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HUMAN CAPITAL – E-LEARNING AND STRATEGY OF DEVELOPMENT

LJUDSKI KAPITAL – E-UČENJE I STRATEGIJA RAZVOJA

*Metod Černetić, Olga Dečman Dobrnjič**

Fakultet za organizacijske znanosti, Kranj, Sveučilište u Mariboru, Slovenija, Zavod za školstvo Republike Slovenije*

Faculty of Organizational Sciences, Kranj, University of Maribor, Slovenia, The national education institute of the Republic of the Slovenia*

Abstract

Conception of human capital is not entirely original, but it has achieved enormous success among international institutions and western governments, not only because it propose a strategy of permanent development as its advocates suggests, but because economical justifies education; what is in the eyes of decision makers only valid justification. It seems that globalization of on-line education opens fairly big market to firms that offers educational products. World market of on-line higher educational system in the years between 1996 and 2002 has passed over from 97 millions dollars to 3,9 billions of dollars; the market of educational computer programs in the period 1996 to 2000 has passed from 2,3 to 6,2 billion dollars; number of educational CD-ROMs has tripled in the period between 1998 and 2000. Prevailing doctrine in pedagogy and education today has a focus in the theories of human capital. These theories, although full of ideological prejudices, reflect very real tendency of modern capitalism to mobilizing a far greater number of values to their double aspects of factors of production and merchandise. With the term human capital different economists determine "stock of knowledge, which can be economically evaluated and has been captured by individuals." In the first place, these are qualifications, gained either in the system of qualification or either through professional experience. In the wider meaning this conception grasps numerous trumps, which can be carried into effect by individual in the marketplace and can be shown by employee as a potential sources of advantage: for example physical appearance, good manners, way of life and state of mind or even good medical condition. In such manner by the opinion of OECD human capital would unite "knowledge, qualifications, competence and individual characteristics, which relieve creation of personal, social and economic welfare."

1 INTRODUCTION

Prevailing doctrine in pedagogy and education today has a focus in the theories of human capital. These theories, although full of ideological prejudices, reflect very real tendency of modern capitalism to mobilizing a far greater number

Sažetak

Ideja ljudskog kapitala nije u potpunosti nova, ali je postigla velik uspjeh u međunarodnim institucijama i zapadnim vladama, ne samo, kako tvrde njezini zagovornici, zbog prijedloga strategije stalnog razvoja, već zbog ekonomičnosti obrazovanja, što je u očima donositelja odluka jedino vrijedno opravdanje. Čini se da globalizacija on-line obrazovanja otvara prilično veliko tržište za poduzeća koja nude obrazovne proizvode. Svjetsko tržište za on-line visoko obrazovanje je u razdoblju od 1996 do 2002 povećalo svoju vrijednost sa 97 milijuna dolara na 3,9 milijarde dolara, tržište računalnih programa za obrazovanje je u razdoblju od 1996 do 2000 poraslo sa 2,3 milijuna dolara na 6,2 milijardi dolara, broj edukacijskih CD-ROM-ova se utrostručio u razdoblju od 1998 do 2000. Prevladavajuće teorije u pedagogiji i obrazovanju danas, fokusirane su na teorije ljudskog kapitala. Ove teorije, iako pune ideoloških predrasuda, odražavaju vrlo realnu tendenciju modernog kapitalizma da mobilizira mnogo veći broj vrijednosti svojim duplim aspektima faktora proizvodnje i roba. Terminom ljudski kapital različiti ekonomisti određuju „stupanj znanja koji se može ekonomski evaluirati i kojeg posjeduje pojedinac“. Kao prvo, to su odrednice dobivene kroz sistem kvalifikacije ili kroz profesionalno iskustvo. U širem smislu, ova koncepcija zahvaća mnoge adute koji na tržište mogu biti unijeti od strane pojedinca i od strane zaposlenika mogu biti prikazani kao izvori prednosti: npr. fizički izgled, manire, životni stil i način razmišljanja ili čak dobro zdravstveno stanje. U tom smislu, po mišljenju OECD-a ljudski kapital bi ujedinjavao „znanje, kvalifikacije, sposobnost i osobne karakteristike koje olakšavaju stvaranje osobnog, društvenog i ekonomskog dobra“.

