CONFIRMATIVE EVALUATION OF ONE CONCEPTUAL VALUE SYSTEM EXPRESSED THROUGH ATTITUDES ACCORDING TO INFORMATIC TECHNOLOGIES IN PUPILS OF CLASSES 7 AND 8

Danijela Bonacin and Dobromir Bonacin

University of Herzegovina, Mostar, Bosnia & Herzegovina

Abstract

On a sample of 182 students 7th and 8th grade elementary school Kaštela (Croatia) was administered a survey with 20 positions intended for the assessment of the conceptual imaginary value system, observed through IT. The aim of this study was to determine the authenticity of a hypothetical model of the value system with the help of confirmative, multi-group factor analysis. The results showed that the system is existent but not quite completely stable and that its stability is expected at a later age (probably about 25 years). It also showed that it was conceived to value system sustainable in its factor structure and that the indicators that describe it simple to interpret and understand. It turned out that the students in grades 7-8 of elementary school (1-14 years + -0.5) recorded considerable stability in expressing their views. All together it seems like extremely grateful material for location of critical areas and in particular the possible emergency situations in education, e.g. although primarily in the transfer of knowledge, not least in the transfer elements of the value system. A huge area of research is open that is not so quick to fill.

Key words: *system of values, views, IT, students, confirmative analysis.*

Introduction

Information technology represent a full set of electronic, information, and other technical element in the combined unit that has the task of collecting, storing, processing and use of information. In the broadest sense of the word under the information technology we mean large computers (mainframes), PC desktops, laptops, tablets, mobile phones and other similar devices that enable access to information and communication. Due to the interest of people today, almost all activities are covered by information technologies in an extent. This applies to electrical engineering, mechanical engineering, shipbuilding, construction industry, mining, science, media, military industry and other technical branches, but no less and in law, economics, social activities, pedagogy and education, sport and politics, diplomacy, international trade, medicine, management, marketing, etc. it might even be said that with the communication features within the local network, GSM and satellite communications and especially the Internet, information technology globally slowly becoming a general nervous system globalized in every sense of the integrated world. In that total crowd of information technology touching virtually every human being, regardless of an older man retired, man or woman in his prime and able to work, and certainly young and in very specific ways children. As is well known, "the plant is bent while young" but in this context, as younger generations enter a new more closely to the world of information technology is to keep them in this world so far longer and the impact of IT on them even greater. Some of these influences on the young often be declared unfit, somewhat unnecessary and in some extreme approaches even frightening to very disastrous consequences for the entire human race. In this case, usually refers to the total time that young children spend in direct contact with information technologies. For example, in computer games, listening to music via mobile phones, the time spent on social networks, etc. It is certain that there is a part of the negative transfer of that part within information technology on young people and children and the problem was investigated several times. However, the problem to be "deep" look does not apply to mere manifestations consequence of IT that are directly visible, but on the core elements of the value that can be associated with overt or more latent relationships and mechanisms that are often not recognize and perhaps should be. In this regard it is particularly interesting, given a sufficiently clear and conceptually complete the initial theoretical model to look at what are the relations in a real community between information technology and children's value system, and this sexual uniformly with boys and girls almost identically exposed to all possible influences IT -a course, probably exist gender differences but we are in the first step does not care, but a unique testimony of children on the system of values expressed through IT. In this way, IT serves as a window through which we look at the world the value system.

Theoretical approach to the research problem
What exactly are social values? The concept of society is explained in many ways by different theorists, so there are several definitions but common parameters are relatively easy to isolate: society is an abstract entity relationship between individuals or system links that make interdependent parts, capable of reproducing itself. It adapts to the surroundings (production activity), is integrated (a normative order).

