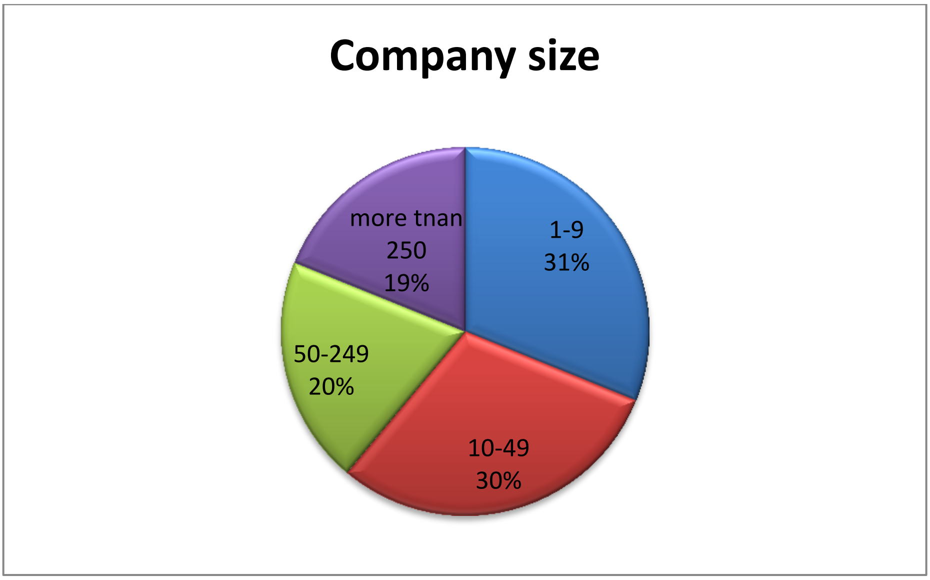

Figure 1. Company siz

Regarding to size of company, in sample are the biggest number of employees which work in micro companies, 31%, then in small companies, 30%, in medium companies work 20% of examinees and in large companies work 19% of examinees.

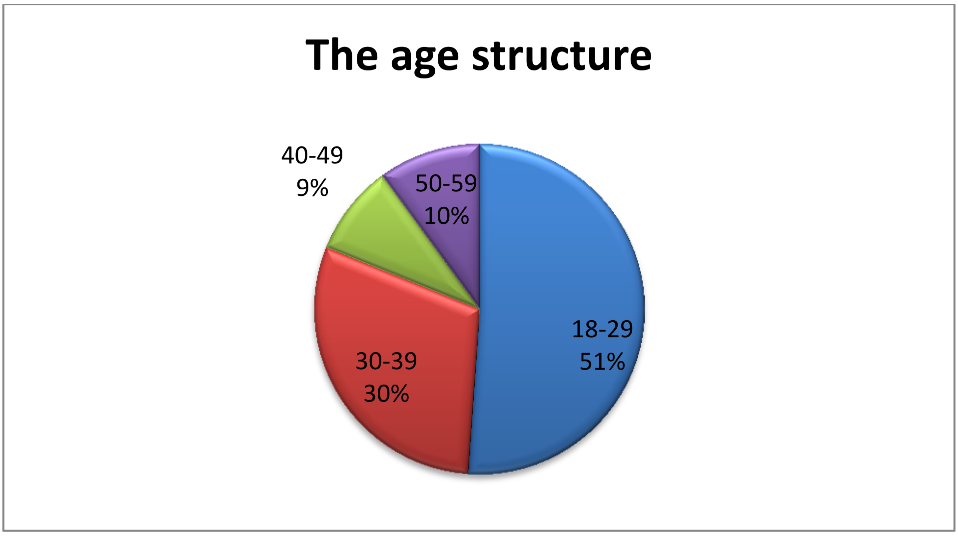

Figure 2. The age structure

According to age structure, it can be concluded that the sample over-represented younger examinees because 51% of them are between 18 and 29 years, while 30% are between 30 and 39 years. Examinees between 40 and 50 years old are 9%, while 10% are between 50 and 60 years old.

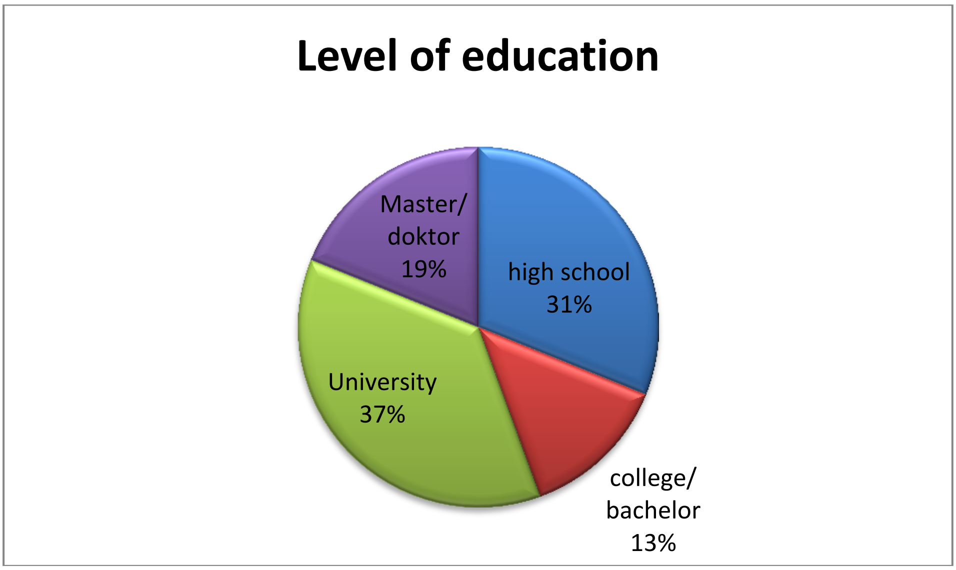

Figure 3. Level of education

According to level of education, it can be concluded that the largest part of sample, 37%, are with university degree, 31% finished high school, 19% are on master or doctor level and on bachelor level are 13% of examinees.

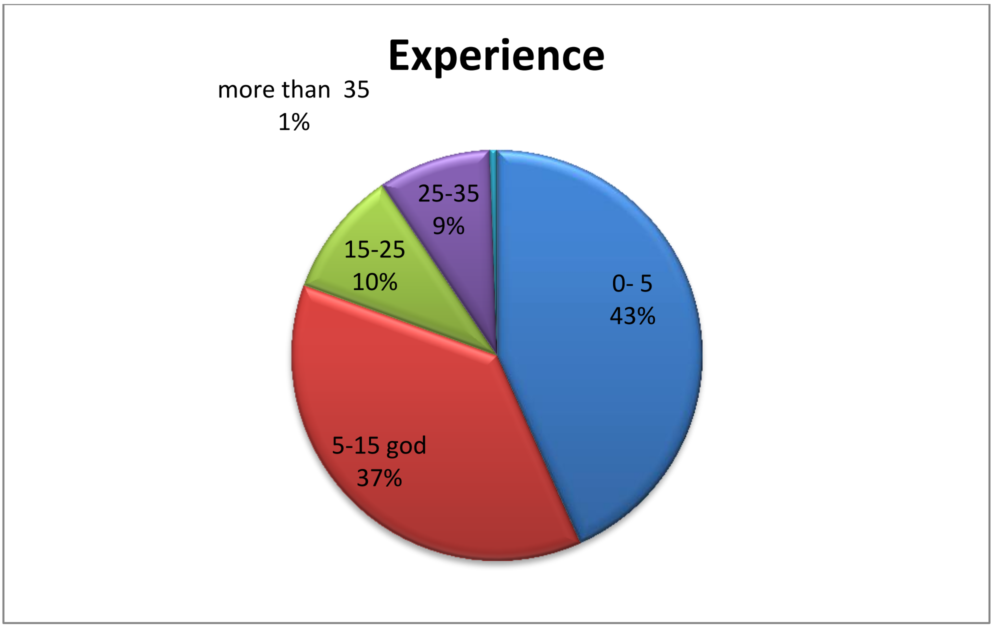

Figure 4. Experience

What is in sample the largest number of young examinees, it is also the largest number those who have work experience from 0 to 5 years, 43%, and those who have work experience from 5-15 years 37%. Examinees with work experience 15-25 years are 10%, those who have experience from 25 to 35 years 9%, while 1% examinees have more than 35 years work experience.

According to gender structure 30% examinees are male and 70% are female.

RESEARCH OF EMPLOYEES' SATISFACTION ABOUT THE POSSIBILITY OF THE DEVELOPMENT IN THE PRIVATE COMPANIES

THE DESCRIPTIVE ANALYSIS OF THE CURRENT AND DESIRED STATE

Research of statement: „in my company I have possibility of training"

Table 1. Possibility of training – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	30	16.7
2	partly disagree	23	12.8
3	neither agree nor disagree	24	13.3
4	partly agree	57	31.7
5	completely agree	46	25.6
Total		180	100.0

Table 2. Possibility of training – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	6	3.3
2	partly disagree	2	1.1
3	neither agree nor disagree	12	6.7
4	partly agree	20	11.1
5	completely agree	140	77.8
Total		180	100.0

Table 3. Possibility of training - the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.37
Desired state	180	1	5	4.59

According to the obtained results, the largest number of respondents, 57 (31.7%) stated that they were partially satisfied with the possibility of training in their companies; 46 of them (25.6%) were fully satisfied with the current situation in their companies regarding the possibility of improving their knowledge and skills (table 1). We also see that 30 respondents (16. 7%) claimed that they had no possibility of additional education in their organizations (table 1). When compared with the results shown in table 2, where respondents evaluated the desired state, and where as many as 140 of them (77.8%) stated that they wanted opportunities for training and education in their organizations, it became clear that employees were aware that further improvement was greatly significant for themselves, for developing of their careers and organizations they worked for. Only 6 (3.3%) employees would not like to be further improved in their organizations. Based on the mean score of all respondents' attitude (table 3), we can conclude that employees in the private sector are partly satisfied – they expect and want more opportunities to expand and improve their knowledge, skills and competencies in their companies.

Research of statement: „in my company I have possibility of career advancement "

Table 4. Possibility of career advancement– current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	36	20.0
2	partly disagree	22	12.2
3	neither agree nor disagree	36	20.0
4	partly agree	52	28.9
5	completely agree	34	18.9
Total		180	100.0

Table 5. Possibility of career advancement –desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	6	3.3
2	partly disagree		
3	neither agree nor disagree	14	7.8
4	partly agree	24	13.3
5	completely agree	136	75.6
Total		180	100.0

Table 6. Possibility of career advancement - the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.14
Desired state	180	1	5	4.58

According to the obtained results, the largest number of examinees, them 52 (28.9%), were partly agree about statement that in their company have possibility of career advancement and 34 (18.9%) were absolutely satisfied and have possibility of career advancement in own company. A total of 36 (20%) examinees said that they don't have possibility of career advancement in their companies (table 4). Research results of desired state show that they expect more possibility of career advancement. Them 136 (75.6%) gave the highest mark to desire state, and only 6 (3.3%) were completely indifferent to the possibility of career advancement (table 5). Difference in average marks which examinees gave to the current and desired state (table 6) about possibility of career advancement in their companies, clearly show that they expect more from their employers.

Research of statement: „in my company I have opportunity to express my opinion"

Table 7. Opportunity to express their opinion - current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	16	8.9
2	partly disagree	12	6.7
3	neither agree nor disagree	30	16.7
4	partly agree	40	22.2
5	completely agree	82	45.6
Total		180	100.0

Table 8. Opportunity to express their opinion – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	4	2.2
2	partly disagree	2	1.1
3	neither agree nor disagree	4	2.2
4	partly agree	14	7.8
5	completely agree	156	86.7
Total		180	100.0

Table 9 . Opportunity to express their opinion – the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.89
Desired state	180	1	5	4.76

According to the obtained results, the largest number of examinees, 82 (45.6%) said that currently have opportunity to express their opinion and ideas on work. Sixteen of examinees (8.9%) said that they don't have that opportunity (table 7). Almost all examinees, them 156 (86.7%) want to have opportunity to express their attitudes, ideas and opinions, but only 4 examinees (2.2%) don't want that (table 8). Based on average marks of all examinees to the current and desired state (table 9) we can conclude that employees were partly satisfied about opportunity to express their attitudes and ideas, and that they want more opportunity for that.

Research of statement: „in my company I can express my initiative "

Table 10. I can express my initiative – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	22	12.2
2	partly disagree	8	4.4
3	neither agree nor disagree	30	16.7
4	partly agree	56	31.1
5	completely agree	64	35.6
Total		180	100.0

Table 11. I can express my initiative – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	6	3.3
2	partly disagree		
3	neither agree nor disagree	12	6.7
4	partly agree	31	17.2
5	completely agree	131	72.8
Total		180	100.0

Table 12. I can express my initiative – the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.73
Desired state	180	1	5	4.56

According to the obtained results, the largest number of employees in private sector, 64 (35.6%), currently can express their initiative on work, while 20 of them (12.2%) can't do that (table 10). The largest percent of examinees 72.8% want absolute possibility to present their work initiative, while 6 of them (3.3%) don't want that (table 11). Based on average marks of all examinees we can conclude that generally currently employed in the private sector in Belgrade are partly able to express the initiative in their work and they want more opportunities to do as well (table 12).

Research of statement: „ I have access to all necessary information and data about work“

Table 13. Access to information – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	10	5.6
2	partly disagree	24	13.3
3	neither agree nor disagree	16	8.9
4	partly agree	52	28.9
5	completely agree	78	43.3
Total		180	100.0

Table 14. Access to information – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	2	1.1
2	partly disagree		
3	neither agree nor disagree		
4	partly agree	25	13.9
5	completely agree	153	85.0
Total		180	100.0

Table 15. Access to information – the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.91
Desired state	180	1	5	4.82

According to the obtained results, we can see that the most examinees, 78 (43.3%), currently in their company have access to all necessary information and data about work, while 10 of them (5.6%) don't have access to all information and data (table 13). The largest percent 153 (85%) want to have fully access to all necessary information and data, while two of them (1.1%) don't want access to all information and data (table 14). View of average marks of all examinees about this statement we can conclude that the employees are currently partly satisfied with access to all necessary information and data about their work and that they also want better access to information and data (table 15).

Research of statement: „In my company I participate in decision making process about my work“

Table 16. Participation in decision making process – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	24	13.3
2	partly disagree	10	5.6
3	neither agree nor disagree	42	23.3
4	partly agree	58	32.2
5	completely agree	46	25.6
Total		180	100.0

Table 17. Participation in decision making process – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	6	3.3
2	partly disagree	2	1.1
3	neither agree nor disagree	2	1.1
4	partly agree	34	18.9
5	completely agree	136	75.6
Total		180	100.0

Table 18. Participation in decision making process –the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.51
Desired state	180	1	5	4.62

The largest number of examinees in private sector in Belgrade said that partly agree with statement that participate in decision making process about their work, 58 (32.2%). Twenty four of them said that don't take participation in decision making process (table 16). In assessing of desired state, them 136 (75.6%) want to participate in decision making process about their work, and for 6 of examinees (3.3%), it doesn't matter (table 17). Based on average marks of all examinees we can conclude that employee in private sector in Belgrade like to take more participation in decision making process (table 18).

Research of statement: „I can alone organize my work"

Table 19. Organization of work – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	11	6.1
2	partly disagree	4	2.2
3	neither agree nor disagree	42	23.3
4	partly agree	55	30.6
5	completely agree	68	37.8
Total		180	100.0

Table 20. Organization of work – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	4	2.2
2	partly disagree	2	1.1
3	neither agree nor disagree	6	3.3
4	partly agree	26	14.4
5	completely agree	142	78.9
Total		180	100.0

Table 21. Organization of work –the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	3.92
Desired state	180	1	5	4.67

The largest number of examinees, 68 (37.8%), said that current can alone organize their own work, while 11 of examinees (6.1%) can't that (table 19). When we analyse desired state the results show that 142 of examinees (78.9%) want to organize their work alone, while 4 (2.2%) don't want that (table 20). Average marks of this statement also confirm that employees can alone organize their work, but they also want to have more autonomy (table 21).

Research of statement: „I know that my work is important"

Table 22. The importance of work – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	10	5.6
2	partly disagree	6	3.3
3	neither agree nor disagree	22	12.2
4	partly agree	34	18.9
5	completely agree	108	60.0
Total		180	100.0

Table 23. The importance of work – desired work

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	6	3.3
2	partly disagree		
3	neither agree nor disagree	8	4.4
4	partly agree	28	15.6
5	completely agree	138	76.7
Total		180	100.0

Table 24. The importance of work–the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	4.24
Desired state	180	1	5	4.62

The largest number of examinees, 108 (60%), know that their work is important, while 10 employees in private sector (5.6%) currently their job don't consider as significant (table 22). In assessing of desired state, 138 (76.7%) of examinees want that their job is important, while for 6 of examinees (3.3%) it doesn't metter (table 23). Average marks about this statement for current and desired state show that employees are aware of the importance of the work they do, but they also want that feel of importace be more intense (table 24).

Research of statement: „I feel a great responsibility to work"

Table 25. Responsibility to work – current state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	6	3.3
2	partly disagree	4	2.2
3	neither agree nor disagree	8	4.4
4	partly agree	24	13.3
5	completely agree	138	76.7
Total		180	100.0

Table 26. Responsibility to work – desired state

Marks	Description of marks	Number of examinees who rate	Number of examinees in percent
1	completely disagree	5	2.8
2	partly disagree		
3	neither agree nor disagree	8	4.4
4	partly agree	25	13.9
5	completely agree	142	78.9
Total		180	100.0

Table 27. Responsibility to work–the average mark

	Number of examinees	Minimal mark	Maximum mark	Average mark
Current state	180	1	5	4.58
Desired state	180	1	5	4.66

According to the obtained results the largest number of examinees, 138 (76.7%) feel a great responsibility to work they do, while 6 (3.3%) of examinees don't feel any responsibility to work (table 25). A total of 142 (78.9%) would like to feel a great responsibility to work, while 5 examinees (2,8%) don't want any sense of responsibility towards work (table 26). By comparing the average marks of all examinees, we can conclude that current employees generally feel a high level of responsibility for what they do and want that feeling to be a little more intense (table 27).

Based on results of all statements it can be concluded that employees in private sector are partly satisfied with empowerment process in their companies and want more possibility of training, career advancement, opportunity to express their opinion, present initiative, want to have more access to information and data, want to take a more participation in making decisions process, chance to organize their job alone and have more intense feel about importance of their work and responsibility too. The least are satisfied with current possibility of career advancement, and the most are satisfied with responsibility for work they do.

ANALYSIS OF THE IMPACT OF CERTAIN FACTORS ON THE POSSIBILITY OF ADVANCEMENT USING METHOD ANOVA

To answer the question: „Does satisfaction with possibility of career advancement, possibility of training, opportunity to express their opinion, access to information, decision making process, organization of work, the importance of work, responsibility depends on the age of employees? “ the statistical analysis, ANOVA (one factor), is performed.

One of the assumptions of ANOVA analysis is that the variances of groups being compared are similar. In order to check it, the Levin's test of homogeneity of variance is applied, reduced to testing the null hypothesis:

HV0: variances are equal (there is no strong evidence that the differences in the variances of the different phases of the age of employees).

HV1: the variance differences are significant.

Table 28 gives Levin's test of homogeneity of variance, examining the equality of variances in the results in each of the four groups of the age of employees. Columns represent Levene F statistic (Levene statistic), the degrees of freedom (DF1 and DF2) for pairs of independent and dependent variables and statistical significance (sig. p-value). When the "Sig." Is greater than 0.05, it means that the null hypothesis is true, i.e. that the variances are equal. In other words, in this case the assumption of homogeneity of variance is not violetad. In our case, Sig > 0.05 is satisfied for variables that examine possibility of career advancement, Possibility of training, Decision making process, The importance of work, Initiative, Organization of work, The importance of work and responsibility, while it is not satisfied for the variables examining Opportunity to express their opinion and Access to information, because Sig < 0.05. In these cases, because the variance is not the same for all four groups of independent variables "age of employees ", the null hypothesis is rejected and instead of ANOVA statistics, the test of robustness is applied, using the median instead of the mean value.