of values to their double aspects of factors of production and merchandise. Term of human capital is define by economists as a »stock of a knowledge, which can be economically evaluated and has been concurred by individuals. « In the first place, these are qualifications, gather either in the system of training or with professional experiences. In the

broader meaning this concept include many trumps, which can be enforced by individual in the market of labor and shown to employee as potential sources of : for example appearance, good manners, way of thinking and life or health condition. According to OECD the idea of human capital unite »knowledge, qualifications, competences and individual characteristics that allay the creation of personal, social and economic welfare. « Conception of human capital is not entirely original, but it has achieved enormous success among international institutions and western governments, not only because it propose a strategy of permanent development as its advocates suggests, but because economical justifies education; what is in the eyes of decision makers only valid justification. Beside that this term as we will see has advantage because it shows decline of connection between school diploma and employment and justifies bigger selectiveness of employees in the time when meaning of informal components, especially the one of social origin, to define degree of employment of individual increases because of inflation of the title.

To truly understand the success of this term we have to start with some general considerations. With works of American economist Edward F. Denison in the sixties of 20th century it was possible to show, that economic development is not connected only with quantative growth of productive factors (capital and work) but also with the quality of labor force; and this quality was assumed to result from education /1/. If we consider that connection, continuation of growth could not be expected just from physical investments, and also no just from enlargement of extent of working force: investments have to be made in the new type of capital. Idea of a human capital despite of opinion of some has not signified a revolution in standard economic theory but it has enabled a movement from former significance of expenses of education: they become investment and not consumption. New idea has widespread to different canals because of different interests; so in seventies of 20th centuries left parties and syndicalism has been took over this reflection. The reason has been a legitimacy that this could bring to state aspiration in the area of public education.

1.1 Era of human capital

Metaphor of »human capital« however lead to very impoverished vision of effects of »investment in value«, which is treated as source of improvement of productivity. Dangers of reduction are visible especially in ultraliberal version of this theory, advocated by other American economist. According to Becker /2/ human capital is a personal good

that bring an income to individual that carries this capital. This severely individualistic concept suits hypothesis of real liberal theory: individual is an owner of his own means, which he will try to increase in his life time with a purpose to increase his productivity, incomes and social advantages. In this sense we can see that there is nothing uninterested in extraction of human capital. This concept demands that selection of profession is one-dimensional: income is the only thing that matters when choosing a profession. In this was it neglects all representations of future, connected with present conditions, transportable values and possibilities that offer; it is also not conscious, that the relation of individual towards active life includes personal and collective history and also relations between social classes, genders and different age groups.

1.2 Utilitarianism and choice of profession

In utilitarian concept of professional choice everything is managed by rational aspiration to gain additional income; this aspiration by itself however defines altitude of income that is expected from investments. Financing of the choice has to be depended from expected incomes and from the fact how useful and general are gained competences. If the costs of education are intended above all to creation of human capital, the question of who has to pay, who has to define content, who has to be master in this formation is raised. As regards to expect incomes the financing has to be divided between a state, company and individual. State of course can not loose its interest for education because there are some »positive exteriors« or effects favorable for all collective. But in the case that state has to take over some part of expenses for education, it has to create condition for individual to make rational choice and take over expenses that belongs to him. In the case that public authorities has to assure initial education - with regard to very big social profitability of investment to which they are devoted – they have to go to private funding, to families and companies. Especially in this era that is marked with budget limitation increase.

It looks like that funding from different sources is the only rational way because in this way the larger part of costs are takeover by families and this part is proportional to personal advantages that are gained with that. So when OECD and World Bank call upon to funding from different sources or to co funding of education, they appeal to the logic of »educational profit«.

Social implications of this funding from different sources are far from being negligible. Analysis of costs and benefits should explain differences in investments in education. To the most talented

students continuation of education is worth of money, because the investment in this case is very profitable; on the contrary, for the less talented students is better to drop out of school and to include in professional life as soon as possible. The theory of human capital is not equalitarian, although OECD and World Bank ascribe this theory as neutral. Becker /3/ justifies educational inequality with rational calculation of individual: more talented students study faster and for limited price accumulate very profitable capital, but less talented have troubles to get to diploma and their price will not be repay with future incomes. This logic works on the market of permanent qualification, which has been - by some individuals - risen in the model for fundamental education and which most reliable effect is a production of inequality between those, who has the most from it, cadres and those who has the least, executive workers. From this point of view, cooperation between school and company is not inevitably democratic.