It also has a hierarchy of goals and ways to achieve them and maintains a certain dominant cultural form values through which social life takes place and that such interpenetration of cultures, people and social order (Fanuko et al. 1995). American sociologists consider to be distinguished social order (social order) that indicates the real fact of organization and dynamism of social life e.g. of continuous reproduction and transformation of social structures (social structure) which indicates an idealized "frozen" static image of social order which can be scientifically explained. Of existing sociological theory, one that is essential for this work is the functionalist theory Talcota Parsons that company a system of interconnected parts where each part has its own function, which must be made to a whole to function and every part is in relation to others affected and affecting him (Haralambas and Heald, 2007). Everything that exists in the nature of something begins.

It is a culture in society, the basis of existence of a society. Culture is a system of learned patterns, thinking, feeling and acting, as well as the expression of these patterns in material objects characteristic of a group of people, community or society. Culture is a complex whole composed of three interconnected phenomena: a) a pattern of behavior that people use as members of the company, b) Common values, beliefs and rules for defining relationships, c) Tools and technologies that humans invented to adapt middle. Every culture is based on symbols, learned it because they do not depend on the biological heritage, common for most members of the society, integrated whole and is constantly changing.

The most important set of symbols that convey information within the culture is language. Culture is based on common values, e.g. an abstract ideas about what is good and desirable and that socialization passed on to new generations and protect social norms such as customs, moral standards, folk customs, taboos and the legal system of legal norms of society (Fanuko et al., 1995).Social attributes represent all of the specific characteristics of each company has to differentiate it from other companies, and all those general characteristics that have all companies. One of the fundamental attributes of the company is its structure. Social structure is arranged set of elements and their relationships. The concept of community or social structure refers to the fact that social life is organized e.g. that takes place according to certain rules and forms under which social structure directs, regulates and limits the actions and behavior of people in society.

In addition it allows social action, e.g. the individual participation in social life. But at the same time, although independent of the individual, social structure exists only through the action of these same individuals. They did, except that reproduce and transform, and also realize the reality. The interconnections between the various parts of the social structure can be very complex.

The most important elements of social structure of the social position and status are social roles, community groups and social institutions (Fanuko, 1995; Haralambas and Heald, 1989; Uvačić, 2004 Bonacin, Da, 2008).

Position of IT in the world today
There is no area of human life nowadays that information technologies are not touched. The reasons for this lie in the fact that the IT able to absorb an enormous amount of data, then with appropriate software and data analysis or display them from another angle as well as rework and further transfer (Bonacin, 2008). Not only are integrated in all scientific disciplines and achievements, but also in all horizontal and vertical pores of society. Ultimately it could be said that there is not a single individual who is not covered by some form of information technology and equally in the workplace, at home and even in the countryside. Information technology, digital television, mobile and similar networks, computer networks with a comprehensive Internet easily integrates everything. Machines, people, the environment and wireless communications, water, land and air. In such a world is simply impossible to "escape" from the impact of information technology. As with any form of human creation that is poured into technological applications, and IT certainly recognized his value on a wide scale.

It is well known but sometimes it is much less known that this technological "miracles" such as IT and reflect on teens and how many are in line with some of the models of the value system that could be a real existent. In summary terms, IT should be viewed from at least two aspects. One is the direct consequences of the application of technology, which can be positive or negative. Others, however, may be far more important and interact with the first and are a reflection of the relationship to the system of values in which they are incorporated. That part of the general aspects of IT is what is interesting in terms of this project and in the end is immersed in the field of education. Mapping the position of IT in the overall value system defines the objective position of IT and subsequent applications if the value system is known, enables easy use in education and with the understanding and prevention of abuse, excessive activation and other possible negative aspects as well as the positive side as help in education, medicine, communications, etc. (Brankovic, 2008).