Table 28. Levin's test of homogeneity of variance

	Levene Statistic	df1	df2	Sig.
Possibility of career advancement	,930	3	176	,427
Possibility of training	1,923	3	176	,128
Opportunity to express their opinion	3,845	3	176	,011
Access to information	5,975	3	176	,001
Decision making process	,099	3	176	,960
Organization of work	,522	3	176	,668
The importance of work	2,164	3	176	,094
Responsibility	1,046	3	176	,374
Initiative	0,937333	3	176	0,423884

Table 29. ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Possibility of career advancement	Between Groups	14,912	3	4,971	2,609	,053
	Within Groups	335,333	176	1,905		
	Total	350,244	179			
Possibility of training	Between Groups	16,376	3	5,459	2,798	,042
	Within Groups	343,424	176	1,951		
	Total	359,800	179			
Opportunity to express their opinion	Between Groups	15,232	3	5,077	3,119	,027
	Within Groups	286,545	176	1,628		
	Total	301,778	179			
Access to information	Between Groups	20,024	3	6,675	4,543	,004
	Within Groups	258,554	176	1,469		
	Total	278,578	179			
Decision making process	Between Groups	11,537	3	3,846	2,338	,075
	Within Groups	289,441	176	1,645		
	Total	300,978	179			
Organization of work	Between Groups	6,679	3	2,226	1,805	,148
	Within Groups	217,071	176	1,233		
	Total	223,750	179			

The importance of work	Between Groups	2,677	3	,892	,681	,565
	Within Groups	230,568	176	1,310		
	Total	233,244	179			
Responsibility	Between Groups	,858	3	,286	,325	,808
	Within Groups	155,053	176	,881		
	Total	155,911	179			
Initiative	Between Groups	3,361031	3	1,120344	0,640531	0,59
	Within Groups	307,839	176	1,749085		
	Total	311,2	179			

After the ANOVA analysis, table 29 following could be seen:

* Significant differences in the mean values of the dependent variables "Possibility of training" „Opportunity to express their opinion“ and „Access to information“ for different age of employees.

ANOVA analysis was applied to the observing of satisfaction with aspects of the job in relation the company’s size, Figure 6 Significant differences were obtained for dependent variables – satisfaction with training opportunities, abilities for employees to express their points of view and to deal with work organization.

Possibilities for training were significantly higher in larger companies, while satisfaction with abilities to express points of view was greater in smaller companies. Smaller companies are mostly family businesses or companies where employers recruit their friends, relatives, so these results are not surprising.

Figure 5 shows that satisfaction with opportunities for learning and mastering new skills declines with age, which gives us a realistic Figure of our companies. Senior employees are often in situation to lose their jobs because of their lack of ability with new technologies.

Respondents between 40 and 50 years of age have the highest level of satisfaction with their abilities to express their views and opinions. In that age, people are mentally, physically and experientially most productive. That is a period of life when our respondents have the greatest satisfaction at being able to access diverse information.

Satisfaction with work organization is greater in smaller companies, then decreases, but after a “critical size” of the company satisfaction grows again, which can be explained by professionalization of management within larger and big companies.

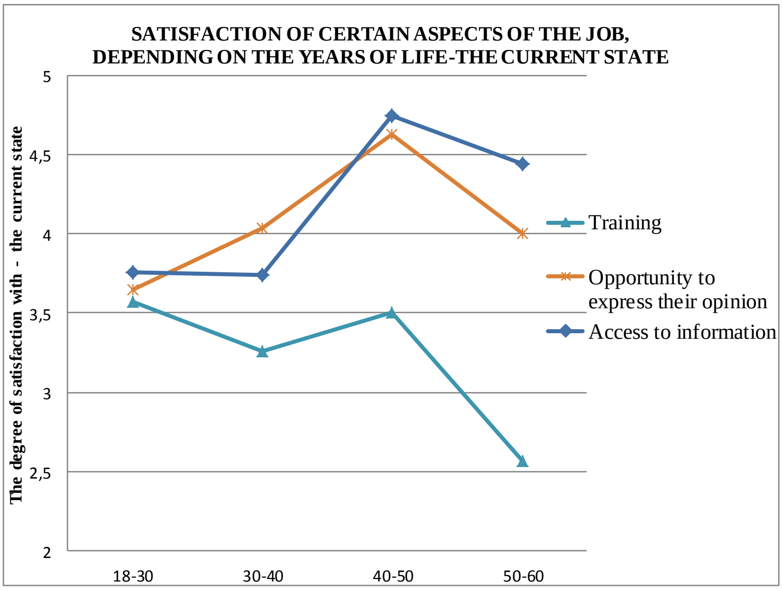

Figure 5. Satisfaction of certain aspects of the job, depending on the years of life

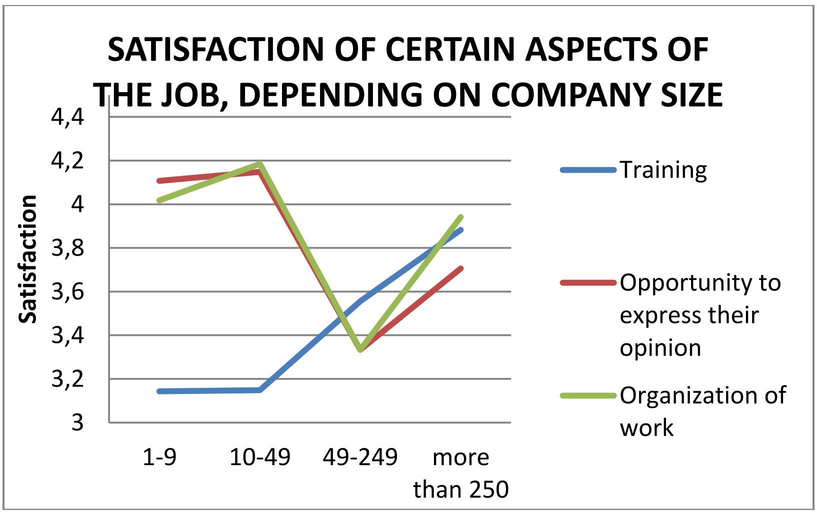

Figure 6. Satisfaction of certain aspects of the job, depending on company size

When we applied ANOVA analysis to the observation of satisfaction with job aspects in relation to levels of education, we did not obtain statistically significant differences between groups.

Observing the impact of gender on satisfaction with aspects of job related to the responsibilities, we got results shown in Figure 7. It can be seen that women are more satisfied with organizations and responsibilities at work, which can be explained by their lower expectations in these areas.

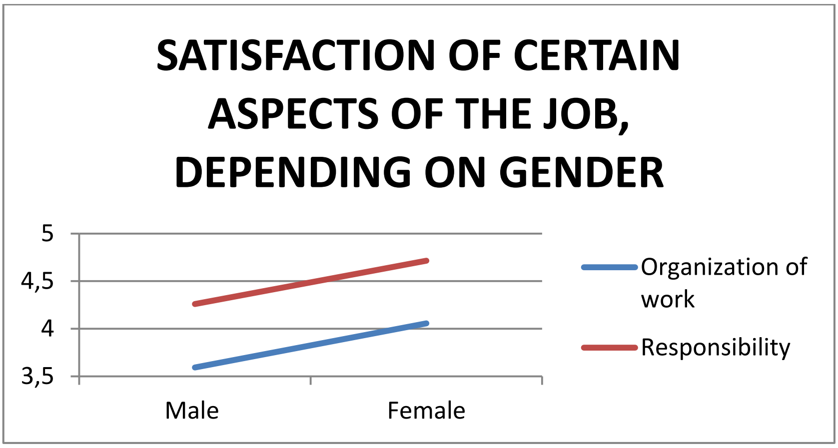

Figure 7. Satisfaction of certain aspects of the job, depending on gender

Following work experience as a factor that influences the level of satisfaction, we obtained significant differences between groups for variable related to gathering information relevant to a job. Satisfaction rate was highest among respondents who had between 15 and 25 years of service, i.e. in the group with the optimal combination of age and experience. The lowest satisfaction level was found among respondents at the beginning of their working lives, as it was expected. After "a peak" (15–25) satisfaction decreased symmetrically with years of experience.

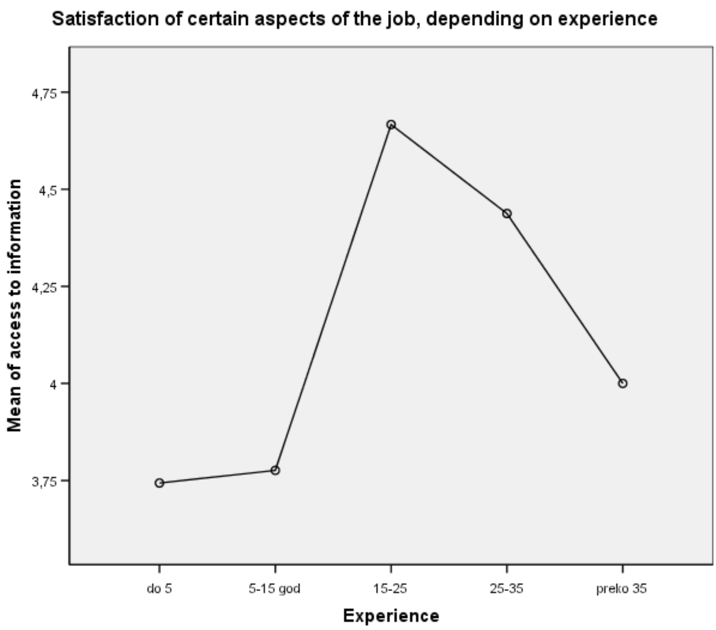

Figure 8 Satisfaction of certain aspects of the job, depending on experience

CORRELATION

To determine relations of independent variables: company size, gender, age, education level, years of service; and dependent variables: training opportunities, promotion abilities, access to information, organization of work, importance of work and responsibility, we applied Pearson correlation. Its results are shown in Table 30:

Table 30. Pearson Correlations (2-tailed)

	Possibility of training	Possibility of career advancement	Opportunity to express their opinion	Access to information	Organization of work	The importance of work	Responsibility
Company size	,196(**)	,150(*)	-,175(*)	-,154(*)	-0,114	0,028	-0,13
Gender	-0,087	-0,071	0,131	0,129	,190(*)	0,077	,224(**)
Age	-,183(*)	-,205(**)	,165(*)	,213(**)	0,141	-0,066	0,044
Education level	0,139	,174(*)	0,033	,188(*)	0,06	,170(*)	0,037
Experience	-,196(**)	-,230(**)	0,122	,204(**)	0,093	-0,061	0,065
N	180	180	180	180	180	180	180

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

There is a weak correlation between company size and possibilities for employees to learn new skills through training and to prosper in careers. Also, there is a slight opposite correlation between company size and possibility to express one’s opinion and access to information, i.e. the larger the company, the smaller the possibility.

There is a slight correlation between satisfaction with company and organization of work between the sexes, in favour of women.

There is a slight negative correlation between age and years of service and opportunities for promoting and training, which means that this option decreases with age and years of service. Correlations between age and access to information and age and opportunity to express their opinion are also slight, but positive, which means that with age, the ability to access information and possibility to express opinion grows.

There is a weak positive correlation between the level of education and access to information and to the importance of work.

CONCLUSION

Employees, as the most valuable resource of an organization, which could not function without them, deserve the highest degree of respect and trust. They must not be regarded as just work executors. The time we live in demands new people who are professional, conscientious, responsible, hard-working, and above all – capable of thinking. Involving employees in decision-making process, providing them with the opportunity to express their views and giving them the initiative to organize their own work are some of the ways to encourage their development, and it gives them great motivation, because they will consider themselves as important factors in success of the whole company. They should be encouraged to think; they should not be taught what to think and how to work all the time. Employees also improve themselves and learn that way. Don't forget the fact that they are the only factor capable of learning and developing, and their knowledge and skills represent a unique value of a company. Development process increases their individual powers, and in that way the total power of companies also increases.

Trust and cooperation between the employer and employee are extremely important for any company that wants to have a healthy business climate.

The most important thing for employees is that their work is observed and respected, and empowerment system should help people to feel even more valuable. Thus, self-satisfaction of employees grows and they are proud of accomplished results and encouraged to continue to strive. Employees that are encouraged to participate in the organization's business through engaging in different ways are proved to be more satisfied and more productive than those not engaged.

Research in real conditions proved the hypothesis 1 because it was demonstrated that there was a difference between the degree of satisfaction with the present situation and what employees want in terms of career development. So, it can be concluded that employee empowerment has a positive impact on employee development, satisfaction and productivity.

Regarding Hypothesis 2, it was proved because research showed that the possibility of career development depended on the size of the company. The results show that satisfaction with training opportunities, possibility to express one's attitudes and with work organization is higher in small companies while the chance of training is significantly higher in larger companies.

Satisfaction with opportunities to learn and master new skills declines with age. We find the highest level of satisfaction with the ability to express their views and opinions among subjects between 40 and 50 years old when they are most productive mentally, physically and experientially. They also have the greatest satisfaction with their access to information in that period of life.

The research has shown that gender influences the sense of satisfaction with opportunity for advancement, because women are more satisfied with work organization and their responsibilities. The culture certainly has an impact, too.

That proves the validity of hypothesis 2, i.e. the fact that possibilities for employees' development in private companies in Belgrade depend on the characteristics of the company. We should bear in mind the time and economic dimensions in which the research was conducted, especially the country's exhaustion after years of transition, the economic crisis and large outflow of skilled labour.

Future research on satisfaction should include dimensions of national culture as well.

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REFORM OF THE PENSION SYSTEM IN SERBIA AND ANALYSIS OF GROWTH IN THE NUMBER OF PENSIONERS

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ABSTRACT

This paper analyzes the necessity of full (not partial) reform of the pension system in Serbia, amendments to the Law on Pension and Disability Insurance (prerequisite being the adoption of a law and its regulations that would be obeyed for decades, unlike our previous experience), with one important condition – it should respect the interests and citizens of Serbia. The aim is to predict the movements of pensions until year 2025, using the fact that in 2011, the number of pensions was 1,638,645 in all categories and types. Our paper also provides concrete proposals and measures which Serbian government should take in order to ensure their pensions and their height, with respect to social, economic and financial interests of all stakeholders in the implementation of the reform of the pension system. Particular emphasis is placed on: the conditions of retirement (age and years of service), which was taken for the calculation of pensions.

Key words: *Reform, Pensions, Categories of Beneficiaries, Types of Pensions*

JEL Classification: *H55*

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INTRODUCTION

When it comes to pension reform, it should be done from economic, social and financial aspects of a country. However, the question that arises is: Is the reform a political or an economic issue? Practice shows that reform is primarily a political issue, but the economic one, as well. If we look upon period from year 2000, it is obvious that only the Law on Pension and Disability Insurance endured nine amendments, and it is certainly too much for a small country like Serbia. That is, each government made changes for several times. Each reform, partial or complete, provokes profound economic, financial and social consequences for the country and its population. Practice in far more developed and economically stable countries all over the world shows that the reform is of vital importance to the country (pensions, taxes etc.).

The process of globalization and process of world economy integration influences reforms of pensions system to a great extent. This can be seen in Eastern Europe, where the countries who aspire to European Union membership, must reduce their fiscal deficits and limit the total pressure of debts (Šifrin, Bisat, 2005).

The reform of the pension system in Serbia is necessary, but not one government has decided to implement it in a way so that it could satisfy the interests of the European Union, the International Monetary Fund, but above all and foremost - the interests of citizens and the Republic of Serbia.

CHARACTERISTICS OF SERBIAN ECONOMY AND ITS EFFECT UPON THE COLLECTION OF CONTRIBUTIONS

When tackling the problem of pension system's reform, it must be done from political, economic, financial and social aspect. A synergy and mutual compromise must exist between government and citizens, in order to achieve common interests, and it must reflect the interests of the state, as well as the interests of pensioners (having in mind that all those who work will someday be retired), so, on the other hand – it is the interest of all citizens of a country.

Table 1. Display of characteristics of the pension system from various aspects

The political aspect	**The social aspect**	**The economic aspect**	**The financial aspect**
Until recently, the "generous" terms of retirement	Worked during their whole life	Superannuation	Part of public spending
Pensions and social benefits have been prioritized	They were paying contributions and taxes	The ability of the state to finance pensions	Part of the Public Finances
Pensioners are the key voters	Have been saving for old age	Pension as a sum of money (its height)	Contribution rate
Problem of pensions for the disabled	They can no longer earn money	Number of beneficiaries, pensioners	The level of contribution collection
Accelerated retirement	The ability to live on pensions	Number of Employees	

Source: Authors

According to V. Vukotić, it is a collectivistic scheme, where the collective, i.e. the state itself manages the money of pensioners, which was paid this in their youth as an investment, in order to secure themselves financially in the period of old age (Vukotić, 2004.).

When we look at the pension system from a political point of view, the fact that we must bear in mind is that our state has always prioritized pensioners and various social benefits, very good conditions for accelerated retirement and complete retirement conditions have always been extremely favourable. One must not ignore the fact that pensioners are essential part of the voters, so the government parties have never opted for radical changes in the pension system. The economic aspect of the pension system must be a priority and the starting point, but we should not forget that it is deeply influenced by political aspect (the legal decisions are made by the party in power). From this point of view, all indicators must be taken into account: growth or decline in production, as well as in export and import, standard of living, number of employees and the number of those unemployed, as well as whether the country is in its economic growth or the recession.

For a decade and a half, Serbian economy has been characterized by: the transition of social, public to private ownership, the privatization process (which was not successful and has not been completed), the decline in the standard of living, a huge public debt, around 700000 people unemployed, around million workers are not registered, and those who are employed, mostly work in public sector (2/3), compared to 1/3 in the private sector. Moreover, both sectors do not pay contributions for pension and disability insurance. On the other hand, retired people have spent their entire life working, paying taxes and contributing to work, saving for old age, and now at the age when they can no longer earn, they are not able to honourably and honestly live off their past work. This is also reflected in the amount of pensions they receive (the minimal pension is around 12,000 RSD, or a retired teacher with approximately 25,000 RSD), especially bearing in mind that pensioners are a social group that is the most responsible in the payment of all obligations to the state (taxes, electricity, water, utilities, telephone etc.). In another words, the country is obliged to create conditions for them to be able to live with honour in their old age. Also, the pensions are a part of public spending, part of the public finances. Republic of Serbia claims the largest number of contributions to the pension and social security (both private and public sector owe to the country - agencies, public utilities, schools, local authorities etc.). It is necessary to legislate complete area systematically and to enable more efficient collection of contributions. Debt based on contributions is to be collected through mechanisms that already exist and thus improve the current situation of pensioners. In the current climate of crisis and recession, the government could reduce the contribution rate through a partial reform of the pension system (the current are: Pension and Disability Insurance Fund - 22 %, Health Insurance - 12.3% and Unemployment Insurance - 1.5%, at the expense of both workers and the employers), thus encouraging the private sector in increasing employment. Altogether with the implementation of a more effective collection and more severe penal policy. It is necessary: to lower contribution rates (for the pension and disability insurance – to 9 %, for mandatory health insurance to 4.15 %, for unemployment insurance to 0.5 %), to make penal policy more severe for employers who have unregistered workers, to conduct effective cooperation between the state authorities in charge (tax authorities, labour inspection, pension and social security) in order to reduce number of workers in the informal economy (unregistered workers), change the penalties for employers who employ workers illegally, that is, the employer who possesses unregistered employee is required to register that same employee for at least one year. (Stevanović, 2012.)

Contributions should be based on the following principles: (Stevanović et al., 2013)

1. principle of legality - means that contributions can be imposed only by law, the law legislates the taxpayers, rate, base, cases of exemptions, guarantees legal certainty
2. principle of obligation - compulsory for all physical and legal persons
3. elasticity principle - implies that contributes adapt, they may grow or diminish
4. principle of proportionality - contributions are paid by proportional rates
5. appropriate use principle - all funds are used exclusively to fund the functions of social security.

In Poland, the contribution rate for pension and disability insurance, which is paid on the gross earnings - amounts to 32.52%. From which, 7.3% contribution of gross wages are to be paid to private pension systems. Bearing in mind the contribution rates paid to private pension funds in Hungary 6%, 6% Estonia, Latvia 2% - we can safely say that the rate in Poland is the largest (Fultz, 2003).

Table 2. Methods of pension adjustment in selected countries

Country	**Methodologies**
Austria	Movements in net earnings
France	Movements in retail prices
Germany	Movements in net earnings
Greece	Salary trends
Sweden	Navigating the retail price-earnings
Great Britain	Salary trends

Source: Stevanović, 2012:111

Bajec lists three main reasons for balanced budget plan funds (Bajec, Stanić, 2005)

1. There were large arrears in the payment of pensions (only in 1996, all 12 pension were paid, while in the remaining years, 10.5 to 11.5 pensions were payed).
2. Contribution rate was constantly increasing, and at the end of 2000, amounted to 32%
3. Lack of funds was financed by other public income, such as :partial tariffs on payments, tobacco taxes, postal taxes. Since the lack was not financed by the budget, it was not explicitly visible.

ANALYSIS OF THE GROWTH IN NUMBER OF PENSIONS ACCORDING TO CATEGORIES AND TYPES OF PENSIONS

According to Professor Popović, modern social security was created in Germany in the eighties of the nineteenth century when they introduced compulsory insurance of employees of large social risks such as: old age, disability, sickness and unemployment (Popović, 1997).