These ultrarationalistic concepts of education these days strongly influence to prevailing notions. It is fair to say that the fear that this concept will contribute to strengthen of education of different speed in which most profitable students are entitled to more investments as less competitive is real. Vast empirical literature shows that proportion between investment in qualification and level of payment is not that simple as liberal economists say. These concept of education as productive investment, which leads to individual income has a giant success and it is widely spread. Because of international and financial organizations this concept today is an ideological fundament of new world educational order.

2. THE CHANGING OF EDUCATION AND LEARNING IN 21ST CENTURY

The idea of learning society becomes really popular in the last few decades. There are many debates about how learning society should work and can be accomplished. Despite of fast economic and social development the gap, apathy and disappointment is getting bigger and bigger. There are not only big differences between developed and less developed countries but also between individual social groups in society or in a country.

All social, cultural, economic and other changes are almost paralyzing. The question of how to prepare all areas of society to more successful encounter with changes has been arisen. It became clearer that sole economical growth can not be accepted as ideal way of adjustment of material progress with equality and with a respect of human way of life;

and it is also clear that new circumstances for more whole growth and development of all inhabitants are needed. In this process many tension will have to be bridged: between global and local, between common and individual, tradition and modern, between long term and short term approaches, between needed competitiveness and care for equal opportunities, between extraordinary development of human knowledge and human capability to capture it and between spiritual and material. All these tasks are asking for modernization of the idea of life long education and learning.

On the one side in the process of learning and education the individualization of process is stressed because it contributes to development of quality and potential of individual, to stimulation of personal growth, autonomy; on the other side richer individual knowledge stimulates the development of new opportunities for learning and education that is facilitate with modern technology. New, alternative possibilities influence to different comprehension of the role of education and learning and access of education to more people is a trend now. That is how the idea to create a learning society that is based on strategy of life long education. This strengthens up also a social dimension of education, which exceed previous by the class defined educational possibilities that come out from a social environment, economic position and other factors. Education and learning now become one of the main factors that can decrease alienation and inequality.

3. SUPPLEMENTION OF EDUCATION AND RESEARCH FOR KNOWLEDGE SOCIETY

Supplementation of information and knowledge with competence

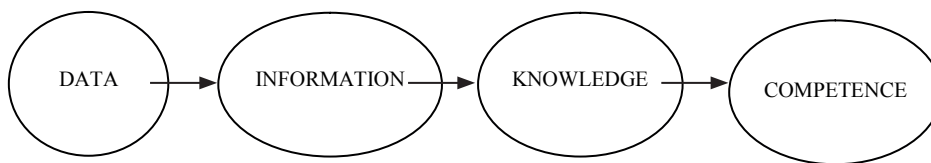
With a Lisbon declaration European Union has define a creation of knowledge society and on the knowledgebased economy as its strategic orientation. Linear with this process a so-called Bologna process is happening in the field of higher education. With an inclusion into EU this becomes also a long term strategic orientation in Slovenia. In this text /4/ we are trying to expose that a lot has to be done in the area of education and research for creation of knowledge society. With this we mean above all supplementation; information and knowledge with the competences; explicit knowledge with a silent one; factographic and reflective with technical and social knowledge; fundamental with applicative and developed research; and individual phases of cycle of knowledge.

Constructivist comprehension of knowledge enables its definition regarding to information.

If we define information as data with meaning, is knowledge of individual information put into context. »Knowledge can be define as an information, as ability of interpretation or giving meaning to a data and information and as expressed wish to do that«. Definition of OECD is similar: Knowledge is a cumulative stock of cognitive skills and information of any individual, family or community that can be used in personal or social situations.