Implementation of IT in elementary schools
The school system, all arranged social communities (principally countries) are relatively uniform and more or less standardized. Even before the implementation of the Bologna and similar processes, such standardization at the global level is certainly there. For example, everywhere to recognize the pre-work, early school age in primary school, older school children in elementary school, high school students and higher education age. Each of these segments has its own characteristics and logic (Bonacin & Bonacin 2016), and in each of

them can be applied certain methodical, didactic, technological and other processes and procedures. In this way speaking, at all these levels is possible to apply IT. Starting from these assumptions, we can easily see that the application of information technology as a new environment, so in many ways and virtual, possible from the earliest days up to the educational attainment of maximum levels. At this point it is of less importance to what will this application be significantly different in each of these educational levels. Due to the nature of educational work with the youngest (nursery, kindergarten) it is clear that IT play a much smaller role and this role will be little increase in class teaching. It is also clear that the application of IT solutions in the higher education institutions will be greatly sophisticated as they are and know-how covered entities in many ways quite a while and in IT. Due to commercial reasons and general integration into the world, it is obvious that the high school population to be quite absorbed in IT solutions, although currently predominantly those that bring mobile devices. So we locate chronological population which is by definition possible content on the biggest coup e.g. in front of which are the biggest requirements for the absorption of new and new applications of IT.

These are obviously children in upper primary schools and especially members of final grades. E.g. those who enter the adult world, which sometimes seems to be the easiest through information technologies. It lies in the school e.g. The system of education in these age groups, it is possible to notice and apply benefits such as various applications in PC that enable learning, group work, and even creativity, then learning supported by the Internet, then the application of computers and IT in teaching work and extracurricular work (photo section, musical activities, movie recording it ...). Also through integrated class in LAN implementation. At the same time, of course there has been a slow process and the disappearance of books and papers that slowly but surely give way to devices such as tablets and the like. These include whiteboard with applications like GeoGebra, education in the respective cases of e.g. directly with the Discovery Channel, countless applications in various cases with direct vision with You Tube, and so on. It is certain also that this long list will not reduce but rather daily is to find new and new ways of applying IT in school (Kapustić, 1992).

Societal competence for adequate application of IT
As you can see, the information technology have no intention of us, "leave it alone" but on the contrary, we go to the heart of even considering the characteristics of modern jobs do we serve them and not one of us. Such is the situation in all, not only in the USA, through the entire history of the human race, however, the application of new knowledge, almost always, carried out without being completely known possible negative consequences and certainly not long-term ones. Of course, it is not excluded and that are too often

through the history of the unknown and positive consequences. In this way, speaking turns out highly questionable general competence communities. On one hand, there is always a minimum number of erudite, ultra competent individuals who "see" various-various consequences of the application of technology, while on the other hand a huge number of people that do not see such consequences. It is obvious that a large group can be divided into the part that grabs only some aspects of the application of technology and to a sizable group that these and such value read does not deal with them but only if it is possible to consume. Thus, the general competence of the company to understand the new technologies and today it applies to information technology is quite questionable, but a certain level of chaos that occurs there can understand, because society is not homogeneous in terms of new technologies, especially IT. In this kind of competence with the law can introduce gender as a feature because it is more than enough examples of both sexes in understanding value systems and IT are equal but also that there are differences. A superficial view might guide us in the direction by which men generally more in favor of implementation of most types of IT but it need not be so. We know very well that some important elements of sociological relationship of psychosocial settings until the general moral definitions meet just at the age when they begin finalizing the position of the ego and it is certainly about 13, 14 years in general and therefore there should explore many phenomena, including IT and especially their a reflection of the total system value (Bonacin, 2008 Brankovic, 2008 Kapustić, 1992).

Previous research
Publications relating to the subject matter treated in this project have a huge number and their complete guidance even not possible, however, the authors therefore decided to choose those which they consider good enough illustrate the desired goals. Referent publications for this project can be divided into three parts:

1) Those dealing with system values,
2) Those dealing with the foundations of education,
3) Those dealing with IT-TV.

In terms of the value of the underlying support for this project is a theoretical concept by Đorđević, B., & Đorđević, J. (2009) in which it identifies several categories in which operationalized the value system of a society and that of the micro to the macro social structures. The four basic elements or rather areas are:

a) place the individual that its basis, a.k.a. the system values found in the psychological nuances have emerged in the individual,
b) area of micro-communities, e.g. in principle, family, friends, neighbors, good acquaintances possibly work colleagues,
c) place of political action in which primarily looks at the dimensions of the general political

orientation rather than the space of a particular policy or political parties, d) place of community in the synergies that integrate all individuals in principle the value system of the moral foundations on top.