We focus on data received from Pension and Disability Insurance Fund, published in the "Annual Statistical Bulletin" and based on them, using a time series of linear trends, we will try to ascertain how they will move, or whether the number of pension beneficiaries would increase or decrease for the chosen categories: employed, farmer, self-employed, as well as in selected types: age, disability and family.

Table 3. Number of pension beneficiaries according to the employee category and type of pension

	Age- number of employees	Disabled- number of employees	Family-number of employees	Total number of employees
1997	531170	418170	293852	1243192
1998	534684	414486	302224	1251394
1999	540494	412392	310429	1263315
2000	544978	403791	315406	1264175
2001	573238	403187	320579	1297004
2002	561229	389872	304713	1255814
2003	559072	381799	307791	1248662
2004	559899	370983	310200	1241082
2005	574071	359219	306283	1239573
2006	607533	350166	309875	1267574
2007	638556	340900	311155	1290611
2008	660221	334282	311891	1306394
2009	681908	329298	313132	1324338
2010	708934	322934	313865	1345733
2011	729516	314488	313842	1357846

Source: Pension and Disability Insurance Fund, Annual Statistical Bulletin – 2011, Belgrade, May 2012.

The table shows the changes in the number of pensions for all employees according to type of pension in the period from year 1997 to 2011. Based on the data observed for fifteen years, it can be seen that the total number of pensions grew from year to year. Old-age pensions recorded a decline only during year 2002 compared to year 2001.However, disability pensions decline since 1999, whereas the family ones vary. (Table 1)

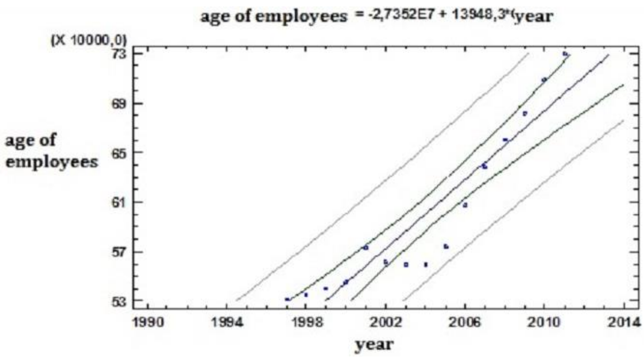

Figure 1. Overview of the number of pensions in the category of employees in the type of old-age pensions, Source: Authors

The Figure shows the time series, linear trends where Y = A + Bxx, where Y = intercept + slope x years. The selected categories of employees - old-age pensions (Figure 1)

Table 4. Displays changes in the number of pensions for all employees by type of age pensions

Year	Number of pensions
2015	753824
2016	767772
2017	781721
2018	795669
2019	809617
2020	823566
2021	837514
2022	851462
2023	865410
2024	879359
2025	893307

Source: Authors

From the Graph below, we can conclude that growth in the number of pensions for all employees is expected – in old-age pensions, year after year, and that until year 2025, we would have 893307 pensions, compared to year 2011 and 729,516 pensions. (Table 4).

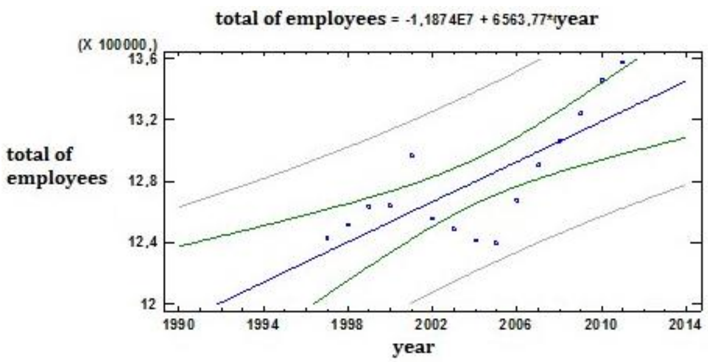

Figure 2. Shows the total number of pensions in the category of employees (includes all types of pension – disability, old age and familiy ones), Source: Authors

Time series was performed, linear trend of growth, the total number of pensions for all employees of all pension types. (Figure 2)

Table 5. Shows the movement of the total number of pensions for all employees of all types (old-age, invalidity and family pensions)

Year	Number of pensions
2015	1351996
2016	1358560
2017	1365124
2018	1371687
2019	1378251
2020	1384815
2021	1391379
2022	1397942
2023	1404506
2024	1411070
2025	1417634

Source: Authors

We have tried to anticipate the movements and total number of pensions until 2025, assuming that fundamental reforms of the pension system are not conducted. The data show that in 2025, number of pensions for all employees would increase to 1,417,634, which is a significant increase, compared to period from1997, (1,243,192) to 2011 (1,357,846). (Table 5)

Table 6. Number of beneficiaries in the category of self-employed and the type of pension

Year	Old age	Disabled	Family	Self-employed pensions in total
1997	12734	13088	10148	35970
1998	13237	13632	10579	37448
1999	13563	13899	11000	38462
2000	13855	14158	11324	39337
2001	15018	14459	26969	41207
2002	15684	41654	12211	42905
2003	15744	15204	12524	43472
2004	15805	15295	12838	43938
2005	16542	15524	13159	45225
2006	18024	15684	13473	47181
2007	20051	15888	13933	49872
2008	21459	15772	13728	50959
2009	23945	16218	14287	54450
2010	26711	16805	14852	58368
2011	29437	17107	15307	61851

From: www.pio.rs (May 2012.)

The data presented in the period from year 1997 to 2011, show constant increase in the total number of pensions in the category of self-employed, but we cannot, disregard a huge, 200 percent leap in the number of disability pensions in 2002, compared to the previous 2001. Also, family pensions recorded a 100 percent leap in 2001. compared to the previous year, 2000. (Table 6)

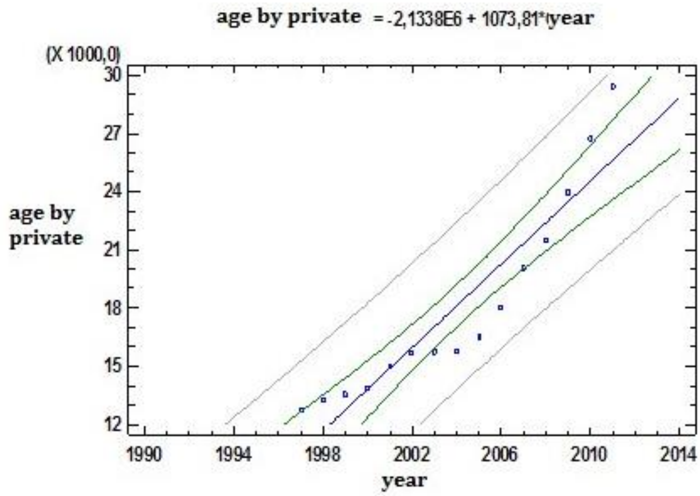

Figure 3. Overview of the number of pensions in the category of self-employed, type - old-age pensions, Source: Authors

The Graph below shows the trend of growth of pensions in the category of self-employed - old-age pensions (Figure 3). The following summary table will give a prediction of the number of pensions for all types in the category of self-employees (family, disability, age).

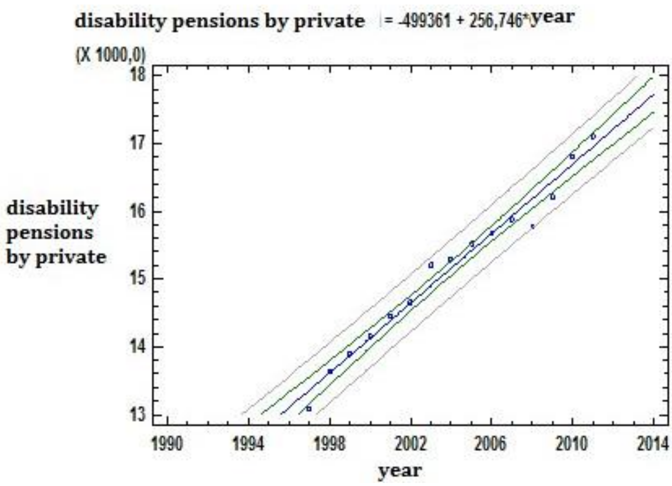

Figure 4. Overview of the number of pensions in the category of self-employed, type: disability pensions,

Source: Author

The time-series of linear trends in the selected category of self-employed and the type of pension shows the movements of disability pension for the period from 1997 to 2011. Prediction for the period from 2015 to 2025 will be given below, in the summary table. In other word, the movements of pensions in the years to come, based on our Graph. (Figure 4)

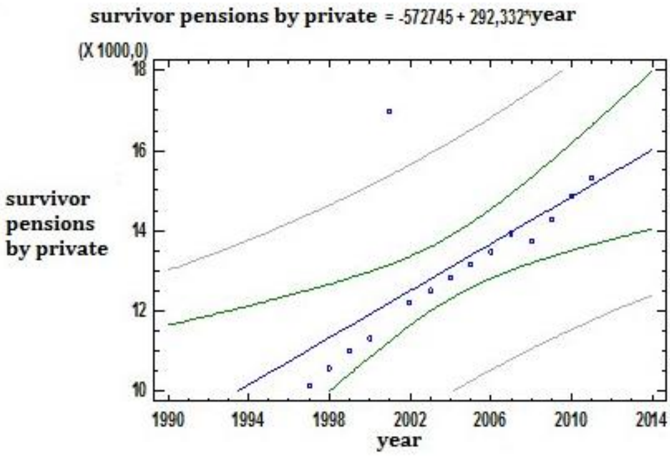

Figure 5. Overview of the number of pensions in the category of self-employees, type: family pensions, Source: Authors

Graphical presentation of the number of pensions in the category of self-employed, the type: family pensions for the period 1997-2011. Time series, linear trend, based on which, in the next table, prediction will be made for the stipulated time period (Figure 5).

Table 7. Showing changes in the number of pensions in the category of self-employees, for all types (family, age, disability), for a period from 2015-2025

Year	**Old age self- employees**	**Disability self- employees**	**Family self- employees**
2015	29927	17982	16303
2016	31001	18238	16596
2017	32074	18495	16888
2018	33148	18752	17180
2019	34222	19009	17473
2020	35296	19265	17765
2021	36370	19522	18057
2022	37587	19779	18350
2023	38517	20036	18642
2024	39591	20292	18934
2025	40665	20549	19227

Source: Authors

The observed number of pension category of self-employees records growth in all types of pensions (old-age, disability, family) year after year. By comparison, the number of old-age pensions in 1997 was 13734 and 29437 in 2011, whereas until year 2025, that number would amount to 40665.

Table 8. Number of pensions in the category of agricultural pensions, according to pension types in the period 1997-2011.

Year	Old-age agricultural pension	Disability agricultural pension	Family agricultural pension	Agricultural pensions in total
1997	159890	7143	14111	181144
1998	161515	7717	14970	184202
1999	171140	8529	16529	196198
2000	179654	9517	18118	207289
2001	183884	10394	19202	213480
2002	182057	10942	19779	212778
2003	182077	11242	20119	213438
2004	187585	11756	21706	221047
2005	189417	11949	22812	224178
2006	193519	12086	23688	229293
2007	192734	12134	24204	229072
2008	186854	12126	24006	222986
2009	187479	12599	24802	224880
2010	184066	13222	25192	222480
2011	179749	13705	25494	218948

Source: Pension and Disability Insurance Fund, Republic of Serbia, Annual Statistical Bulletin - 2011, Belgrade, May 2012

Number of agricultural pensions of old-age pension type has decreased since 2008. However, we can safely say that in 2011, it returned to the 2000 pension rate. The total number of pensions is growing, year after year, so at the end of 2011, we had 218948 agricultural pensions. (Table 8)

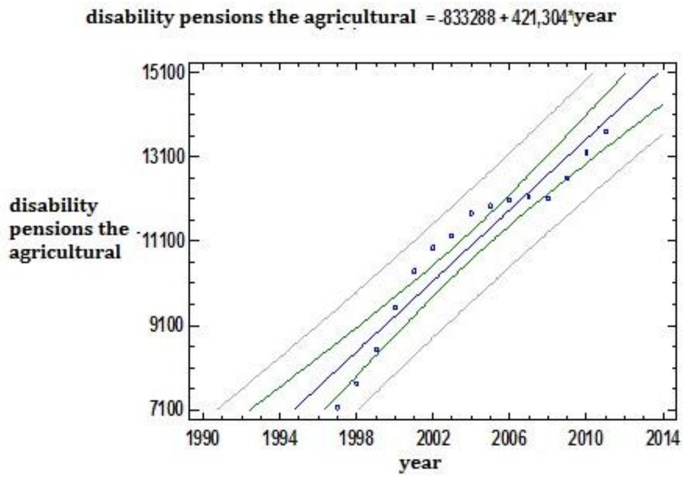

Figure 6. Graph showing the number of pensions in the category of agricultural pensions, according to disability pension type, Source: Authors

In the category of agricultural retirement, we chose to focus on the disability pension type and its movements in the period 1997-2011. We also chose to do time series, of linear trend with anticipation until 2025 (Figure 6).

Table 9. Shows number of pensions in the category of agricultural pensions, type: disability pensions for the period 2015-2025.

Year	Disability-Agricultural
2015	14375
2016	16060
2017	16482
2018	16903
2019	17324
2020	17746
2021	18167
2022	18588
2023	19009
2024	19431
2025	19852

Source: Authors

With respect to the selected time series and the use of linear trend prediction, where prediction goes "slope x years - intercept", we gained data on the number of movements in the category of agricultural pensions versus disability pensions for a period 2015-2025 period of time (Table 9).

DIRECTIONS IN WHICH WE AMENDMENTS TO THE LAW ON PENSION AND DISABILITY INSURANCE SHOULD BE MADE

The global economic crisis, a large number of retirees, high unemployment rate, high contribution rates, low benefits, low rate of collection of contributions, too many people retiring when they reach the age criterion, the aging population – all these are the problems that the state and the population are facing . The best way to solve these problems is to push the boundaries of the retirement age, but with obligatory motivation of employees to choose to work longer, stimulating them to later retirement.

Law on Pension and Disability Insurance, Article 19 - regulates the acquisition of legal age pension. “The beneficiary is legally entitled to old-age pension: when he turns 65 (men) or 60 (women) years of age and at least 15 years of service ; when he turns 40 (men) or 38 (women) years of service and at least 58 years of age ; upon reaching 45 years of service (Stevanović et al., 2013)”. The first necessary change to the mentioned article of the Law would be:”The beneficiary is legally entitled to retirement: when he turns 67 (men) or 65 (women) years of age and at least 20 years of service; when he turns 42 (men) or 40 (women) years of service and at least 63 years of age.

Article 42 of the Law on Pension and Disability Insurance Act regulates certain categories of insured employees who do jobs where insurance coverage is calculated at an accelerated rate and can under certain conditions be entitled to a pension, while Article 52 provides clarification that these are particularly difficult, dangerous and unhealthy jobs, jobs where, after reaching certain age, workers cannot successfully perform the activity. Article 55 of the Law on Pension and Disability Insurance should be mentioned (The Law on Pension and Disability Insurance Act, Official Gazette of the Republic of Serbia, no. 34/03, 64/04, 84/04, 85/05, 101/05, 63/06, 5/09, 107/09, 101 / 10th p. 6):

1. Jobs where insurance covers bills at an accelerated rate, procedure and method for their determination, and the enlargement of insurance determined by the Minister responsible for pension and disability insurance, previously suggested by the Fund.
2. Employees of the Ministry of Internal Affairs, members of the Intelligence Agency, members of the Military Security and Military Intelligence Agency, the authorities responsible for foreign affairs who do jobs under special conditions, professional military personnel according to the regulations of the Serbian Armed Forces, government employees, authorized officials of the tax police involved in Tax Administration. For all these occupations, each 12 months effectively spent on these activities is counted as the maximum of 16 months of employment, depending on the job itself, under the terms of Article 54 of this Law.
3. Notwithstanding paragraph 2 of this Article, the Minister determines the jobs and tasks where the employees of the Ministry of Internal Affairs, civilians in

the Army of Serbia and professional military personnel according to regulations of the Army of Serbia, for every 12 months effectively spent on these operations, are given 18 months of employment, in agreement with the minister responsible for pension and disability insurance.

4. Jobs and enlargement of insurance in paragraph 1 and 3 of this Article, are a subject of review after a maximum of 10 years from the date of their defining.

From all stated above, it is obvious that there is a necessity of modification of the existing legal provisions, in other words, all above listed activities may be given an increase, so that "every 12 months effectively spent on these activities is counted as 13 months of employment." So the increase will only be one month. On the other hand, we must be aware of the following facts: for the last two decades it has been very difficult to live and work, that in 2000 privatization was performed, that in socialism each job was “job for life”, that this trend should cease to exist, that this should apply to the public sector, that the public sector is too extensive with the number of employees (necessary reduction of at least 1/3 of employees). In addition to this, all the "young pensioners" after retirement continued to work in the private sector (teachers, administrators etc.) and it is their constitutional right which no one can deny. Do not forget that all research conducted in recent years claim the necessity of changing jobs after 7 years of practice, in order to make the greatest effect and to avoid negative consequences for the health of employees. Bearing all this in mind, changes of employees can be made, i.e. of employees in certain categories (e.g. the Tax Police – a worker may, after a period (say 10 years) be transferred to work as an office control supervisor in Tax Administration and it would not require any special effort, because the both departments are parts of the Ministry of Finance). This would result in several ways (less "young pensioners", later retirement, retirees would not work after retirement and therefore occupy a vacancy etc.), which would make positive consequences to the budget of the Republic of Serbia.

All the above listed measures are unpopular, but that does not mean that they cannot be conducted. However, unpopular measures must be accompanied by at least one that would be widely accepted and popular. Our sincere contribution to this paper should be moving in the direction of the changes in insurance calculation, as well as in determining the amount of pension and disability insurance. Only in the case that the changes to the law are made as proposed in this paper, a change in the calculation of pensions can be made, i.e. the calculation could be made based on the best 10 years of service. This would stimulate the employees. Moreover, the life of pensioners would be dignified, and so much different from the life they are currently entitled to.

However, all this is not enough, and everyone needs to be involved in the solution of such important issues, all services, all professionals in our country, every aspect is to be covered, statistical forecasts should be made for each and every scenario, timeline being 20 years of execution.

The following Figure provides an overview of the requirements for retirement and early retirement in the EU and Norway.

Table 10. Requirements for age and early retirement in the EU and Norway

Germany	Old-age pension	1. For workers born after year 1963, 67 years (men and women) 2. For workers born in 1947, and later: gradually from 65 to 67 years of age between year 2012 and 2029. 3. For workers with 45 years of pension insurance: 65 years
	Early retirement	With 63 years of age, minimum of 35 years of pension insurance
Italy	Old-age pension	Men with 65 years of age and 35 years of pension insurance Government employees: after 2018: 65 years for both men and women
	Early retirement	Flexible early retirement, with minimum of 59 years of age and minimum of 36 years of pension insurance, or 40 years of pension insurance, regardless of age
Holland	Old-age pension	Fixed AOW state pension at age of 65 for men and women; full AOW pension: 50 years of residence (insurance) between 15 and 65 years of age. Increase to 67 for both men and women is ongoing
	Early retirement	No early retirement
Czech Republic	Old-age pension	Men- 62 years and two months, women -56 years and 8 months of age, depending on the number of children. For workers born after 1968, age requirement will gradually amount to 65 years for men and women with one child, and to 64 years of age to women with two or more children.
	Early retirement	Possible 3 years prior to age pension, with 26 years of pension insurance
Sweden	Old-age pension	Sweden has universal compulsory state insurance, which consists of three parts: Guaranteed pension from taxes for all residents with no or low income relating to old-age pension (possible after 65 years of age); Old-age pension, earnings-related to additional pension linked to earnings, which is financed from the general social benefits of regular payments; Full replacement pension with individual account. For a full pension, 40 years of insurance is a required guarantee. There is no concept of "full pension" for the other two types of pension. Retirement age is flexible: between 61 and 67.
	Early retirement	Does not exist.
Poland	Old-age pension	Men-65 years, women 60 years. For women, until 2020,

		age limit will be gradually increasing. Full pension does not exist.
	Early retirement	For people born after 1948, early requirement is a non-existent category.
Norway	Old-age pension	Norway, like Sweden, has mandatory universal state system that consists of three parts: 1) The basic pension based on years of insurance; 2) Supplementary pension linked to earnings based on pension points (reflecting earnings); 3) A special supplement for people with no or little additional pension. The system is funded by taxes and social benefits, i.e. regular payments during the working years. Recently (2006), a system of mandatory occupational pensions, funded by the employers, was introduced in the private sector in addition to the pension paid by Pension and Disability Fund of Norway. The full basic pension requires 40 years of insurance. Full pension requires additional pension credits for 40 calendar years earned between the age of 17 and 69 In 2011, Universal state pension system introduced flexible retirement age between 62 and 75 on the basis of actuarial neutral basis in terms of the expected pension capital.
	Early retirement	*Does not exist*

Source: "Pension reforms in the Western Balkans from a European perspective," Implementation of the project, E. Salimović ICC PERV Office for South-East Europe in Sarajevo, the ICC PERV Brussels, LO Norwayand unions SEE, p . 46, 2011.