Learning economy /5/ gives advantage to fast results that can be commercially used. In this circumstances gaining of competences and skills, which assure success in pursuit of own goals and

goals of organizations becomes important. Gaining of competences is fundamentally different from usual comprehension of learning as acquisition and contextualization of information. It is fair to say that competences upgrade knowledge. They are capability of knowledge use. "In education there is an aspiration for development of competences instead of learning of written knowledge....The knowledge is not so much important as its usage." If this is true, the succession from data to knowledge should be complete with competences. We believe that competences present special knowledge: knowledge about use of knowledge.



Picture 1: From data to competences (Source: Svetlik, 2005 v Černetić 2006, 201)

Stated findings present challenges for education. In the other words the question is what is fundamental task of education: is this a mediation of increasing number of information that are usually better presented by media, world web, libraries and similar than teachers or this is a help with choice and understanding of information, with their contextualization and interpretation in a new knowledge. Later demands creation of new learning situations as seminar, project work and case studies. It demands examine of knowledge and not only recollection of row data as dates, names, formulas and similar. Pretentiousness of pedagogical process to develop also competences is increasing. This demand practices, tests, contact with real action and life environment. And through this concept of key competences as information communication literacy, social skills, learning of learning, methods of time and decision making management, business and similar this fond of general knowledge is supplementing on all levels of education in Europe.

5 MARKETS AND E-LEARNING

5.1 Market with a new pedagogical technologies and illusions

One of the most significant phenomenon that has occurred in nineties of 20th century in Europe is establishment of a market with new technologies

that are use in education. To companies, which were looking new ways, because of its size and quantity of information technology equipment needed the school system look as Eldorado. By the end of eighties USA shown the way in the area of contracts with which universities were connected with big companies as Microsoft and also with joint projects as Apple classrooms of tomorrow (ACOT). In USA equipment of school has been stimulated with high competitiveness between suppliers and intense mobilizing discussion promoted by lobbies and popular media /6/.

Europe did not lag behind in this era. In the beginning of 1996 commission proposed "promotion of research" about "educational multimedia computer programs" and enlargement of budget for that. »European partnership for pedagogy and education« (1997) has intended to provide schools all needed material and computer programs through active cooperation with companies from this sector. In the same year Tony Blair proposed broad plan how to connect 32.000 British schools, supported by Bill Gates. In the March 1997 solemn demanded that all high school institutions are connected to the net and this was a priority goal in the government of Lionel Jospin. But in truth this movement started much earlier. Nico Hirtt in Gerard de Selys /7/ has written indirectly how European government turns to this giant market with new

technologies. They especially stressed all the speed with which European commission adopted what was recommended by the companies in this field. Movement was triggered by ERT (European Council of Industrials), when in the January 1989 a report with a title »Education et competence en Europe« that recommended learning from a distance was published /8/.

5.2 The bloom of pedagogic and educational technologies

Bloom of the market with new pedagogic and educational technologies is accompanied with pedagogy discourse that announces the end of professors. Information science and internet are not consider to be technical subjects that has to be studied and understand and also not as additional tools for learning but as a revolutionar levers that will help with radical changing of school and pedagogy /9/. In this area commercial aims and pedagogical methods are intervening as never before. Devotees of projective pedagogies, reciprocal lessons and Freinet's technique praised the part of administrative and ministry hierarch and also big constructors of informational material, but only because for those who promote this revolution, abolition of traditional pedagogical relationship and use of new machines for learning are tightly connected. In fact it has been shown that a profit gained with implementation of new technologies into traditional learning is small or even nonexistent, as it was shown in the case of Apple classrooms of tomorrow (ACOT). In consequence the idea that the sole nature of school has to be change that the learning is in the first place and above all autonomic collection of documents and treatment of information has to be change and also for this reason the role of a teacher has to be remake. In the opinion of ERT this evolution can be summarize like: in the credit of new technologies we pass from the model of lessons to the model of learning. Teacher's task is no longer a transmission of knowledge, but motivation, leadership and evaluation. He becomes trainer and researcher at the same time. Educational leaders at the head of institution, which have been trained in private management, will want to introduce this shift of pedagogical model and favorite broadening of new technologies in new learning organization.