Feri (2009) deals with values, referring to authors who criticized his works are based on data collected in certain research and regarding the imprecise definition and method of measurement values. The same author deals with the study of values and value orientations of young people. Barni et al. (2011) examined the topic of transfer values in the family in terms of that and adolescents accept the values that parents want to convey. In a set of hierarchical relationships in a kind of way is interesting and accessed by Vukasović (1993) which looks at the moral values in the practical and theoretical sphere trying to integrate personality in morale, with the understanding of ethical tasks that are nothing but practical morality. Position of young people in recent decades much has changed, primarily because of the exponential growth of knowledge as well as other factors.

About the real position of young people today there is a particularly interesting comment given by Radin and Ilišin (2002), taking into account the current position of education in the wider context. Such considerations are certainly on the right track because we must not forget that information technology is not only integrating factor of education. It is just as well as business, law that standardizes the world and even some political action such as the EU (AN). Finally, it is obvious that the values and systems and moral standards, do not happen by chance but are the result of knowledge thrive and sociological value. In this sense Koprek (1996) talks about the social structures and moral norms. This is of course a very complex subject and is thus derived interactions equally complex, but also the clear nature of the formation of moral standards.

Ivan Illich (according to Haralmbos and Heald, 1989). realizes educational system as the core of the problems of modern industrial society. According to him, the schools are the first, most important and most important phase in the creation of narrow-minded, conformist and easy manipulated citizen. In school one learns to flatter authorities, accept alienation, use the services of institutions and appreciate them and forgets to think for themselves.

Bloom (1970) emphasizes the importance of setting educational goals and advocates for the definition of typing that. Taxonomy of educational objectives. This approach undoubtedly should serve for global educational purposes that today we call making the curriculum. Gudjons (1994) defines the basic teaching coordinates at which a teaching process by introducing the known dimensions or entities such as pupils, then those who educate and there is certainly an indispensable teaching methodology collection procedures themselves and

of course the content is transferred. In one complex is identified and upcoming increasingly articulated value management for which it could be said that this represents an organizational model of action.

In a somewhat different way, but above all for trying specific definitions, Mandić (1975) considered part of the system of values in education pertaining to the cooperation of family and school. Obviously, the basic assumption transfer of educational value where the school appears as an extended and expanded educational activity of the parent circle, e.g. Family. In a similar context, Mandić and Erceg (1969) articulated the problems of sexual development and behavior of young people which is especially interesting from the point of this project because they are young especially the target group for the application of information technologies. In such considerations Rakić and Vukušić (2010) fully fit their access to education for values. This emphasizes a cognitive dimension that utilitarian needs to be focused on acquiring primarily educational value, and then all the others

Information technology should be seen in the whole of their width and fullness. In this sense Bonacin (2008) is a full set of information and how the information in the narrow sense and the computer technology and the application of computer networks and the Internet. This all together is a good foundation for understanding information technologies. One very interesting and complex display of application of IT gave Mlinarević et al. (2015) describe the application of information and communication technologies in the educational system as the starting point set aimed at students in primary and secondary schools.

Methods and aim

The problem of this research is such that it can be defined through the question: whether the students' attitudes toward information technology consistent with the system of values in which this technology are realized. The subjects of research are students of grades 7 and 8 of primary school, and their statements through attitudes about information technologies categorized into four groups.

The aim of the research is to determine whether there is a stable set of value orientations of seventh and eighth graders in accordance with the selected concept and that can be identified through information technology.

Research variables
For the purpose of this study is designed special measuring instrument in order to examine the extent to which pupils in the final grades of primary school shape their view of information technology in accordance with one all-round character concept of a value system that is the extent to which this system of values can be recognized because it reflects in attitudes of pupils towards IT.