Initial experiences in reforms of Poland and Hungary show some trends (Ilić, 2006. p. 24):

1. costs of switching from PAYG to a mixed system turned out to be bigger than expected, and range from 0.5% to 1.2% 25 per annum, which is a great burden to the fiscal system, especially with regard to European integration and international competitiveness;
2. political and economic environment in which these reforms are conducted is still unstable, and is reflected in the frequent changes of government and the lack of development of financial markets. All this leads to the fact that private pension funds, guided by the principle of security, mainly invest in government bonds, which reduces the return on investment;
3. high inflation rates in these countries at the beginning of the reforms have led to problems concerning the indexation of pensions,

particularly due to the fact that governments didn’t create a satisfying legislative framework in relation to this matter;

4. largely due to the lack of experience, altogether with poor regulatory framework, costs of pension fund management are relatively large, which reduces incomes of the insured to a large extent.

According to Mr. Matković, "Difficulties in financing pensions in Serbia appear in the mid 80s, to culminate in the time of economic decline during the 90s of the 20th century (Matković, 2005).

We must not allow it, as it has been the practice to only administer someone’s legal solutions, we need to unite knowledge, experience, practice, really consider the interests of the state and the employees, as well as the consequences that would result from the new legislation. We must access the full pension reform which would exclude any partial solutions for a period of time, so immediately we must make a "painful cut" that would bring prosperity in the future for all the interested parties.

Pensions are not the only Serbian problem, but for most countries of the world. However, we have to solve our problem in the best way possible for our country, as well as for employees, future retirees, not reducing pensions.

CONCLUSION

The global economic crisis, a large number of retirees, the high unemployment rate, high contribution rates, low benefits, low rate of collection of contributions, too many people retiring when they reach the age criterion, the aging of the population – these are the problems the country and the population are facing. The best way to solve these problems is to push the boundaries, the retirement age but with necessary incentives to employees to choose to work longer, and stimulate them to later retirement. Namely, to legally prescribe the age when insured person becomes entitled to retirement: when they reach 67 (men) or 65 (women) years of age and at least 20 years of service ; when they turn 42 (men) or 40 (women) years of service and at least 63 years of age. Also, to introduce a provision that "every 12 months effectively spent on tasks (which are listed in Article 55) counts as 13 months of employment." In that way, the increase made will be only for one month. All these measures must necessarily follow changes in the calculation of pensions, or that the calculation is made on the basis of the top 10 years of service.

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PROSPECTS OF THE RIGHT TO STRIKE IN SERBIA

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ABSTRACT

This paper includes analyses of prospects of right to strike in Serbia, from the theoretical and practical point of view, through the more detailed introduction to the national legal sources on right to strict: laws and by-laws, autonomous sources (collective agreement) and jurisprudence. Also, the subject of analysis includes restrictions on right to strike in Serbia.

***Key words**: Strike, Union, Social Dialogue, Collective Agreement*

***JEL Classification:** J52, K31*

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INTRODUCTION

From a theoretical point of view, the existence of Labour Law, institutions for maintenance of security and protection at work, organizations for peaceful resolution of labour disputes, inspections, Social-Economic Council… makes the impression that in Serbia (as well as in other transitional countries), the strike is an ‘museum exhibit”, a relic from past without any rational need for existence. The reality, burdened with economic and social crisis, issues with the new company owners, negative effects of the world economic crisis, heavy debts etc. in many transitional countries in the region, particularly in Serbia, has the characteristic of often use of radical measures and behaviour of workers trying to protect their rights, which due to the wave of new strikes look more like a social revolt (Patrović, 2012, p. 254.). Therefore, the analysis of the actual situation and prospects of industrial relations in Serbia must take into consideration another common thread of the mutual connection and determination of the industrial relations and social environment, and this is the fact that the industrial relations are in great measure reflecting the entire political, economic and social condition of a society. Many phenomena in the political and economic sphere, which can be hidden in the other areas of life (most of all in the politics), or at least can be presented as little bit better, in the industrial relations, unavoidably, are presented at the appearance level. In other words, in the field of industrial relations the following slogan is valid – tell me about the industrial relations and I will tell you in what sort of society you are living (Marinković, Marinković, p. 206.).

The strike participants in the developed democratic societies are workers and employers, while state has the role of the arbiter. In our case, there is still mostly the case of conflict between the workers and state, which is the consequence of the fact that sate is still a significant employer. It is very hard for the workers to realize their goals because the state appears in the double role, both as the employer and the arbiter, which is making additional difficulty for the unions, because the state is much more powerful. The state is trying to win the public with various forms of manipulation, which is making more obstacles for the union struggle (Milaković, 2011:167.). Therefore, the right to strike in Serbia is facing the challenges, which this institute is facing at the global level, but it is multiplied with the internal inconsistencies of the political and economic system.

LAW AS THE SOURCE OF RIGHT TO STRIKE IN REPUBLIC OF SERBIA

In the Serbian legal regulation, the law is, by rule, the primary source of all branches of the law, including the Labour law and, particularly, the right to strike. The basic legal act, which is regulating the right to strike in Serbia, is the Strike Law (Official Gazette of Federal Republic of Yugoslavia No. 29/96), although the right to strike is regulated also by some special laws, which are regulating the particular activities.

RIGHT TO STRIKE PURSUANT TO THE STRIKE LAW

As the consequence of the underdeveloped collective negotiations and lack of harmonized court practice, the laws are representing the basic way of regulation of the right to strike and the basic source of this right. The basic legal act, which is regulating the right to strike in Serbia, is the Strike Law of 1996. The Strike Law is determining the concept of strike. According to the Article 1 of the above-mentioned Law, the strike is a work stoppage, organized by the employees for the purpose of protection of their professional and economic interests on the basis of work. What can be immediately noticed as the defect of the Law (and the draft of the new Strike Law also does not contain the idea for the regulation of this issue), is that, beside the general definition of a strike, there is no precise definition which professional interests of the employees might be the subject of strike of employees for the purpose of protection, as well as the scope of injury of such interest, which might represent the required minimum for the adequacy of strike as the way of solution of a labor dispute (Theoretically, a strike would be legal even if the reason for organization was one day delay of salary payment). Although such broad legal freedom of employees for organization of a strike gives impression of the privilege of the employees, in practice this leads to the culmination of nonsensical strikes, without any prospect for a success.

The Constitution and this Article of the Strike Law impose the conclusion that Serbia has opted for the concept of strike as the right of the employees. However, already in the Article 3 of the Law (which is defining the making decision on strike), the right to organize strike (and the warning strike) against employer, beside the majority of employees, is also allowed to the union, and the strike in branch and industry, as well as the general strike is an exclusive right of the union.By this Law, Serbia has allowed a broad possibility for organization of strike, joining both concepts of right to strike (both the concept of right to strike of employees and the concept of strike as the right derived from the right on union organization).

A strike may be organized: against employer (a company, other legal person i.e. its part or physical person carrying out an economic or other activity or service), in branch i.e. industry and as a general strike. Also, the Law includes a warning strike, which is defined as the temporary stoppage of work, which can last one hour at most. The decision on beginning of strike contains: demands of the employees, time of the strike beginning, place of gathering of the strike participants (if the strike is expressed by gathering) and the strike committee (which is leading the strike on behalf of the employees and represents their interests.

The strike committee is obliged to announce the strike by submitting to the employer the decision on strike, at latest five days before the day, set forth as the strike beginning, i.e. twenty four hours before the warning strike. The participants are making new decision on strike for each new strike.

The decision on beginning of strike of employees in the branch or industry or general strike is submitted to the competent authority of the appropriate association of employers, founder and competent state authority. If the strike is expressed by gathering of employees, the gathering place of the strike participants cannot be out of business (working) premises i.e. out of the area of business premises of employees, which are beginning the strike.

The Law has established the obligation of participants in dispute to begin the negotiations on consensual solution of disputed requests from the moment of the strike announcement. This obligation is continued during the period of strike until its end. The competent negotiating sides are the strike committee (elected representatives of the strikers i.e. union) and representatives of the authority to which the strike is announced (employer, founder or competent state or local authority). The establishment of the Republic Agency for Peaceful Settlement of Labor Disputes has opened the possibility for a formal engagement of the neutral expert (conciliator), as an aid in finding of mutually acceptable solution.

A strike represents the right of employees for a collective action for the purpose of protection of their interests. However, the organization of strike bears certain obligations of all participants with itself. The obligations of strikers during the strike are: not to jeopardize the safety of persons, property and health of people, to cooperate during the strike with the employer for the purpose of provision of the minimum of working process, not to inflict the direct material damage to the working facilities and the equipment, not to prevent the continuation of work after the strike end, not to prevent the employer to use and dispose the means for the activity performance, not to prevent the work of employees, who are not participating in the strike.

The tortuous as well as the criminal liability are foreseen for failure to comply with these obligations.

Beside the strikers, the employer also has certain obligations (of acting and non-acting) during the strike for which tortuous and criminal liability is also foreseen in case of failure to comply. His obligations during the strike are: does not accept new persons, who would replace strike participants during the strike, which is organized in accordance with the law, to provide the minimum of the working process set forth by the general act i.e. to set forth the working minimum by the general act (this relates to the employers, who are not established as public companies and public services and are performing the activities of public interest), does not prevent employees to participate in the strike, not to use the measures of coercion in order to end the strike and not to foresee the more favorable salary or other more favorable conditions of work for the employees, who are not participating in the strike.

The employees, who are participating in strike, enjoy certain protection during the strike. According to the Strike Law, the organization and participation in the strike does not institute a violation of working obligation, so it cannot be the basis for initiation of the procedure for establishment of disciplinary and material liability and therefore, it cannot be the basis for termination of the employment

(Article 14 of the Law). The employees during the strike are realizing the basic rights from the employment, except the right to salary, and rights from the social insurance are realized in accordance with the regulations on insurance. Therefore, the employer is obliged to pay the contribution for the retirement and disablement insurance for the employed strike participants, as follows: for the compensation of the salary, if he is paying it and on the lowest basis, if he is not paying the compensation.

A strike is ended by agreement by parties in the dispute or by decision of the union, i.e. of the majority of employees on the termination of strike.

RIGHT TO STRIKE IN THE ACTIVITIES OF GENERAL INTEREST

The provisions of Articles 9 and 10 of the Strike Law set forth that in the activities of a special social interest (electric power supply, water supply, traffic, information, postal services, communal services, production of basic food products, health and veterinary protection, education, social care of children, social protection); activities of the special significance for the defence and security of the country, established by the competent authority in accordance with the law and jobs, which are required for the performance of international obligations, as well as in the activities, which, if stopped, might jeopardize the life and health of people or to make damage of major proportions (chemical industry, steel industry and ferrous and non-ferrous metallurgy), the right to strike can be realized only with the provision of minimal work process. The minimal work process for the public services and public companies are established by the founder and for other employer the competent person is the director. In the activities, referred to in the Article 9 of this Law, the strike is announced to the employer, founder, competent state authority and competent local authority at latest ten days before the strike beginning (General rule referred to in the Article 5 of the Law foresees the obligation of announcement 5 days before the strike beginning i.e. 24 hours in case of a warning strike), by submitting the decision on strike and statement on way of provision of the minimal work process. The importance of the successful solution of disputes in such activities is confirmed by the fact that Law on Peaceful Settlement of Labor Disputes foresees the compulsory attempt of reconciliation.

RIGHT TO STRIKE ON THE BASIS OF SPECIAL LAWS

Beside the Strike Law, the establishment of the right to strike is regulated by some special laws, out of which, particularly significant for this institute are regulation of activities of education (Law on Elementary Education and Upbringing and Law on Secondary Education and Upbringing) („Official Herald of Republic of Serbia", No. 55/2013).

The Law on Elementary Education and Upbringing, by its Articles 78 and 79, is regulating rights and obligations of employees and employers during a strike. регулише. The employees within schools are realizing their right to strike in accordance with this Law and the law, which is regulating strikes. The strike committee and the employees, who are participating in the strike, are obliged to organize and conduct the strike in the way, which is not jeopardizing the safety of employees and students, as well as the property and is enabling the continuation of work after the end of the strike. The teachers i.e. professional associates in the school can realize their right to strike provided they have secured the minimal work process of the school, in the realization of rights of citizens of general interest in the elementary education and upbringing. The minimal work process is performance of lectures in duration of 30 minutes per class within the framework of daily schedule and performance of exams, and for the professional associate 20 hours of work per week. If the teachers, i.e. professional associates of the school, participate in a strike, without provision of the minimal work process, the School Principal shall initiate the disciplinary procedure. The school principal is obliged to provide the realization of education and exams during the strike, which is organized contrary to the provisions of the Law.

In the similar way, the Law on Secondary Education and Upbringing foresees that employees of the school are realizing the right to strike in accordance with this Law and the law, which is regulating strikes. The teachers, educators and professional associates can realize their right to strike provided they have secured the minimal work process of the school, in the realization of rights of citizens of general interest in the secondary education and upbringing. The minimal work process is performance of lectures in duration of 30 i.e. 40 minutes per class within the framework of daily schedule and performance of exams, and for the professional associate 20 hours of work per week. If the teachers, educators and professional associates of the school, participate in a strike, without provision of the minimal work process, the School Principal shall initiate the disciplinary procedure with adoption of measure of the employment termination. Analogous to the elementary education, the school principal is obliged to provide the realization of education and exams i.e. duty during the strike.

In regard to the right of police officers to strike, the provisions of the Article 135 of the Police Law („Official Herald of Republic of Serbia", No. 101/2005, 63/2009 –Constitutional Court decision and 92/2011) set forth that organization and conduct of the strike are subject, in an appropriate way, to the general regulations on strike and the police officers do not have right to strike in case of: 1) state of war or state of immediate danger of war or state of emergency; 2) armed rebellion, uprising and other forms of violent danger to the democratic and constitutional order of Republic of Serbia or basic freedoms and rights; 3) announcement of natural disaster or immediate danger of its appearance in the area of two or more regional police administrations of the Ministry or in the entire territory of Republic of Serbia; 4) other accidents and disasters, which are disturbing the normal life and endangering the safety of people and property; 5) danger from a major disturbance of public order (Paragraph 3.).

BY-LAWS AS THE SOURCE OF RIGHT TO STRIKE IN SERBIA

Beside laws, the right to strike in Serbia is partly regulated by by-laws, above all by the decrees and regulations of the Ministries. The regulation of particular legal fields by decrees and regulations (particularly those with legal force) is not a characteristic of states, which respect the principle of separation of powers. The justification for its introduction into the legal system can be found in the extraordinary conditions, as well as in the periods of major economic and political changes. During our legal history, after the WW2 and socialist revolution (and the adoption of Law on Invalidity of legal regulations adopted before April, 1941 and during the occupation), a major number of by-laws was adopted, mostly decrees with legal force, in the field of labour legislature, as the way of fulfilling the legal voids before the law adoption (Tintić,1972:143.).

The most significant area, which is regulated by by-law s is maintenance of the minimal work process, With such goal, the Serbian Government has adopted the decrees on minimal work process at the faculties and universities, established by the Republic of Serbia, in the Electric Utility public company, Electric Networks of Serbia, Radio Television of Serbia, Yugoslav Air Transport, Postal Services, Railways, health institutions…

Beside the decrees, the particular Ministry regulations are significant for the regulation of strikes, first of all, those which are significant for the collective rights of employees and employers: Regulation on inscription of union in the Register („Official Herald of Republic of Serbia“, No.6/97, 33/97, 49/00, 18/01, 64/04, 10/10), Regulation on inscription of association of employers in Register („Official Herald of Republic of Serbia“, No. 24/05) and Regulation on registration of collective employment agreements („Official Herald of Republic of Serbia“, No.. 50/05).

COLLECTIVE AGREEMENTS AS THE SOURCE OF RIGHT TO STRIKE IN SERBIA

The labour relations, beside the laws, are regulated by collective agreements, regulations on labour and employment contracts. The collective agreement regulate the rights, obligations and responsibilities from the employment, the procedure of its amendment, relations between the participants in the collective agreement and other issues of significance for the employee and employer. The Law is familiar with three kinds of collective agreements: general, special and employer's agreement. The general is concluded for the territory of entire state, the special is concluded for the particular field of work, certain territory, category of employers or category of workers. The employer's collective agreement is concluded for the particular working environment. As the Law has defined, the regulation on employment is adopted when there are no requirements that labor relations are regulated by an employer's collective agreement while employment is established by the employment contract, concluded between the employee and the employer. By such contract the employment is regulated at the basic level.

In the first stage of its existence, the collective agreements have replaced the nonexistent labour legislature. Although, nowadays there is labour and social legislature, the collective agreements did not lose its significance, because their basic goal is to improve the quality and quantity of employee's rights and working conditions in comparison with the Law. The beginning of collective agreements in the Republic of Serbia is linked with the period between two world wars, when the collective negotiations were foreseen by adoption of Law on protection of workers of Kingdom of Yugoslavia in 1922, and it became compulsory in 1931, by adoption of Law on Shops (Trade Law). After the Second World War, the collective negotiations in the Republic of Serbia had a symbolic character, because collective agreements were contrary to the system of the socialist self-management i.e. to the role and position of workers, who, according to the Constitution and laws, independently regulated their mutual relations, as well as the rights and obligations on the basis of joint work and management within the working organization (Kolektivni ugovori kod poslodavca u Republici Srbiji, Savez samostalnih sindikata Srbije – UGS Nezavisnost-Kancelarija MOR-a u Beogradu, Belgrade, 2013, p. 7 and 11). Although, at the end of eighties, mostly by adoption of the Law on Basic Rights from Employment („Official Gazette of Socialist Federative Republic of Yugoslavia", No. 60/89, 42/90 and "Official Gazette of Federal Republic of Yugoslavia", No. 42/92, 24/94), and later by Constitutions of Serbia from years 1990 and 2006, the collective negotiations (and collective agreement as the primary goal of negotiations) acquired its legislative foundation, the collective agreements still do not have a required influence in the regulation of rights and obligations of employees. The collective agreement still did not acquire the character of a primary instrument of employment regulation, the role which it should have in a market economy.„Before the collective agreements do not become a part of social and legal awareness of the citizens, inscluding the highest institutions of the system and political leaders, they will not have the adequate place in the legal system. Much more developed countries have passed through this process, as mentioned above, and it remains to our legal theory and legislature to lean on the practitioners, most of all, the lawyers in practice, the unions and associations of employers, so they could influence the creation of a positive public position on necessity of collective agreements with their positive practice and occasional pressures.“ (Stajić, 2004:282.)

The most significant collective agreement for realization of right to strike is the Special collective agreement for state ("Official Herald of Republic of Serbia", No. 95/2008. This collective agreement had a decisive influence on the decision of the Constitutional Court of Serbia on unconstitutionalitz of Article 18. Paragraph 1 of the Strike Law, which has foreseen the termination of employment for the state organ emplozee because of organization or participation in a strike). The Articles from 30 to 34 are regulating the procedure of a peaceful settlement of collective labour disputes. The collective labour dispute exist if in the procedure of conclusion i.e. modifications and amendments or implementation of the agreement or realization of rights of the employees in the sate organ for union organization or realization of right to strike, the participants cannot harmonize the positions and content of the act, which they mutually establish. In case of a collective labour dispute, each of the parties in the collective dispute may propose the solution of the dispute in the arbitration proceedings. The arbitration body – arbitration consists of five members, out of which two members are representatives of the employer and two members are representatives of the representative unions. The fifth – independent arbitration member is a distinguished expert from the ranks of scientific or professional workers, who are dealing with labor relations and is proposed by the manager of a special organization with competence, which includes the state administration jobs in the field of peaceful settlement of labour disputes. The independent arbitration member is determined by the representative union from the list of three suggested candidates. The arbitration work is managed by the independent member. The participants are obliged to submit to the arbitration the requested documentation and their opinions on the legal foundation, financial, organizational and reasons of other nature, which are preventing the participants to achieve the agreement, as well as to provide all the technical conditions for work. The arbitration is establishing the draft decision on way of solution of the dispute by majority of votes of all members and submits it to the agreement participants.If the participants accept the draft arbitration decision, they will sign a special agreement on this. On the day of signing of agreement, the arbitration decision is obliging the participants. If the participants do not solve the collective labour dispute in the arbitration proceeding, they can agree to continue to solve the dispute in the proceeding and before the person, which are established by the law, which is regulating the peaceful settlement of disputes. If, on the basis of acts adopted by the competent state authorities in the procedure of performance of inspection supervision of operation of state organs or in the procedure of making decision in the second instance in relation with the decisions, which are making decision on the rights and duties of the employees, the representative union estimates that in the particular state organ, mistakes in legal decision making are being repeated and there is violation of the individual or collective rights of employees (which, according to their characteristics, scope or frequency of repetition of actions and making of individual acts, and are depriving employee of rights, are pointing out the existence of violation of dignity and humiliating attitude to the employee), it can propose the initiation of the arbitration proceeding.