If we try to show that teacher have to become companion in personal research and standardizing practices with informational material we can justify mass consumption of equipment in the name of inevitable "replacement of work with capital." It the end, pedagogy and education should become next capitalistic industry, which will act though "silicon professors" - according to image, painted by one

of the most eager advocate of this technological revolution. Experts radically predict that school system, created in the last centuries will sooner or later collapse and withdraw to encounter between demand and supply, which will be responsible for increase of the most profitable qualification. This pedagogical concept creates utopia about new school culture that is in the credit of experiments constructed by students, intensive use of NICT in classrooms and adjustment of school to economic and cultural globalization. In this way they will also assure victory of pedagogical constructivism (students create their own value) about transmission of knowledge, end of teachers, openness of school towards the world and horizontal communication between students. Some see in those tools possible levers for common deschooling. They see the end of overfilled classrooms, where students for hours and hours transcript teacher's lectures. Students will be able to do their training at home, through computers in their own rhythm. The knowledge could be supplement all the time. Teachers could be soon replaced by "virtual clones", much more effective than old self-fulfilling card files of Freinet's pedagogy /10/.

4. NEW BOUNDARIES FOR E-LEARNING

There is no doubt that new technologies that we are talking about could support big cultural ambition to freely spread human heritage of knowledge between as many people as possible. Some proposals for a big world service of internet that was at the UNESCO formulated by Philippe Queau show that changing of on-line education - e-learning - into merchandize is not fatal. That can be done only without interference and resign of public authorities. In France the public power could create virtual nets and campuses, which will rest on already existing institution and public funds. But for this ambition to come true, political fill and finances are needed. This ambition contradicts usual appeal to adapt to world trade of intelligence. If these techniques are not planned to be used to change knowledge in truly common goods of human kind, learning and education has never been so depended for direct commercial logic. Many university administrators, leaders of agencies, specializing in e-learning or political leaders from now on think that services of university have to be sold, that on-line lectures of professors can be subjugate to the regime of intellectual ownership and that university administrations have to get copyrights when sold.

It looks like that this globalization of on-line education to companies because of the sell of learning and educational products opens up

considerable market. World market of on-line higher educational system by some data between years 1996 and 2002 passed over from 97 million dollars to 3, 9 billion dollars and the market with learning and educational computer between years 1996 and 2000 passed over from 2, 3 to 6, 2 billions; the number of educational CD-ROMs tripled between year 1998 and 2000.

Investment Company Lehman Brothorse estimate potential market to the more than hundred billions. They already plan to create first American prestige on-line universities free for their users and funded by commercials. It seems that neoliberal utopia about abolition of borders and decline of public school system because of information technologies, above all because of internet has found the right way. Private operators that look upon USA where on-line training on the level of high educational system design for employees in companies were created, increased the number of offers for partnership with schools in England, Belgium and Germany. This is supported by European commission and western governments. Also France has taken the same path with creation of EduFrance. This supposed to be a great market that will even expand in the next few years. /11/.

On this, what some call »world super market of on-line training«, private universities already arrange instant training; for start-up they offer complete study plans for learning with mentor. Economic advantages of this kind of training are obvious: you don't have to build walls, the use is loose, globalization of demand and supply. Because of smaller relative and absolute funds, needed for coping with greater needs for training, universities create partnership with private companies to sell as much as on-line lectures possible. Big American universities – for example Californian – created joint branch offices together with printing groups to put their lectures on web and gain some commercial use.

Parallel with that some business universities are created, which are connected with some special skill. Private companies offer study programs and lectures and offer their own certificates. As some stress out, information technology training from Microsoft is more value than a diploma from prestige university.

Because of connection between big public university and private companies in the process of organization of lecture, take over of university because of sell of lecture through the net to individuals and companies, establishment of private virtual universities that expand activity of big groups to the market of permanent training (for example Apollo Group), very different combination

that can be notices in the field of e-learning, the world of production and the world of training are intervening more and more.

Secret agreement for reproduction and distribution of on-line lectures that was in the year 1994 signed by Californian university and media company THEN (The Home Education Network) shows how intertwining of commercial interests and interest of academic birocracy can put under the question all the tradition about autonomy of university.