The Article 35 of the Agreement is directly dedicated to the right to strike and foresees that employee, employed by employer, under conditions and in the way established by the law, may organize a strike and warning strike. The participants agree that in the term of 30 days from the coming into force of the law, which shall, pursuant to the Constitution of Republic of Serbia, regulate the issue of realization of right to strike of employees within state organs, conclude the Annex to the Agreement, which shall establish the realization of such right with more details.

The general collective agreement ("Official Herald of Republic of Serbia", No. 50/2008, 104/2008 - Annex I and 8/2009 - Annex II.After signing of the General collective agreement, there were many problems in its implementation, which is illustrated, among other things, by the facts that two Annexes of the General Collective Agreement were concluded, two decisions on implementation of the General Collective Agreement for employers in Republic of Serbia were made, the Agreement on further development of social dialogue was concluded, and the General Collective Agreement was cancelled by the Union of Employers of Serbia etc. After three years since its adoption, the General Collective Agreement, with its provisions, did not start to function and ceased to be valid in May, 2011. The new General Collective Agreement has not been signed although the Committee for negotiations of representative unions was formed: *Kolektivni ugovori kod poslodavca u Republici Srbiji*, op. cit., p. 17.) has no provisions on right to strike, but there are provisions, important for the realization of this right (Articles 62.-65.) in relation with the solution of collective labour disputes. The disputes, which originate during modifications and amendments of this collective agreement or conclusion of a new collective agreement (interest collective disputes), as well as during its implementation (legal collective disputes), are solved by reconciliation, mediation, by arbitration and by other methods, in accordance with the law. The parties in dispute shall form a reconciliation commission for the solution of interest collective disputes. The commission is obliged to bring closer the positions of the parties in dispute for the purpose of the agreement. The parties in dispute may appoint mediators for the solution of interest collective disputes. The task of mediators is to bring positions closer and to suggest the solution of the dispute. The mediators are obliged to make a report on the results of mediation and on causes of the possible failure in mediation. The disputes, which appear in the implementation of this collective agreement, are solved by arbitration. The parties in dispute are obliged to submit the subject of dispute in relation with the implementation of collective agreement for solution to the arbitration. The arbitration has odd number of members.

The arbitration consists of equal number of representatives of parties in dispute, which is elected from the list of arbitrators and one arbitrator, determined by agreement of the parties in dispute. If there is no list of arbitrators, the arbitrators are determined in agreement of parties in dispute from the category of impartial experts for the area, which is the subject of the dispute. The arbitration award on the disputed issue is obligatory for the participants.

COURT PRACTICE AS THE SOURCE OF RIGHT TO STRIKE IN SERBIA

Serbia has a developed legal system of state regulation of the European continental type. „The majority of legally relevant relations is regulated by norms, which are, in the form of laws and other general legal acts, adopted by the organs of the legislative and executive authorities. Pursuant to the principle of separation of powers, proclaimed by the Constitution, the courts are obliged to consistently apply the general rules. A judge should implement the law, not to create it. In other words, court practice is not deemed to be a formal source of law. However, the courts in reality always had much more significant role in the process of formation of the legal system. It moved from a very broad interpretation of legal regulations to the creation of individual rules, which have fulfilled the legal voids, and event to the creation of general legal rules“ (Nikolić, p. 7.). The Constitutional Court of Serbia has the most significant activity in relation with the realization of right to strike. The most frequent reason for reassessment is certainly the provisions, which are regulating the realization of minimal work process. Therefore, the Constitutional Court of Republic of Serbia has discussed the disputed legality of the Decision on establishment of minimal work process during strike in the companies and institutions, which have been founded by the Assembly of Municipality Ljubovija (No. 06-102/98-01 of 23 October 1998) („Municipality Official Herald of Municipality Ljubovija“, No. 14/98. See more: VUČETIĆ D., BARUN I., Pravo na štrajk zaposlenih u jedinicama lokalne samouprave, Zbornik radova Pravnog fakulteta u Nišu, 2012, p. 370). In reassessment of the Paragraph 2 of the Decree on minimal work process within public company „Electric Utility of Serbia“, the Constitutional Court has established that the Government, by issuing authorizations to the General Manager of Electric Utility of Serbia, i.e. directors of the public companies within it, to determine the way of provision of the minimal work process, job positions and number of workers, who are obliged to work during the strike, has overstepped its authorizations, established by the provision of Article 10, Paragraph 2, of the Strike Law, which has entrusted the General Manager only to determine the persons, who are going to work the jobs, which must be performed during a strike (Decision IУ-308/04 of 5 February 2009 („Official Herald of Republic of Serbia“, No. 23/09)).

Beside the minimal work process, the Constitutional Court has solved cases in relation with the restrictions on right to strike for particular professional groups (police officers and public servants). The schedule of the Constitutional Court included the Decree on strike of police officers (05 No. 110-4534/2007 („Official Herald of Republic of Serbia“, No. 71/07)). Among other things, this Decree has foreseen that the minimal work process during the work stoppage is provided by work of at least 90% of employed police officers within the organizational unit in which the stoppage of work is organized and the stoppage of work may last 30 minutes at most. The initiative for assessment of constitutionality and legality of the Decree on strike of police officers was submitted to the Constitutional Court by the Independent Police Union of Belgrade, Branch Union of Administration, Legislature and Police "Independence" and the Police Union of Serbia. Having assessed the constitutionality and legality of the Decree, the Constitutional Court has established that the Government has overstepped the constitutional and legal authorizations and has regulated the relations from the competence of the legislative organ (Decision IУ-85/2007 of 30 September 2010 („Official Herald of Republic of Serbia“, No 87/2010)). The justification of the Decision has pointed out that the Constitution of Serbia by the Article 61 „guarantees to the employees the right to strike in accordance with the law and collective agreement". Also, the Constitution has set forth that the right to strike can be restricted only by law (pursuant to the nature and sort of the activity), so the decree as the sort of act, which is adopted in the performance of law, cannot regulate the requirements for realization of right to strike (Stevandić,2012, p. 422.). The provision of Article 135 of the Police Law, which is regulating the possibility of realization of right to strike and restrictions on this right, did not give authorization to the Government to regulate relations in this field with more details. Having in mind this, the Constitutional Court has estimated that the Government, by adoption of the disputed Decree, has overstepped its constitutional and legal powers and regulated the relations from the competence of legislative organ. The Constitutional Court has established such position also on the provision of the European Convention for protection of human rights and European freedoms, which has allowed the state signatories to legally restrict the right to freedom of assembly and association to certain categories of people, like the members of armed forces, police and the state administration. However, the restrictions are legal only if they full fill certain requirements, and the first requirement is that restrictions are set forth by the law.

The most significant decision of the Constitutional Court is the one on freedom of organization of strike for the employees within state organs and the police members. The Constitutional Court, in an abbreviated procedure, has estimated the constitutionality of the provision of Article 18, Paragraph 1 of the Strike Law, in the part which states: „Employee within state organ," and "and police member". More concrete – these provisions have set forth that – for the employee in a state organ and police member – employment is terminated if it is established that he/she has organized a strike or participated in a strike. In the implemented procedure, the Constitutional Court has established that the Strike Law was adopted on the basis of the Constitution of Federal Republic of Yugoslavia, which has established: employees are entitled to strike for the purpose of protection of their professional and economic interests, in accordance with the federal law (Article 57, Paragraph 1); the right to strike may be restricted by federal law if this is required by the nature of the activity or public interest (Paragraph 2); employees within state organs, professional members of Army and police do not have right to strike (Paragraph 3). From the day of coming into force of the Constitutional Grapher of State Union of Serbia and Montenegro ("Official Gazette of Serbia and Montenegro", No. 1/03 and 26/05), the Law has continued to be applied as a Republic regulation, pursuant to the provision of the Article 64, Paragraph 2 of the Constitutional Grapher, which has set forth that the laws of the Federal Republic of Yugoslavia, beyond the affairs of Serbia and Montenegro, shall be applied as the laws of state members, except the laws for which the parliament of a state member has decided not to apply. The Constitutional Court has ascertained that the Constitution of Republic of Serbia of 1990, which was the relation for assessment of constitutionality of formerly adopted federal laws – which continued to be applied as the Republic regulations, has ceased to be valid on 8 November 2006, when the new Constitution of Republic of Serbia came into force. Since the term, established by the Constitutional Law for implementation of Constitution of Republic of Serbia ("Official Herald of Republic of Serbia", No. 98/06) for the harmonization of the Republic laws with the Constitution of Republic of Serbia of 2006 has expired, which also relates to the former federal laws, which, on the basis of provision of Article 64, Paragraph 2 of the Constitutional Grapher, continued to be applied as the Republic regulations, the constitutionality of the provision of Article 18, Paragraph 1 of the Law is estimated in relation with the Constitution of year 2006. The applicable Constitution has established right to strike to all employed persons, including members of the police, state officials and employees, which can be restricted only by law. The Law on State Officers, which is regulating rights and duties of state officers and particular rights and duties of employees on the basis of employment, does not contain provisions, which are regulating rights of such persons to strike. However, the provisions of Article 4 of the Law have set forth that on rights and duties of state officers, which are not regulated by this or special law or other regulations, the general regulations on labour and particular collective agreement for state organs are applied (Paragraph 1), that is, on rights and duties of the employees the general regulations on labour and special collective agreement are applied if this is not regulated otherwise (Paragraph 3). Pursuant to the provision of Article 17 of the above-mentioned law, the special collective agreement may establish rights for the state officers, which have not been established by this law, in accordance with this law and general labour regulations. In regard to this, the Constitutional Court has established that the Labour Law, as the general regulation on employment, did not regulate the right of employees to strike. However, the Special collective agreement for the state organs has foreseen that the employees, which are, pursuant to the provisions of Article 2 of this agreement, the state officers and employees, who are employed and whose employer in the sense of this agreement is Republic of Serbia, may organize a strike or warning strike under conditions and in the way established by the law (Article 35, Paragraph 1). The conclusion from the above-stated is that the state officers and employees have right to strike, which must be organized in accordance with the Strike Law. In regard to the right of police employees to strike, the Constitutional Court has established that the provisions of Article 135 of the Police Law have set forth that organization of and implementation of a strike are subject, in the appropriate way, to the general regulations on strike (Paragraph 1) and the police employees do not have right to strike in the case of: 1) state of war or state of immediate war danger; 2) armed rebellion, uprising and other forms of violent danger for the democratic and constitutional order of Republic of Serbia or basic freedoms and rights; 3) proclaimed natural disaster or immediate danger of its appearance in the territory of two or more regional police administrations of the Ministry or in the entire territory of Republic of Serbia; 4) other accidents and disasters, which are disturbing the normal life and endangering the safety of people and property; 5) danger from a major disturbance of public order (Paragraph 3). Consequently, the police employees have right to strike (except in five precisely stated cases, in which they do not have this right), namely, under the conditions set forth by the provisions of the Strike Law, which are regulating the organization and implementation of strikes in the activities of public interest, and which are established by the provisions of Article 9 of this Law. Also, the Constitutional Law has pointed out that pursuant to the provisions of Article 14 of the Strike Law, the possibility of termination of employment of the employee on the basis of organization i.e. participation in a strike is excluded, if the organization of strike i.e. participation in the strike was performed under the conditions set forth by this Law. Pursuant to the above-stated, and considering that the provision of Article 18, Paragraph 1 of the Strike Law is based exclusively on the provision of the Article 57, Paragraph 3 of the Constitution of the Federal Republic of Yugoslavia (which has excluded the right to strike for employees within state organs and police members), that the mentioned Constitution is not in force any more, and the applicable Constitution has established right to strike to all employed persons, including the police members, state officers and employees, which can be restricted only by law, the Constitutional Court has estimated that the provision of the Article 18, Paragraph 1 of the Strike Law in the parts, which state: "„Employee within state organ," and "and police member", is not in accordance with the Constitution and ceases to be valid on the day of publication of the Decision of Constitutional Court in the "Official Herald of Republic of Serbia" („Official Herald of Republic of Serbia“, No. *103/2012*).

RESTRICTIONS ON RIGHT TO STRIKE IN SERBIA

The Serbian Constitution foresees that employees have right to strike, but the same Article leaves a possibility that such law is restricted by law, pursuant to the nature or sort of the activity. Right to strike, pursuant to the legal regulations, is forbidden for professional soldiers (Article 14 of Law on Serbian Army ("Official Herald of Republic of Serbia“, No.116/07).). The Police Law, in principle, allows realization of right to strike, but this right is restricted in good measure. First, during a strike, the authorized police officers are obliged to implement the authorizations when it is necessary for the protection of life and security of people, arrest and detention of person caught in performance of an act, which is prosecuted in the line of duty as well as the prevention and revealing of the perpetrator of such act. Also, the police employees do not have right to strike during the state of war, immediate war danger or state of emergency, armed rebellion, uprising and other forms of violent danger for the constitutional order of the country, natural disaster or immediate danger of its appearance (in the territory of two or more regional police administrations), other accidents and disasters, which are disturbing the normal life and endangering the safety of people and property as well as the danger from a major disturbance of public order (Article 135 of the Police Law ("Official Herald of Republic of Serbia", No. 101/2005)). Although each of the reasons, viewed separately, represents a realistic reason for restriction on right to strike, viewed as a whole, the right of police employees to strike is rather narrow and left in great measure to the free interpretation. The Decree on strike of police employees has narrowed the realization of strike even more (Among other things, this Decree („Official Herald of Republic of Serbia", No.71/2007) has foreseen that strike of police employees can last 30 minutes at most, without weapons and official equipment, the minimal work process is provided by the engagement of minimum 90% of employees within the organizational unit in which the strike is organized. More: Uredba o štrajku policijskih službenika „Official Herald of Republic of Serbia", No. 71/07), but it is not in the force by the decision of the Constitutional Court.

In regard to the state officers, both Law on State Officers and the present Strike Law do not explicitly mention their right to strike. However, having in mind that Serbia has ratified the Revised European Social Grapher (Law on confirmation of the Revised European Social Grapher, „Official Herald of Republic of Serbia", No. 42/09); the right to strike of state officers (Article. 6 of the Grapher) has become the part of applicable law of Serbia.

The right to strike is restricted by the obligation of the strike committee and employees, who are participating in strike, to organize and conduct the strike in the manner in which the safety of people and property and health of people are not jeopardized, the immediate material damage is prevented and continuation of work after the end of strike is enabled. The Strike Law foresees the requirements, which must be fulfilled before and during the organization of the strike. This relates above all to the obligation of preliminary notice, reconciliation, security measures, minimal work process and freedom to work of non-strikers. The decision of starting of the general strike or strike in the branch or industry is made by the highest organ of the union at the level of the Republic and the decision on strike against the employer or warning strike is made by the union organ, appointed by the union's general act or the majority of employees. The decision on strike contains: demands of the employees, time of the strike beginning, place of gathering of the strike participants and the strike committee. The participants are making new decision on strike for each new strike.

The Law has established the obligation of participants in dispute to begin the negotiations on consensual solution of disputed requests from the moment of the strike announcement. This obligation is continued during the period of strike until its end. The competent negotiating sides are the strike committee (elected representatives of the strikers i.e. union) and representatives of the authority to which the strike is announced (employer, founder or competent state or local authority).

RESTRICTION OF RIGHT TO STRIKE BY PROVISION OF MINIMAL WORK PROCESS

The major restrictions on right to strike are linked with the obligation of the minimal work process in the particular activities. Such restrictions had double burden: by the broad definition of the industry in which the minimal work process is required and the negligible role of employees (union) in determination of the particular minimal process. The danger from deprivation of right to strike is even bigger because the employers received too big authorizations in regard to the establishment of the scope of minimal work. The realistically determined minimal work process is the basic condition for the conducting of (legal) strike. Very often, the employers set forth the obligations of employees with act, which is determining the minimal work process at the same level (and sometimes at the higher) then the usual level of work process. In such cases, the possibility of conducting a strike is representing only an “empty word”, and the obligation of minimal work process is the means for prevention of the strike.

RESTRICTION OF RIGHT TO STRIKE BY OBLIGATION OF AN PEACEFUL SETTLEMENT OF DISPUTE

The obligation of a peaceful settlement of dispute has been accepted by the Committee for freedom of assembly as the legal precondition for organization of a strike. The draft law has accepted the obligation of the party in dispute that from the day of announcement of the strike and during the strike try to solve the dispute by agreement as well as to cooperate for the purpose of provision of minimal work process, when it is required by the law. The strike organizer and the employer, i.e. negotiating body, determined by him, are obliged from the day of the strike announcement and during the strike, to try to solve the dispute by agreement or to initiate the procedure for a peaceful settlement of the dispute in accordance with the law. Employer, i.e. association of employers or founder, are obliged, in the term of 48 hours from the announcement of the strike, to invite the strike organizer in a written form for the purpose of attempt to solve the dispute by agreement and initiation of an peaceful settlement of the dispute. The basic difference in relation with the present legal solution is the significant role of the Republic Agency for Peaceful Settlement of Labour Disputes (Law on peaceful settlement of labor disputes, *Official Herald of Republic of Serbia*,No. 125/04and 104/09). The draft law has foreseen that the decision on beginning of strike in the industries in which the minimal work process is required is submitted to the Agency for the purpose of participation in the procedure of peaceful settlement of the labour dispute, by which it is deemed that the procedure of peaceful settlement has started. If the agreement is not reached in the term of 15 days from the day of the decision delivery, the employees may begin with the strike.

CONCLUSION

The present situation of industrial relations in Serbia has a characteristic of lack of harmonization between the theoretical basis and practical implementation of right to strike. From a theoretical point of view, the existence of Labour Law, the Strike Law, institutions for maintenance of security and protection at work, organizations for peaceful resolution of labour disputes, inspections, representative associations of the employees and employers, Social-Economic Council… makes the impression that Serbia, according to the achieved level of industrial democracy, does not lag behind the developed European countries. In practice, the situation is quite different. The associations of employees and employers hardly can take care of themselves, not to mention the interests of their members. The Social-Economic Council exists only formally because in practice it have sessions on rare occasions and the main decisions, important for the position of employees (and the employers) are made out without its influence. The Administration for Safety and Protection at work, as well as the Republic Agency for Peaceful Settlement of Labour Disputes are at the very beginning of their operation, without sufficient support for their work. The Labour Inspection is at odds between the increase of competence and the decrease of the personnel and financial capacity. All this is making Serbia to be a state in which the right to strike does not have a good basis for further development.

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THE CALCULATION AND QUANTITATIVE CHARACTERISTICS OF CONSTRUCTION OF MULTIDIMENSIONAL POVERTY INDEX

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ABSTRACT

Multidimensional poverty index represents one of the important statistical composite indices and at the same time it is a valid economic quantitative indicator of degree of development and growth of world countries. The calculation of this index is based on encompassing 3 basic components of development which are equally weighted: health, education and living standard and the measurement of these components includes 10 different indicators. 2 of these 10 indicators refer to health, 2 to education and 6 to living standard. Multidimensional poverty index is a product of a multiplication of percentage proportion of those that are multidimensionally poor and average percentage proportion of particular indicators of multidimensional poverty index. The important characteristics of multidimensional poverty index is that it allows decomposition into different subgroups of population such as regions or ethnical groups which depends on the sampling design. The other important characteristics of this index is in the fact that it can also be decomposed into individual components which allows measuring of the contribution of each of the components. Methodology of calculation of multidimensional poverty index also allows a cross time as well as cross nations comparative analysis. The calculation of multidimensional poverty index is a result of application of complex statistical procedure which encompasses several different dimensions, indicators and weights and that is why it represents important aspect in methodology of construction of composite indices.

Key words: *Multidimensionality, Indicators, Weights, Methodology, Poverty*

JEL Classification: *C40*

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INTRODUCTION

Multidimensional poverty index is one the best known statistical composite indices that became an important indicator not only of pure quantitative tendencies in economics but also of a economic growth and development since it is a reliable indicator of degree of development of worlds countries (it is calculated for 109developing countries in 2014). Multidimensional poverty index was constructed by Oxford Poverty and Human Development Initiative and United Nations Development Programme. This index was created as a replacement for Human poverty index and it tends to be improved version of that former index that will cover some disadvantages of it. Its goal is to show the quantitative level of acute multidimensional poverty of nations across the world. It shows the number of people that are multidimensionally poor and the number of deprivations that exist in poor households.

The construction of multidimensional poverty index is based on a complex statistical methodology that includes measurement of 3 different components of multidimensional poverty: health, education and standard of living ; each of them is measured using 10 indicators : health–child mortality and nutrition, education–years of school and the number of children enrolled and living standards–cooking fuel, toilet, water, electricity, floor and assets. Each dimension and each indicator that is included in dimension is equally weighed. Multidimensional poverty index (MPI) is calculated as multiplication of percentage of people that are MPI poor (the incidence of poverty) and average intensity (percentage) of MPI poverty across the poor (Alkire and Foster, 2011, pp.476-487). A person is considered poor if they are deprived in at least one third of all 10 indicators that are included in construction of multidimensional poverty index. The intensity of poverty shows the proportion of indicators in which they are deprived.

The methodology used for calculation of multidimensional poverty index is very complex and quite interesting not only from the aspect of quantitative methodology but also it represents a detailed analysis and study of different qualitative and quantitative factors that are included in the calculation of this index.

QUANTITATIVE CHARACTERISTICS OF CONSTRUCTION OF MULTIDIMENSIONAL POVERTY INDEX

The calculation of multidimensional poverty index includes measurement of three dimensions that consists of several different components (Alkire, Foster, 2011:476-487):

I. Education (each indicator is weighted equally at 1⁄6):

1. Years of schooling (deprived if no household member has completed 5 years of schooling)
2. Child school attendance (deprived if any school–aged child is not attending school up to class 8)

II. Health (each indicator is weighted equally at 1⁄6):

3. Child mortality (deprived if any child has died in the family)
4. Nutrition (deprived if any adult or child is malnourished)

III. Standard of living (each indicator is weighted equally at 1⁄18):

5. Electricity (deprived if household has no electricity)
6. Sanitation (deprived if sanitation facility in the household is not improved according to the UN Millennium Development Goals guidelines or it is improved but shared with other households)
7. Drinking water (deprived if the household does not have access to safe drinking water)
8. Floor (deprived if household has dirt, sand or dung floor)
9. Cooking fuel (deprived if household uses dung, wood or charcoal as a cooking fuel)
10. Assets ownership (deprived if household does not own more than 1 radio, TV, telephone, bike, motorbike or refrigerator and does not own a car or truck)

A person or household is treated as a poor if it is deprived in at least 33.33% of above mentioned 10 weighted indicators.

A deprivation score is calculated for each person based on his or her deprivation in the component indicators. The deprivation score of each person is computed using a weighted sum of deprivations so that the deprivation score for each person lies between 0 and 1. The deprivation score becomes larger if the number of deprivations of the person increases. The deprivation score equals 1 exists when person is deprived in all ten indicators. On the other hand, a person who is not deprived in any indicator gets a deprivation score equals 0. A calculation of deprivation score can be expressed using the following formula (Alkire and Foster, 2011, pp.476-487):

$$c_i = w_1 \cdot I_1 + w_2 \cdot I_2 + \cdots + w_d \cdot I_d$$

where Ii=1 if the household is deprived in indicator i and Ii=0 if the household is not deprived in indicator i and wiis the weight assigned to indicator*i*with $\sum_{i=1}^{d} w_i = 1$.

Apart from deprivation score, methodology for calculation of index of multidimensional poverty contains also one more measure that is used for identification of multidimensionally poor. That measure is poverty cutoff (k) and it is the proportion of weighted deprivations a household must have in order to be considered poor. A person is considered poor if her or his deprivation score is equal to or greater than the poverty cutoff, that is if $c_i \geq k$. In the methodology of multidimensional poverty index a person is treated as poor if his or her deprivation score is at least $1/3$ which means that deprivation must be at least a third of the weighted indicators to be considered MPI poor. Households with a deprivation score between $1/5$ and $1/3$ are considered ”vulnerable” since their score is close to poverty cutoff. If a deprivation score is below the poverty cutoff, even if it is non−zero it is replaced by 0 and in this case the deprivation score becomes censored (ci (k)). When ci$\geq k$, then ci (k)= ci. On the other hand when ci$< k$then ci (k)=0. ci (k) is the deprivation score of the poor.

Multidimensional poverty index methodology is based on measurement of 2 variables that are components of index structure. The first one is the proportion of people whose share of weighted deprivations is k or more (this variable is formally called multidimensional headcount ratio – H). The other variable that is included in the structure of index is the intensity of deprivation meaning the average proportion of weighted deprivations (this variable is formally called the intensity of poverty – A). Multi-dimensional headcount ratio is calculated as a ratio between the number of people who are multidimensionally poor and the size of total population (Alkire, Foster, 2011:476-487):

$$H = \frac{q}{n}$$

where q is the number of people that are multidimensionally poor and n is the size of population. The intensity of poverty is measured as a average deprivation score of multidimensionally poor people (Alkire, Foster, 2011:476-487):

$$A = \frac{\sum_{i=1}^{n} c_i(k)}{q}$$

Where $c_i(k)$ is the censored deprivation score of individual iand qis the number of people who are multidimensionally poor. The multidimensional poverty index derives from multiplication of these two variables (Alkire.Foster, 2011:476-487):

$$MPI = H \times A$$

According to Multidimensional poverty index 2011 data (http://www.ophi.org.uk /multidimensional-poverty-index, accessed 30.6.2014) there are 0.8 % people in Serbia who are MPI poor and the average intensity of MPI poverty in Serbia is 40.0% which produces the final score for multidimensional poverty index:

MPI= $0.008 \times 0.40 = 0.0032$

This means that those who are MPI poor suffer from deprivation in 0.32% of all 10 indicators, on average. The methodology for calculation of multidimensional poverty index also includes two more variables apart from multidimensional headcount ratio and the intensity of poverty. Those two variables are the number of people that are vulnerable to poverty (people whose deprivation score is between 20% and 33%) and number of people in severe poverty (people whose deprivation score is 50% or more).

The multidimensional poverty index can be decomposed by population sub–groups such as regions or ethnic groups, depending on sample design. If there is the distinction between rural and urban areas in some country the decomposition of multidimensional poverty index can be performed through formula (Alkire, Foster, 2012:289-314):

$$MPI_{country} = \frac{n_U}{n} MPI_u + \frac{n_R}{n} MPI_R$$

where U shows 'urban' and R shows 'rural', and $n_u/n$is the population of urban areas divided by the total population, n_R/n is the population of rural areas as a proportion of the total population (n_U+$n_R = n$). This calculation for decomposition by sub–groups can be in the same way expanded to more than 2 population sub–groups as long as populations from which these groups come from make in total the whole population.

The contribution of each group to the total poverty can be calculated based on formula (Alkire, Foster, 2012:289-314):

$$Contribution\ of\ urban\ areas\ to\ MPI = \frac{\frac{n_U}{n} \cdot MPI_U}{MPI_{country}} \cdot 100$$

If contribution to poverty of some particular region or other group is significantly higher than its population proportion, this means that some regions or groups have significantly higher proportion in the total poverty than others.

Apart from characteristics that refer to the possibility for regional decomposition, multidimensional poverty index also allows its decomposition by indicators or components. This will show how people are poor, meaning which indicator has the greatest contribution in total poverty. This calculation is performed after multidimensional poverty index is computed.

The decomposition by indicators is conducted using censored headcount ratio in each indicator. The censored headcount ratio for particular indicator is calculated by adding up the number of poor people who are deprived in that indicator and dividing by the total population. When all censored headcounts ratios are computed, it can be verified that the weighted sum of the censored headcount ratios also produces multidimensional poverty index of particular country. This means that MPI is constructed from all 10 indicators (Alkire, Foster, 2012:289-314):

$$MPI_{country} = w_1 \cdot CH_1 + w_2 \cdot CH_2 + \cdots + w_{10} \cdot CH_{10}$$

where wiis the weight of indicator 1 and CH1 is the censored headcount ratio of indicator 1 etc. Sum of weights of all ten indicators is 1. The percentage contribution of each indicator to the total poverty can be calculated using formula (Alkire, Foster, 2012:289-314):

$$Contribution\ of\ indicator\ i\ \ to\ MPI = \frac{w_i CH_i}{MPI_{country}} \cdot 100$$

If the contribution to poverty of certain indicator is higher than its weight it can be concluded that there is significantly high deprivation in this indicator in the country. The poor are more deprived in this indicator than in others. The sum of contributions of all indicators is 100%.

Since multiple poverty index is calculated based on different survey years, in order to determine the number of MPI poor in any given country or across countries it is needed to multiply the MPI incidence or headcount ratio (H) calculated from the sample survey by the population of the country (Alkire, Foster, 2012:289-314):

$$Number\ of\ MPI\ poor = H \cdot Total\ population$$

Despite the fact that this calculation looks simple, it is rather complex since it requires selecting and justifying a particular year for the population Figures (Alkire, Foster,2012:289-314).Instead of this, there is the option to either use population data that correspond to the year of the survey or to use population data from a given single year which may not be the survey year. In 2011 Human Development Report the number of MPI poor was calculated using the first mentioned approach which means by multiplying the MPI headcount ratio by the total population from the year of the survey. In this approach the MPI values and the number of MPI poor all refer to the date of the survey. The advantage of this approach is in the fact that no assumptions are made regarding poverty trends after the survey. The disadvantage of this approach lies in the fact that the number of MPI poor cannot be calculated by regions or other groups if the surveys for the considered countries are different. This will not allow international comparisons which is the big problem since one of the most important goals of creating international poverty measuresis to enable comparison across countries (Alkire, Foster, 2011:476-487). The other issue that refer to calculation of the number of MPI poor arise from the situation when there is a significant rate of population growth it can cause limitations in updating the data or in releasing new data because even the incidence of poverty decreased, the absolute number of MPI poor increases.

The number of MPI poor can also be calculated by multiplying the MPI headcount ratio by the total population taken from a given year which may not be the same year as the survey. This approach was used in 2011 Human Development Report press release that said that there were 1.7 billion MPI poor people. Unlike previously mentioned approach (it uses data from the year of survey) that has limitations in comparisons, this approach (when data from a given year are used which may not be the same year as the survey) allows to make comparisons across countries and regions in order to make a regional ranksand to make groupings of countries according to income level. Based on this approach, a Figure of 31% of MPI poor among the inhabitants of 109 countries is produced (Alkire, Foster, 2012:289-314). If the year of the survey chosen is after the year of the survey, data that refer to poverty can be updated because the number of poor will decrease if poverty rates decline this especially stands for the countries that have great population growth. The disadvantage of this approach is in the situation when headcount that is used comes from the year that is older than the reference year of the survey. In this case valid results can be produced only if the level of the poverty in year of the survey and the year of population are identical which is rarely the case. Because of all disadvantages of all mentioned approaches for calculation the number of MPI poor it is important to increase the periodicity of data collection.

In calculation the multidimensional poverty index for 2011 a decomposition by states, districts, regions or provinces (depending on the country) was conducted for 66 out of 109 countries that were included in MPI calculation (Alkire, Foster, 2012:289-314). Those 66 countries satisfy the three following criteria (Alkire, Foster, 2012:289-314):

1. The survey of the country is representative at the sub–national level according to the survey data regarding the sample design and to basic tabulations in the country survey report.
2. Headcount ratio (H) and the MPI are large enough (H more than 1.5% and MPI greater than 0.005) so that a meaningful sub–national analysis can be made. The first 30 criteria exclude 30 country surveys from analysis.
3. The sample size after the treatment of missing data is reasonably large both at the national and at the sub–national level. If some case is borderline an additional bias analysis has been conducted in order to exclude those cases where the sample reduction produces significantly high bias. The national sample size should be at least 85% of the original sample after missing data are treated. This is because of the fact that a lower sample size can cause sub–national comparability that is not accurate enough. Also, every sub–national region in the country must have sample size that is at least 75% of the original sample. A smaller sample produces a problem of representativeness for that particular sub–national region which can decrease the level of quality of sub–national comparison. A bias analysis test is conducted for each region whose sample size is 75 and 85 percent of the original sample. The major cause of sample reduction is identified and the entire sample is divided into 2 groups based on this cause. The headcount ratios of the other indicators across these two sample groups are checked. If there is a statistically significant difference (at significance level of 1%) between the headcount ratios across these two groups then that region does not satisfy the bias analysis test. If a region with a population share more than 20% within a country does not pass the bias test, that country is excluded from MPI analysis.

There were 109 countries in MPI calculation for 2011 and 66 of them meet al., three mentioned criteria for sub–national decomposition of multidimensional poverty index.

The methodology for calculation of MPI allows also analysis over time, which actually means comparison of MPI values between 2010 and 2011. The condition for this comparison is that updated data for MPI calculation in 2011 are consistent with data for 2010 in terms of sampling frame and indicators. This means that differences between MPI values for 2010 and 2011 can be interpreted as real reductions in MPI. The MPI calculation produces changes over time and confidence intervals for each of these countries over the period indicated with respect to MPI, headcount ratio (H), intensity of poverty (A) and also the censored headcounts of each indicator (Alkire, Santos, 2010). It becomes possible to observe the absolute and relative variation in each indicator during the analysis of these changes over the time. The absolute variation shows the overall percentage of people that became poor or stopped to be poor. The relative variation indicates the magnitude of the reduction with respect to the overall poverty level in the country. Since the length of the period between both surveys for comparison varies, the changes should be annualized to allow comparability across countries. The average annual absolute change of each indicator X can be computed using formula (Alkire, Santos, 2010):

$$\Delta X_{t-s} = (X_t - X_s)/(t - s).$$

The average annual percentage change of each indicator X is:

$$\Delta\% X_{t-s} = ((X_t - X_s)/X_s) \quad /(t - s)$$

where Xtis the performance of a country in period t and Xsis the performance of a country in period s.

Changes in MPI over time can be caused by incidence (H) or intensity (A) or by the interaction of both of these variables:

$$\Delta\% MPI_{t-s} = \Delta\% H_{t-s} + \Delta\% A_{t-s} + (\Delta\% H_{t-s} \cdot \Delta\% A_{t-s} \cdot (t - s))$$

The methodology for MPI calculation can provide the information about how reductions in different indicators caused the overall reduction in poverty and allows assessments of the statistical significance of the results. This information is useful because it provides feedback to different public and private sector actors on what caused changes in MPI. Also it becomes possible to decompose changes over time at regional levels and for different population sub–groups in order to observe differences or consistency in poverty reduction within countries.

Since Multidimensional poverty index has been constructed recently, there have been constant improvements in its methodology. There was improvement in 2011 methodology comparing to 2010 considering coding used to create the school attendance, sanitation, water and nutrition indicators (the coding affected the treatment of missing data for the distance to water variable, the coding of composting toilets and the year in which children’s school attendance was assessed). Also, if a country lacks 2 or more indicators, the poverty cutoff that is equivalent to that of those with 9 or 10 indicators has been constructed. In 2010 MPI methodology it was used a cutoff such that if a person’s weighted deprivation score was greater or equal 3 that person was considered poor (Alkire, Santos, 2010). This is equivalent to being deprived in a third of the indicators when the country has 9 indicators and in 30% when it has 10, but in practice this makes no difference. For countries with 7 or 8 indicators it meant in practice a higher poverty cutoff. By using $k = 1/3$ for all calculations all inconsistencies in identification were removed.

There are three environmental indicators included in MPI calculation methodology and they were given a special attention due to their importance: lack of improved cooking fuel, safe drinking water and improved sanitation. These 3 indicators are weighted at $1/18$ each, so their proportional contribution to poverty for someone deprived in 10 indicators is $3/18$ or 0.1667. It becomes possible to conduct a separate analysis about the joint distribution of these 3 indicators across the MPI poor population. It can also be shown what percentage of MPI poor people are deprived in one or more environmental indicators, in any two or more, or in all 3 of the environmental indicators simultaneously. Similar analyses can be done for other subsets of variables in multidimensional poverty index, depending on the goal of particular study.

The MPI uses the poverty cutoff (k) equal to one third of weighted indicators. That means that roughly 31% of people are identified as multidimensionally poor .A change in the poverty cutoff may identify the multidimensionally poor differently which may cause changes in the ranks of countries (Alkire and Santos,2010). If the value of cut off changes to k =0.2 it would be used to determine household that is vulnerable to poverty, in other words it means that roughly 43% of people across 109 countries are identified as multidimensionally poor. If the value of cutoff changes to k=0.4 it can be concluded that roughly 22% of people across 109 countries are identified as multidimensionally poor. If the poverty cut off is above k=0.4 that will mean that more than 32 countries have very low MPI values which will lead to the conclusion that a ranking comparisons are less meaningfull. Since there are 109 countries, there are 5886 possible pair–wise comparisons. 94.7% of the 5886 pair–wise comparisons are not changed for the MPI poverty cutoff and the 2 alternative cutoffs, meaning that one country is less poor than another, independently of whether the poverty cutoff is set at 20%, 33.33% or 40% of the weighted indicators.

The Kendall tau rank correlation coefficient (Tau–b) and Spearman's rank correlation coefficient between the MPI ranking and the ranking for each of the alternative poverty cutoffs can also be encompassed by MPI calculation methodology. The Spearman's coefficients are 0.99 for both cases while the Kendall coefficients are 0.94 and 0.93 respectively (Alkire, Santos, 2010). These results show that MPI ranking across 109 countries is not affected by the changes in the poverty cutoff.

In the MPI methodology each dimension is equally weighted at one third and each indicator within a dimension is equally weighted as well. The decision to weight health, education and standard of living dimensions equally comes from the various analysis and robustness tests of the Human development index as well as from expert opinion. Also, choosing dimensions that are roughly equal helps make the resulting measure easy to understand and use (Atkinson et al.,., 2002:120-122).

In order to analyze robustness of MPI to different range of weights an analysis with different weights has been conducted. First, there are weights 50% for health, 25% for education and 25 % for standard of living. Then, these weights were changed, 50% for education and 25% for other two, etc. Country rankings were checked in order to determine if they are robust to the change of weights of dimensions using the correlation coefficients (Pearson's correlation coefficient, Spearman's rank correlation coefficient and Kendall's rank correlation coefficient) between each pair of rankings. It was found that MPI ranks were robust for 84.9% of all pair–wise comparisons when these 3 alternative weights are considered. All 3 correlation coefficients between MPI and each of 3 weighting structures is at least 0.89 which indicates that MPI country rankings are not influenced by the change in weighting structure of dimensions (Seth, Foster, 2009).

METHODOLOGICAL CONSIDERATIONS

A. Time. The multidimensional poverty index is economic and development indicator that was first constructed in 2010 by Oxford Poverty and Human Development Initiative and United Nations Development Programme asa replacement for Human development index. The first multidimensional poverty index table was published in 2010, and then after that, MPI tables for 2011, 2012, 2013 and 2014 were also published with some improvement in MPI methodology calculation.

B. Geographical coverage. The 2010 multidimensional poverty index was calculated for 104 developing countries of the world. For the period 2011–2013 there were 108 countries included in multidimensional poverty index tables. The most recent MPI table that refers to 2014 contains a list of 109 developing countries.

C. Sources of data.For calculation of the MPIall data for each country must come from the same survey. There are three main datasets thatwere used to compute the MPI: the Demographic and Health Survey, the Multiple Indicators Cluster Survey and the World Health Survey. Apart from these three main sources of data, the MPI calculation uses some country–specific surveys such as National Survey of Nutrition and Health in Argentina, National Survey of Demographic and Health in Brazil, National Health and Nutrition Survey in Mexico and others country–specific surveys. The MPI estimation for each country relies on the most recent and reliable data that contain the required indicators and which is available since 2000. However surveys are taken in different years, and some countries do not have the recent data. The year of the survey is reported in each of the MPI tables for 2010, 2011, 2012, 2013 and 2014. The difference in dates causes limitations in cross–country comparisons since circumstances may have improved or deteriorated in the /intervening years.

RESULTS OF EMPIRICAL APPLICATION OF MULTIDIMENSIONAL POVERTY INDEX

There are 109 countries that are on the list in 2014 Multidimensional poverty index table. For each of the 109 countries there are data for source and the year in which data were collected, size of population for 2010 and 2011,number of MPI poor people, the value of multidimensional poverty index, headcount ratio (proportion of people that are multidimensionally poor), intensity of deprivation among the poor, percentage of people that are vulnerable to poverty, percentage of people that are in severe poverty, proportion of MPI poor who are destitutes, inequality among the poor, and the total number of indicators (out of 10) included in calculation of MPI.