Not only that THEN can use university as their brand, it also has exclusive copyrights for electronic lectures on the university. Similar agreement has been signed in the year 1995 by university of Berkeley and AOL, in the year 1996 by the university of Colorado and private company Real Education Inc. The question of ownership on lecture, contents of forum and electronic mail is always posed: is the university the owner and it is possible to transfer the rights to private company to commercialize the knowledge?

6. CONCLUSION

Certainly we have to be careful about a credulous that leads to illusion about »new economy«. It is not necessary that the market of pedagogy and learning is as profitable as everybody thinks. All economic models enforced in e-learning today did not prove to be pertinent. Companies that cooperate can me disappointed over relative autonomy of teachers and dynamics of professional practice. The use of common free pages (print), practice for teachers and students to exchange pedagogical sources – that could disappointed many hopes, unless someone could persuade teachers to connect with pages that they have to pay – and that is the only way to exceed a threshold of profitability, expected from a new techniques. But this is not possible in this moment. It is from here that campaigns of persuasion and waking of guilt, that perform pressure in behalf of spending for new services and mass consumption of materials come from. Despite this ideological flood many American and Canadian works already cracked a myth about internet and information science as miracle solution for school problems (but because of that Europe with her inferior complex, so characteristic for her elite, hasn't stopped to »discover America«.)

In reality considerable economic interests that change learning and education into market and school in factories of competences are more important.

References

- /1/ Denison, E. F.: Why Growth Rates Differ? Postwar Experience in Nine Western Countries, Brookings Institution, Washington D.C. 1998., p. 22.
- /2/ Laval, C.: Šola ni podjetje, ZPS, Sophia, Ljubljana, 2005., p.141
- /3/ Ibidem, p.142
- /4/ Svetlik, I.: Dopolnjevanje izobraževanja in raziskovanja za družbo znanja, Tipkopis, 11.4.05, DS, Ljubljana, 2005., p.1-6
- /5/ Ibidem, p.7
- /6/ Ibidem /2/, p.137-140
- /7/ Černetič, M.: Management ekonomike izobraževanja, Moderna organizacija, Kranj, 2006., p. 242
- /8/ Ibidem /6/
- /9/ Ibidem /7/, p.243
- /10/ Ibidem /2/, p.142
- /11/ Ibidem /7/, p. 244

Literature

1. Černetič, M.: Development and globalisation - from the economic and sociological points of view. V: Černetič, M. (ur.), Mušanović, M. (ur.), Dečman Dobrnjič, O. (ur.). Comparative pedagogy : selected topics. [Maribor]: Faculty of Education; [Kranj]: Faculty of Organizational Sciences; Rijeka: Croatian Future Society, 11-18, 2006.
2. Černetič, M.: Ekonomika izobraževanja in raziskovanja, Moderna organizacija, Kranj, 1999.
3. Černetič, M.: Knowledge and education - between the labour market and human resources. V: Sapia-Drewiniag, E. (ur.), Jasinski, Z., (ur.), Bednarczyk, H., (ur.). *Adult education at the beginning of the 21st century : theoretical and practical contexts : konteksty teoretyczne i praktyczne : Theorie und Praxis*. Opole; Radom; Bonn: University of Opole [etc.], str. 283-294, 2002.
4. Černetič, M.: Knowledge and education - management of development = Znanje i obrazovanje - upravljanje razvojem. Informatologia (Zagreb), vol. 36, no. 1, 15-20, 2003.
5. Drucker, P.: The Post-capitalist Society, Butterworth, Oxford, 1993.
6. Economic Commission for Europe (2005) Economic Survey of Europe, 1/2005, UN, Geneva.
7. ERT (1997): Investing in Knowledge, The Integration of Technology in European Education
8. Human Resources and New Tehnology: Main Trends and Issues. CERI/CW/89.01. V: Education and Economy in a Changing Society. OECD, Pariz 1989.
9. Plenković, J. i Plenković M. (1998.): *Društvo, znanost i tehnologija*, Sveučilište u Rijeci, Rijeka
10. Svetlik, I.: Avtonomija in integracija univerze, Slovenska smer, Ljubljana, 1995.
11. Ziman, J.: An Introduction to Science Studies, the Philosophical nad Social Aspects of Science and Technology, Cambridge University Press, Cambridge