According to MPI 2014 data table (http://www.ophi.org.uk /multidimensional–poverty–index, accessed 30.6.2014) all information for MPI calculation for Serbia was based on Multiple Indicators Cluster Survey with data that were collected in 2010. Total population of Serbia in 2010 was 9647000 and the number of MPI poor people is 10000. The value for MPI for Serbia is 0.0032 which means that those who are MPI poor suffer from deprivation in 0.32% of all 10 indicators. This value for MPI was calculated from multiplication of headcount ratio (percentage of people in multidimensional poverty– value for Serbia is 0.8%) and intensity of deprivation among the poor (average percentage of weighted deprivations–value for Serbia is 40.0%). 3.3% of population in Serbia are vulnerable to poverty which means that they experience 20–33.32% intensity of deprivations. The percentage of people that are in severe poverty in Serbia is 0.1% which means that they experience intensity of deprivations that is higher than 50%. Among MPI poor people in Serbia there are 13.9% destitutes. Inequality among the poor is measured on the scale from 0 to 1 and its value for Serbia is 0.024.

A comparative analysis among developing countries in the region based on MPI 2014 data table (http://www.ophi.org.uk /multidimensional–poverty–index, accessed 30.6.2014) shows that Croatia has the highest MPI score (0.016), followed by Macedonia (0.008), Montenegro (0.006), Albania (0.005) and Bosnia and Herzegovina whose value for MPI is the same as in Serbia (0.003). The scores for headcount ratio are 4.4% for Croatia, 1.9% for Macedonia, 1.5% for Montenegro, 1.4% for Albania and 0.8% for Bosnia and Herzegovina. The greatest intensity of deprivation among the poor is in Montenegro (41.6), followed by Macedonia (40.9), Albania (37.7), Bosnia and Herzegovina (37.2) and Croatia (36.3).

Countries from Africa such as Burkina Faso, Burundi, Central African Republic, Ethiopia and Niger have the highest MPI scores that exceed 0.5. In these countries there are more than 80% of people that are multidimensionally poor and their intensity of deprivation among the poor is higher than 60%.

Among European countries the highest MPI values are in Azerbaijan, Estonia and Turkey with MPI scores around 0.02. There are approximately 6% of people in these countries that are multidimensionally poor with around 40% of intensity of deprivation.

CONCLUSION

The multidimensional poverty index is based on very complex and detailed methodology that requires knowledge of many different quantitative and qualitative indicators, factors, variables and weights. Its construction includes exploitation of various data and encompasses different methods and procedures for measuring, organizing and analyzing those data. That is why this index is significant indicator of economic trends, development and growth of world's countries. It can be a useful tool for thorough analysis of country'social and economic development. Various data and dimensions that can be observed on multidimensional poverty index allow conduction of different comparative analysis across periods and nations.

The methodology and calculation of Multidimensional poverty index is included in various activities and policies that aim to reduce the poverty in different countries of the world. The most developed of them is European platform against poverty and social exclusion which is designed to help EU countries to lift 20 million people out of poverty and social exclusion (more than 80 million people in EU are poor which is 16.5% of all EU population). The Platform is based on delivering different actions across the whole policy spectrum such as the labour market, minimum income support, healthcare, education, housing and access to basic banking accounts and better use of EU funds to support social inclusion.

Although multidimensional poverty index is based on highly developed quantitative and qualitative methodology, there is no doubt that this methodology will tend to improve which will result in more valid and accurate measurement . It is undeniable that problems and issues that multidimensional poverty index methodology faces, would surely be reduced or resolvedin this progress.

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RESEARCH RESULTS: INTEREST IN WORK REINTEGRATION IN THE MINISTRY OF DEFENCE AND SERBIAN ARMED FORCES

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ABSTRACT

Experiences of developed countries clearly indicate the close relationship of the national economy and the military system.

The aim of the present study was to identify directions for possible solution to the issue of redundant military and civilian personnel in the military system of the Republic of Serbia.

In modern terms, organizations are constantly adapting to current changes, seeking for the selection of those solutions that provide the opportunity for further successful operation and future development. The military organization is no exception.

Professionalisation of the Serbian Army constantly requires qualitative changes of the existing personnel through engagement of the military personnel of a certain profile and relevant skills, and therefore the termination of professional military service for the members of the Serbian Armed Forces, since the need for their engagement will cease to exist.

In order to identify potential content and create useful basis for making appropriate decisions by the military decision maker, in 2012 the Ministry of Defence and Serbian Armed Forces conducted the research on interest of the military members to continue their working career in the Ministry of Defence.

Key words: *Professional Military Personnel, Modalities of Responses, Research Results*

JEL Classification: *M14, M54*

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INTRODUCTION

Defence system reform and professionalization of the Serbian Armed Forces are processes that inevitably result in termination of the professional military service and redundancy of military and civilian personnel. A number of these personnel, apart from losing their job, will at the same time lose profession, e.g. officers and non-commissioned officers of certain branches (infantry, armoured and mechanised units, artillery etc.) or persons who were trained in military schools for specific military occupations. The second category, i.e. professional soldiers on contract who spent the best able-bodied age in professional military service, have to leave the military system due to legally limited age, with no relevant work experience and expertise that is required in the civilian sector. Therefore, the question that inevitably arises is how to direct redundant personnel toward new career, to assist them in transition process, promote them as a potential for society and present them with a very usable operating characteristics. For decision-makers in the military system it means that the opportunities for continuation of working career of professional military personnel in the defence system after the termination of professional military service should be taken into account. Especially because those people already have the appropriate values that characterized them and affirmed them in military sense during their professional military service, such as discipline, responsibility, adaptability and resourcefulness, organizational skills, ability to work in team, experience in human resources management, the ability of personal and collective motivation, determination, reliability, execution of tasks under difficult and complex conditions, accuracy, and other capabilities acquired in the course of professional military service and training. These human resources are illustrated in the fact obtained on the basis of the reperesentative sample which shows that almost a third of the officers in addition to undergraduate studies, have also masters, graduate or doctoral degree.

Given the need to determine to what extent, for what specific content, how and under which conditions professional personnel, i.e. officers, NCOs and professional soldiers are interested in pursuing a working career in the military system after cessation of active military service, in the organizational units of the Ministry of Defence and Serbian Armed Forces, the relevant research was conducted in 2012, while respecting the principles of anonymity and voluntary.

REPRESENTATIVENESS OF THE SAMPLE

The study included 1085 professional military personnel- 640 officers, 319 NCOs and 126 professional soldiers.

The largest number of officers has graduated from the Military Academy (95.1%), while the much smaller part got their degree in civil faculties. In the category of NCO absolute majority (95%) had completed secondary education (37.6% the military high school and 57.4% civilian high school), while the remaining part (5%) has higher, vocational or college studies. Similar educational structure is represented in professional soldiers (Graph 1).

The respective educational potential is indicated by the fact that out of total number of officers that participated in the survey 16.9% have completed masters degree or specialization, 8,8% graduate studies and 3% doctoral studies.

ANALYSIS OF THE RESPONSES

In relation to the questions asked, with modalities of responses, the following answers were obtained:

1. Would you choose military profession again as the life and work commitment?

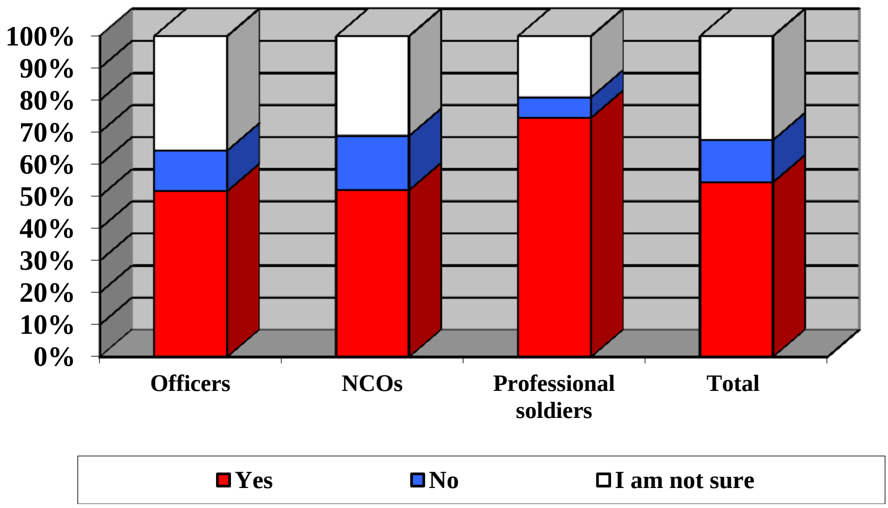


Figure 1. Modalities of responses to question 1.

In the category of officers, 51.7% said yes, 35.6% were not sure how to respond, while 12.7% said that they would not again opt for the military profession. Slightly more than half of the non-commissioned officers (52.0%) said yes, 31.0% said it was not sure of the answer, while 17.0% said that they would not choose military profession again. In the category of professional soldiers absolute majority

(74.6%) would choose military profession again, 19% were not sure of the answer, while only 6.3% would not opt for the military profession again. Overall, 54.5% of professional military personnel said that they would choose military profession again as a life work orientation, 32.3% were not sure how to respond, while 13.2% would not opt for the military profession again.

2. What reflects your intentions after the termination of professional military service?

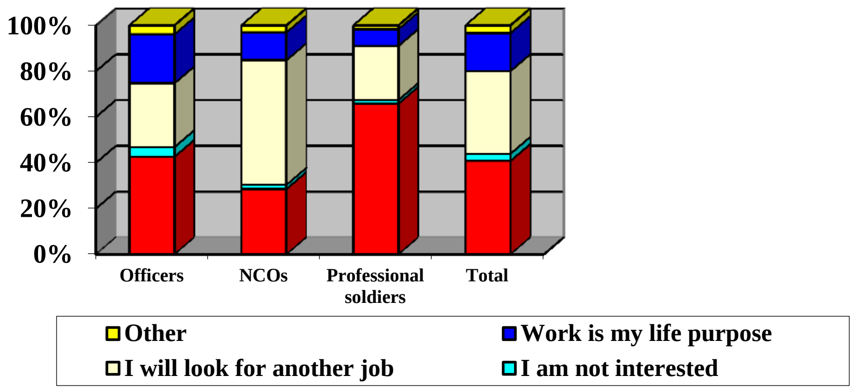


Figure 2.Modalities of responses to question 2.

With respect to individual categories of respondents, 36.1% of officers did not expressed any further intentions after the termination of professional military service, 39.2% have intention or need for work engagement, while 18.1% expressed the view that the work is meaning of life, which in a broad sense can be interpreted as a desire for continued employment. In the category of NCO, the largest number (56.1%) intends to continue to work, 29.4% are still not thinking about it, while 12.5% finds the meaning of life in work and, on that basis, the need for further work engagement. The largest number of professional soldiers (64.2%) stated that they did not consider further work engagement, while 23.0% of professional soldiers said they would accept further employment. Overall, 57.6% of professional military men pleaded interested in further work arrangement after termination of service, or that the work is the meaning of life, while 37.4% said they did not think at that moment about the future intentions regarding work after the termination of the professional military service.

3. Specify where you would like to continue work engagement.

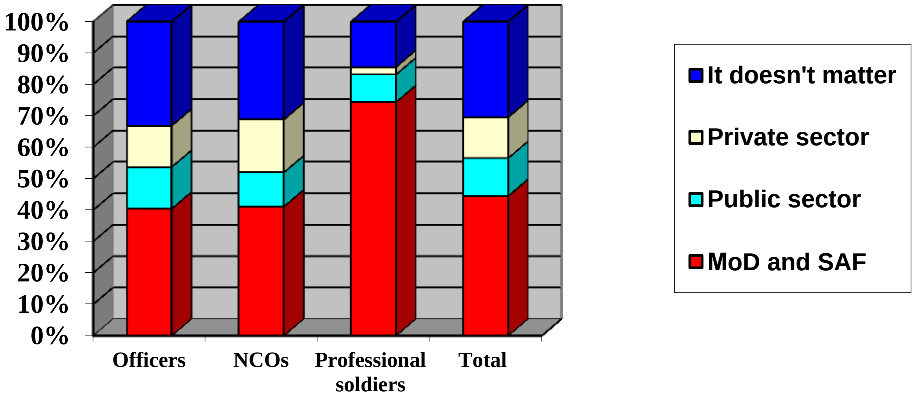


Figure 3. Modalities of responses to question 3.

Nearly approximate number of officers and non-commissioned officers chose their further engagement in the Ministry of Defence and the Serbian Armed Forces (41.4% and 41.3%) or said that they did not care where they will continue their career (33.9% and 31. 3%). They answered similarly regarding the work engagement in the public sector (13.6% and 10.9%) and the private sector (13.4% and 16.9%). Extremely high number of professional soldiers (73.8) expressed a wish to be actively engaged in the Ministry of Defence and Serbian Armed Forces after the termination of their professional military service. Overall, 45.6% of professional military personnel would like to continue their work career in the Ministry of Defence and Serbian Armed Forces, while 30.9% think that it doesn't matter where they will continue their employment. Others expressed interest to work in private (13.1%), and public sector (12.6%).

4. What status would you like to have in your future work engagement?

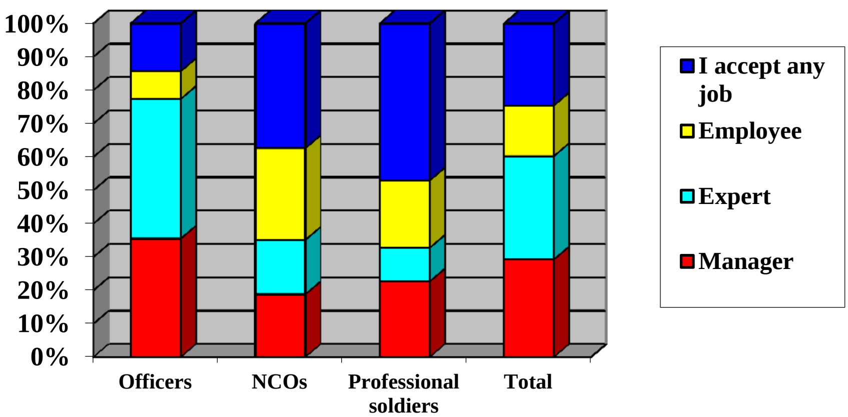


Figure 4. Modalities of responses to question 4

In the category of officers, the most common responses were those that favour the status of experts (42.5%) and managers (36.1%), while a much smaller fraction showed interest in the status of employees (8.4%), or the acceptance of any job (14.5 %). Most of the non-commissioned officers expressed the greatest interest in the acceptance of any job (37.7%) and the status of the employee (27.0%), while the smaller fraction chose the status of a manager (18.5%) and a professional (16.0%). When it comes to professional soldiers the largest number opted for acceptance of any job (44.4%), while the rest chose the status of a manager (21.4%), an employee (19.0%) and the status of a professional (9.5%). Overall, 30.9% of professional soldiers would continue their work engagement with the status of a professional, 29.2% with the status of a manager and 10.9% working as an employee, while 24.5% expressed readiness to accept any job.

5. What level of job complexity would you like to have in your future career?

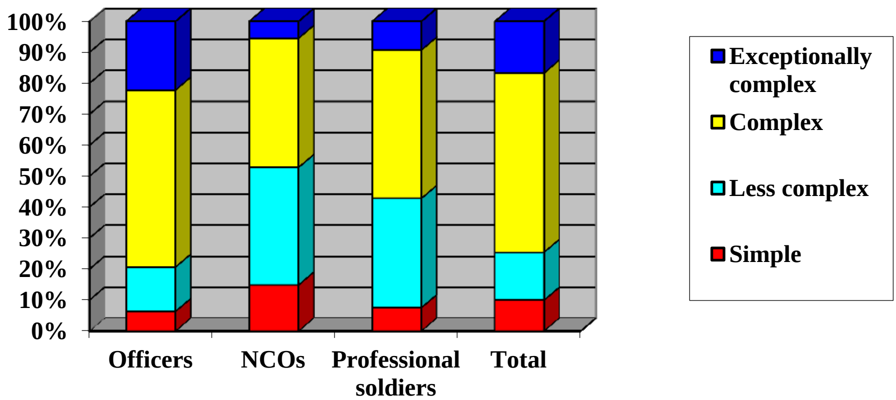


Figure 5. Modalities of responses to question 5.

More than half of the officers (56.1%) declared that they were interested in complex job in future careers, 21.7% extremely complex job, 14.1% less complex job, and 6.3% a simple job. In the category of non-commissioned officers the most common responses were related to the performance of the complex (38.6%) and less complex (35.1%) work. The largest number of professional soldiers opted for performing complex (45.2%) and less complex jobs (33.3%), while the other part chose to perform an extremely complex (8.7%), or simple job (7.1%) . Overall, 49.7% of professional military personnel declared to be interested in complex work in future careers, while 22.5% less complex, 15.3% very complex, and 8.6% a simple job, being thus the subject of much less interest.

6. Would you accept a work engagement in the Ministry of Defence and Serbian Armed Forces that is not appropriate for your education end expertise?

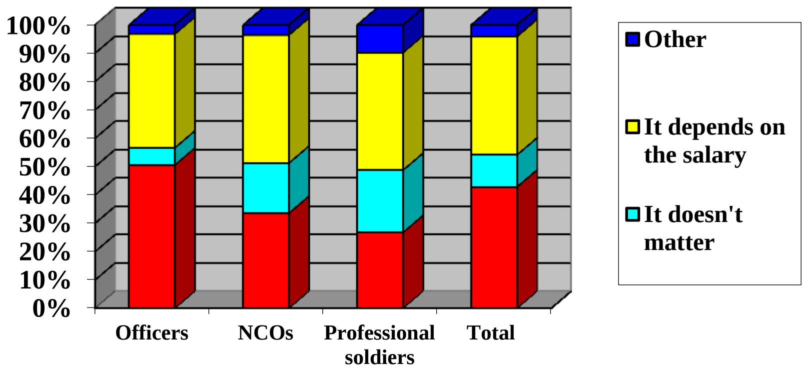


Figure 6. Modalities of responses to question 6.

In the category of officers, half of the respondents (49.8%) said they want employment only based on the existing qualifications and experience, 39.5% of officers would accept favourable working arrangement depending on the salary, while the amount of income is irrelevant to a significantly smaller number of officers (5.9%). As for NCOs, possible work engagement depends mostly on the amount of income (44.2%), 32.9% would accept work engagement within the existing qualifications and experience, while 15.7% don't think that income level is not an important determinant. For professional soldiers decisive prerequisite was income level (40.4%), followed by existing qualifications and the experience (26.2%), while 21.4% of professional soldiers think that income level in a possible job engagement is not significant for its acceptance. Overall, 42.1% of professional military personnel said that they do not want the job in the Ministry of Defence and the Serbian Armed Forces which is not in accordance with existing qualifications and experience, 37.2% that it depends on the amount of income (37.2%), while 11.1% stated that it doesn't matter.

7. Would you accept retraining as one of the essential conditions for a possible employment in the Ministry of Defence and the Serbian Armed Forces?

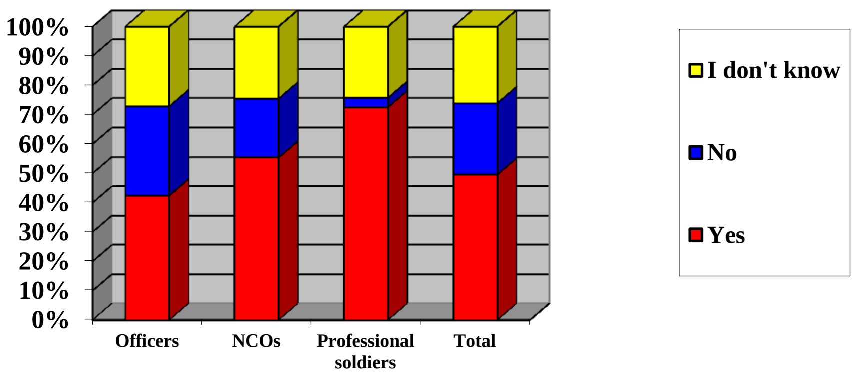
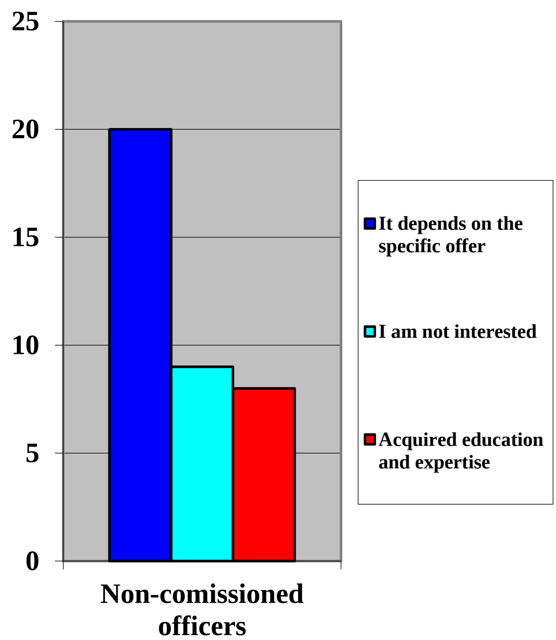


Figure 7. Modalities of responses to question 7.

In the category of officers, 42.4% said that they would accept retraining, 30.4% did not accept, while 27.2% had no comment on the matter. In the category of non-commissioned officers, slightly more than a half accepted retraining (51.8%), 18.9% declared against, while 22.9% of NCOs had no comments regarding the acceptance of retraining. For most professional soldiers, retraining was not a problem (71.4%), while 23.8% had no comment on the matter. Overall, slightly less than half (48.6%) of professional military personnel said that they would accept retraining as a necessary condition for further employment in the Ministry of Defence and the Serbian Armed Forces, while a significant number of respondents did not consider retraining an adequate solution (23.9%) or they were not sure how to respond to this issue (25.5%).

8 If you answered that you do not want to answer or you are not sure how to declare about retraining, specify what made you choose such a response?



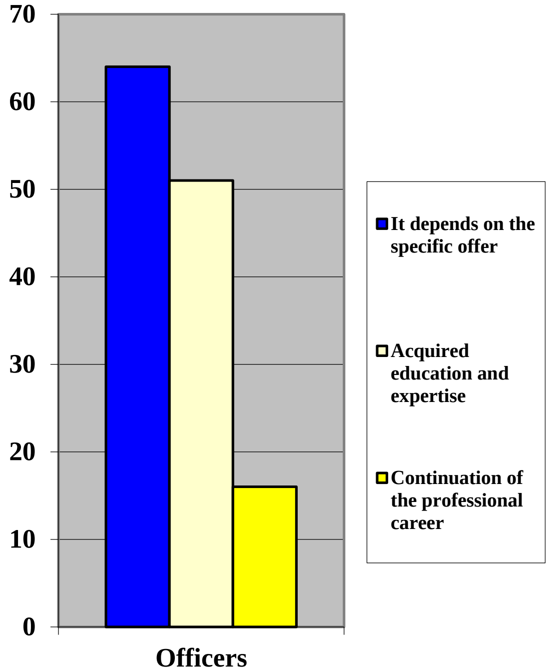


Figure 8. Modalities of responses to question 8.

Most of the officers' comments concerned the acceptance of retraining provided they were previously acquainted with the content of a specific offer (49.6%). The most frequent reasons for the lack of readiness for retraining were the existing education and gained professional experience in the performance of professional military service (26.6%), as well as the commitment to continue working career solely in the existing profession (8.3%). In the category of non-commissioned officers, the majority of comments related to dependence of the final decision on acceptance of retraining on the previous acquaintance with the contents of specific offers (42.6%), while the rest of the comments highlighted the lack of interest in re-training (19.1%) or working career continued exclusively with the achieved education and acquired professional experience (17.0%).

9. Would you self-finance training/retraining as a condition for possible employment in the Ministry of Defence and Serbian Armed Forces?

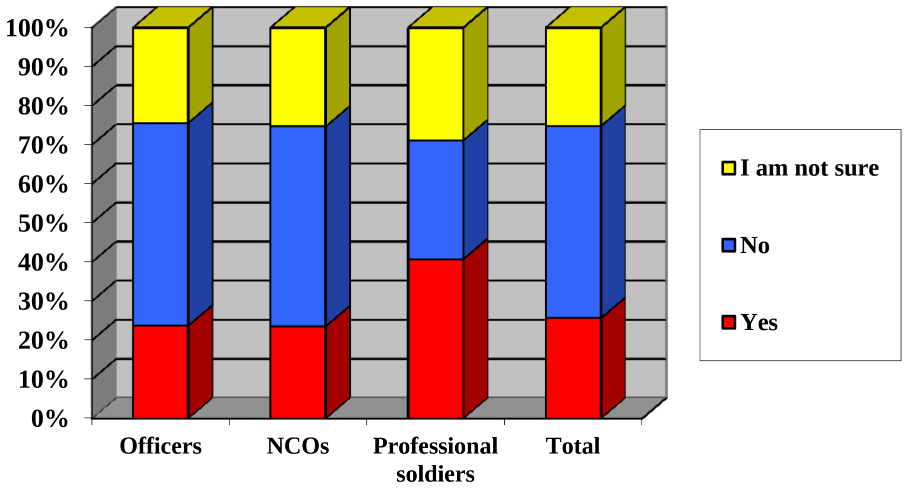


Figure 9. Modalities of responses to question 8.

The largest number of professional military personnel (officers and non-commissioned officers in almost identical relation) declared that they did not want to finance the cost of any re-training (48.7%), 25.4% answered affirmatively, while 24.9% were not sure how to respond. The main reasons for not accepting to finance costs of retraining were the difficult financial situation (83.4%) or that it depends on specific employment offer (8.3%).

9. Would you accept a job if your superiors were your colleagues of a lower rank or civilians?

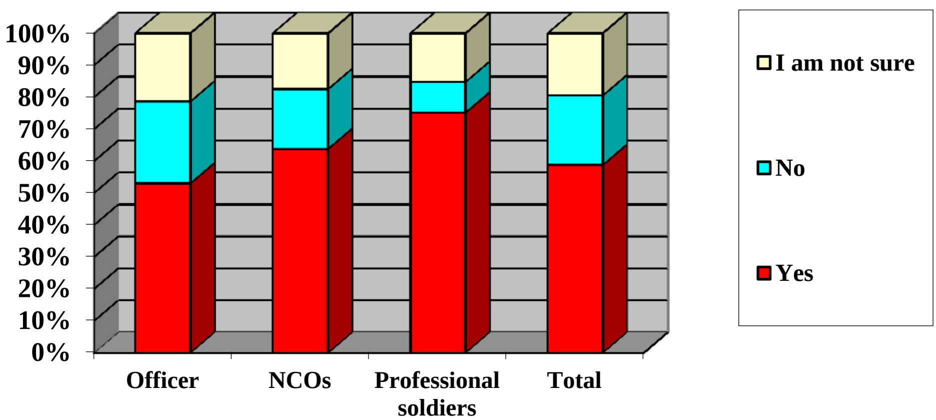


Figure 10. Modalities of responses to question 9.

In the category of officers, 52.2% agreed to have superiors of a lower rank or civilian personnel, 25.2% did not want employment under these conditions, while 20.1% said they were not sure whether they would accept such a solution. When it comes to NCOs, 62.1% said that they would accept work engagement under these conditions, 18.2 % would not accept such an arrangement, while 16.9% were not sure how to respond. 74.6% of professional soldiers opted for acceptance of employment under the abovesaid condition, 9.5% were against and 15.0% of professional soldiers were not sure how to respond on this issue. Overall, more than half of the professional military personnel said that they would accept colleagues of lower rank or civilians as their superior managers (57.7%), while a much smaller number declared they would not accept such a situation (21.3%), or they were not sure how to respond on this issue (19.1%).

10. Specify or complete the content that you are interested in if you are to continue the working career in the MoD and SAF:

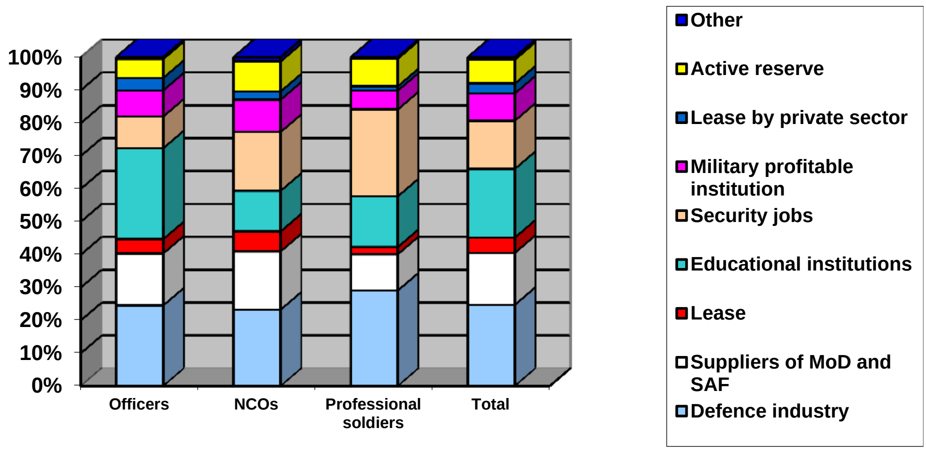


Figure 11. Modalities of responses to question 10.

Professional military personnel expressed their interest in continuing working career in the following areas: defence industry (24.7%), military education and professional institutions (20.9%), suppliers and business partners of the Ministry of Defence and Serbian Armed Forces (15.8%), security operations (14.7%), military institutions (8.3%), active reserve (7.2%), lease of military property (4.6%) and work engagement in the facilities leased by the private sector (3.0%).

In the category of officers, subject of employment are military educational and professional institutions (27.7%), defence industry (24.5%), suppliers and business partners of the Ministry of Defence and Serbian Armed Forces (15.8%), security operations (9.6 %), military institutions (8.0%), active reserve (5.7%), lease of military property (4.4%) and work engagement in facilities leased by the private sector (3.8%).

Non-commissioned officers showed the following interests: defence industry (23.4%), security operations (17.9%), suppliers and business partners of the

Ministry of Defence and Serbian Armed Forces (17.7%), military educational and professional institutions (12.3%), military institutions (9.8%), active reserve (9.1%), the lease of military property (6.1%) and work engagement in facilities leased by the private sector (2.5%).

For professional soldiers, the most interesting activities for engaging in work are shown in the defence industry (29.0%), security operations (26.4%), military educational and professional institutions (15.4%), suppliers and business partners of the Ministry of Defence and Serbian Armed Forces (11.0%), active reserve (8.4%), military institutions (5.7%), lease of military property (2.2%), and work engagement in leased facilities by the private sector (1.3%)

SUGGESTIONS OF THE RESPONDENTS

One of the main objectives of the research included the intention to get as many comments, views, suggestions and other useful information from those people who dedicated their working and life career to the military profession, and who were well acquainted with the functioning of the defence system and the Serbian Armed Forces. Not only at the present moment, but also in period when the military system was a linchpin of the entire socio-economic development and when the society referred to the military profession with respect, and period when the military system was left on its own and without adequate institutional support.

Starting from the contribution to the present study, the following comments of the respondents can be distinguished:

- the need for re-training for occupations required by the defence system and the Serbian Armed Forces should be presented to professional soldiers, in order to get them acquainted in advance with the prospects for the continuation of one's career in the Ministry of Defence and the Serbian Armed Forces;
- through the provision of active reserve, examine the possibility of employment of persons who are not eligible for the exercise of professional military service, but they can be engaged in the active reserves;
- make use of knowledge of experienced and professional staff through professional engagement at the Military Academy, the Military Technical Institute, Technical Testing Center and other military-technical institutions;
- employ only competent and "proven" staff whose professional military service ended;
- carry out an analysis of the current situation and identify concrete measures and activities aimed at activating and launching a military economy (military communications and transportation, tourism and hospitality services, hunting and fishing, mini production, etc..) in commercial use, in the manner and with the staff who will provide their smooth functioning and successful business;

- monitor, guide and pay special attention to the staff that by working qualities, skills and responsible approach to the exercise of professional military service provide and improve the functioning of the defence system and the Serbian Armed Forces, in order to offer employment to such staff after termination of professional military service;
- provide trainings in those areas for which there will be a need for employment and that will represent some of the requirements for continued working career after the termination of professional military service, regardless of rank and position;
- offer a broader and more specific content and opportunities of employment in accordance with the expected needs of the defence system and the Serbian Armed Forces, with respect to useful expert potential of each individual;
- design the necessary personnel within the sector or organizational units of the Ministry of Defence and the Serbian Armed Forces through the performance of military duties, which would be in direct correlation with the continuing civilian working career (now the commander of an artillery battery, and tomorrow contributor in the development of new artillery, etc..)
- establish Institute of healthy competition in the selection of staff for engagement in a way that does not privilege unprofessional and incompetent staff by personal, party or other connections;
- project regarding employment after the termination of the professional military services use modern international experience that can be applied and adapted to the needs of the defence system and the Serbian Armed Forces;
- if the system does not take care of those who have dedicated their lives and their career to its successful operation, it is unrealistic to expect a faster and better further development of the working personnel who in the coiurse of professional military service had personal, not collective ambitions;
- preserve the moral integrity of persons who dedicated their life and working career to improving the functioning of the military system through appreciation of qualifications and skills, so that they would be offered further work placement at the Ministry of Defence and the Serbian Armed Forces;
- continue in direction where opportunities of a "possible" employment become opportunities of "real" employment in the Ministry of Defence and the Serbian Armed Forces;
- the majority of retired military personnel is at the age when their working ability are not exhausted, and therefore the proposed project on employment in the Ministry of Defence and the Serbian Armed Forces should be supported;
- establish a commercially based Agency to work with explosives (demining, demolition, etc..), the Centre for standards and career management, and other specialized military institutions and organizations that would function and operate employing appropriate "military" profile according to principle of profit;

- it is undeniable that people want to work and contribute to achieving the objectives, since they participated in creation of these objectves. Most of the professional members of the Armed Forces may carry out more creative and responsible jobs than they currently do. Therefore, the main task of military leaders is to develop and properly use the untapped human resources, with the creation of collective environment, and military organization in which all members may contribute within their capabilities. In this way, the full use of the potential possibilities of employees would improve the operational efficiency of the system, as well as their satisfaction with the achievements. Thus after the termination of the military career in the Ministry of Defence and the Serbian Armed Forces employees could engage in work as consultants (experts) for certain areas and to participate in decision-making, design and implementation of changes, goal setting, problem solving, etc.;
- engage people in similar jobs which they were doing during their military career, but not in the same workplace or former working environment in order to prevent the problem regarding work environment, due to the change from "active" into "passive" status based on the termination of professional military service;
- in accordance with the transformation of the military system and the professionalization of the Serbian Armed Forces, the "empty" space remained, that will have to be somehow resolved. For these reasons, it is essential that the Department of General Logistics of Material Resources Sector of the Ministry of Defence considers the possibility of leasing existing facilities that are no longer in operation (kitchens, chemical cleaners, utilities, maintenance and other services, etc..) to the private sector, providing the work opportunities for persons whose professional military service terminated. Also, there is a huge space for agency to be engaged in performing many tasks that were, before the professionalization of the Army, done by the soldiers doing their regular service, with the obligation of the employer to hire a number of persons whose professional military service has terminated in agencies;
- engagement of members whose professional military service has terminated shall create conditions for professional soldiers to be principally engaged in the implementation of specific tasks of the Serbian Armed Forces, and not mowing the grass, doing guard service, cleaning laps and other activities that do not fall within the professional military duties and tasks;
- initiate and implement the project under the working title "Manager of the development and marketing of complex weaponry and military equipment";
- adequately support, on behalf of the Ministry of Defence and the Serbian Armed Forces the establishment of small enterprises, that would be jointly founded by the retired or discharged members, for the supply or provision of services that the defense system and the Serbian Armed Forces need;

- establish and concretize cooperation with the Ministry of Defence and the Serbian Armed Forces through work engagement as private entrepreneurs;
- hire only experienced and competent personnel who will present their highly skilled and acquired knowledge to younger generations, thus preparing them to prepare in the best way for the performance of military occupations and duties.

More comments related to the question why to discharge, and then re-employ and engage the same staff. With the full understanding and expectation of the comments, the answer is as follows. The point is that in this process only comes to a qualitative change, where simply adaptation to modern conditions eliminates the need for the engagement a number of the military personnel of a certain profile and their "replacement" in accordance with the current needs of the defense system and the army. For these reasons the institute for exercising the right to early retirement has been established, which automatically implies a change in the current status. The subject of this research is not concerned with whether someone was deliberately dismissed to get employed again and retired at the same time, but only to support those members who have been made redundant in terms of professional military service unprovoked by them and the situation of many unresolved life issues.

A number of comments, appreciating the time the respondents spent on giving them, could not be considered usable, since these comments were not appropriate and in the function of the research.

CONCLUSION

Bearing in mind that the human resources, their knowledge, strengths, expertise and experience are the most important factors in the development of each organization, including the military organization, the survey showed that the Ministry of Defence and the Serbian Armed Forces have highly professional and respectable educational potential. In the category of officers, 71.4% have finished the Military academy or a civilian college, 16.9%, have masters degree or specialization, 8.8% graduate studies and 3% doctoral studies. In the category of NCOs, absolute majority (95%) had completed secondary education (37.6% and 57.4% of civic education), while 5% had completed higher, vocational or college studies. Similar educational structure is represented in professional soldiers.

The largest number of professional military personnel said that they would accept the work engagement in the Ministry of Defence and the Serbian Armed Forces after the termination of professional military service.

In relation to the proposed modalities of work engagement, 24.7% of professional military personnel has expressed an interest to continue working career in the Serbian defence industry, 20.9% in educational and professional institutions of MoD and SAF, 15.8% with the suppliers and business partners of MoD and SAF, 14.7% in security jobs, 8.3% in military institutions that perform manufacturing and service activity on the principle of acquisition and distribution of income, 7.2% in the active reserves, 4.6% for the lease of military property, and 3 0% for engaging in work in leased facilities by the private sector.

One of the main factors for the development and production of modern weaponry and military equipment is a scientific research activity, or research, development, testing and evaluation of armament and military equipment. In comparison with the interest shown, it can be seen that the total number of respondents slightly less than one-half (45.6%) expressed interest in working engagement in the Serbian defence industry and in educational and professional institutions of MoD and SAF, as interrelated elements in the implementation of the same goal. Broken down by category, 52.2% of officers have shown interest in engaging in work in these areas, while the NCOs expressed less interest (40.3%), and it can be concluded that there is a positive response to those areas that essentially present economic mainstays of development of the military system and beyond.

A significant number of officers (15.8%) and non-commissioned officers (17.7%) expressed a preference for engaging in work as suppliers and business partners of the Ministry of Defence and the Serbian Armed Forces. Although it represents institutionally possible contents in accordance with the applicable rules and mutually arranged obligations, still there are no concrete examples of ways to solve the employment status of redundant military and civilian personnel on that basis.

In applying for a security job, 9.6% of officers and 17.9% of non-commissioned officers showed interest. Although this issue has not been resolved at the institutional level through appropriate laws and regulations, the experience of developed countries shows that a significant number of members of the armed forces continued their career through these tasks, and with institutional support through "giving privileged status" to security agencies that employ people whose professional military service has ceased when they apply for the job of securing government buildings and Figures.

The reasons for the relatively less interest to continue working career in military institutions that perform manufacturing and service activity on the principle of acquisition and distribution of income (8.0% of officers and 9.8% of NCOs) stem primarily from their current financial situation, followed by low and irregular earnings as well as their still undefined status. In addition, the number of interested people indicates the awareness of the importance, possibilities and perspectives these institution can objectively provide.

International experience has shown that work engagement in active reserve provides significant opportunities for solving the issue of redundant personnel, especially in terms of institutional equalizing the length of military and civil service. For example, the right to early retirement in the armed forces of the Republic of Portugal does not exist as an institutional solution because the professional members of the armed forces (from 20 to 36 years of effective service) are at one moment converted to the active reserve, from which, by the force of law retire at the age of 65. In our conditions, the active reserve concept is relatively new institutional arrangement, and perhaps for that reason officers (5.7%) and non-commissioned officers (9.1) did not show more interest to continue their working career in the active reserves.

For the other contents (lease of military property and lease of capacities from private sector) much interest has not been shown.

In the present study through several comments aroused the question why to dismiss, and then re-employ or engage people whose professional military service had terminated. The point is that this process involves only a qualitative change, where simply, due to adaptation to modern conditions, cease to exist the need for engagement of part of the military personnel of a certain profile and they are reintegrated in accordance with the current needs of the defence and the Serbian Armed Forces.

Proceeding from the above, it can be concluded that for decision-makers in the Ministry of Defence and the Serbian Armed Forces results of the research are very useful knowledge about the interest of professional military personnel to continue working career in the Ministry of Defence and the Serbian Armed Forces after the termination of professional military service.

The survey was conducted with support of competent organizational units of the Ministry of Defence and Serbian Armed Forces, i.e. the Office of the Minister of Defence, the Office of the Chief of the General Staff of the Serbian Armed Forces, the Human Resources Sector of the Ministry of Defence of Human Resources Department (J-1) of the General Staff of the Serbian Armed Forces.

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