Accordingly, formed the set of twenty indicators with clearly defined target object measurement, and with the idea that if each of these indicators shows minimum values of good metric characteristics, each being held. That's why these indicators are in the later stages of research treated as variables. In the application of the measuring instrument each indicator was crucified on a Likert scale with five modalities (strongly disagrees, disagree, cannot determine, agree, strongly agree) and for one of those five, the students had to determine.

Table 1. Used variables/indicators

Variables	Intentional measuring subject
Knowledge and quality usage of computer, cell phone, tablet... make me safer.	Integrity
IT help mi fulfil my chores.	Positive relation towards work
Through IT I succeed in expressing myself in a very quality way.	Creativity
I am able to control duration of activity on the computer.	Self-control
A massive amount if information that IT enables certainly makes us modest.	Modesty
Computers enable us to help each other every day.	Altruism
In contact with computers and the internet we are enabled solidarity with others.	Solidarity
Mutual networking, e.g. on the internet makes us more successful.	Cooperation
IT make us accept people the way they are.	Fair relation towards others
Through IT we form relationships more easily.	Communication
Modern technology makes us responsible towards our chores.	Responsibility
Through IT we understand better and accept patriotism.	Patriotism
Modern IT teach us acceptance of rules and respect towards the law.	Respecting law and order
IT and social media enable us wider activity in the community.	Social engagement
Modern technological achievements enable better understanding of political processes.	Politics
Understanding IT brings us closer to understanding truthfulness and righteousness in the world around us.	Fairness and truthfulness
In contact with other on the internet I feel as free as a bird in the air.	Freedom
Through IT it is possible to carry out numerous humane activities.	Humanity
Computer games, mutual activity and other through IT make us braver.	Bravery
IT as a clean industry are a significant step in preserving the nature and the environment.	Ecological unison

These variables belong to ordinal position / scale consisting of the sequence of complex categories which include relations more or less equal. For the purpose of objectivity and ease of understanding, all data before further procedures are normalized e.g. Put in a common area of normal distribution (see eg in Bonacin, Da., 2011). As can be seen, the twenty-dependent indicators / variables in the initial results are not quantitative indicators but

qualitative categories. This is often a problem because of the qualitative categories almost impossible to count. However, there are several ways that qualitative categories translate into quantitative. The procedure makes it possible at the same time regulating information and a way to sort them according to a Gaussian curve, is called normalization.

Description of the measuring instrument
Based on Djordjevic (1977) settings on the system of values made the measuring instrument with 20 items that are entered as input system student. The system pupil completes one of the preset values of the Likert scale, and it represents the output pupil of the system. The only thing that has to be emphasized as the entrance is restricted to predefined statements and thus is partially limited the output value of the response to the possible scale of the five modalities.

What is measured with this instrument? As the initial concept envisioned, this measuring instrument measures the degree of agreement students with social value system. Measures are features that students are an integral repertoire in a complex system of social values and all together through the testimony of the position of information technology. So, wants to recognize the social profile of students in the system of social values.

In this way determines how information technology among students correlates with selected elements of the value system. When installing remotely serious research or project the author should clearly state that the concept or concepts relied in preparing the project. In this way, the reader becomes clear that the logical or philosophical roots of the study. In this case, the basis for such work e.g. conceptual approach, after studying extensive literature which treated the value system, was found with Djordjevic (1977) according to which the company is no general system of values and he watched through four aspects: individual-psychological, sociological , political and global-moral. Each of these aspects has further approximately 5 characteristics that you define.

This concept is quite clear and if existent it is possible that can be very effective in the application of knowledge which can be obtained on various samples drawn from different populations. Once the concept is selected it is necessary to determine the space research. In this case it was information technology and space itself that is encircled by twenty indicators that describe the already mentioned twenty properties within the said concept. At the end of the selected population and pulled out of the sample of 182 boys and girls 7th and 8th graders. Such effective sample allows that any correlation projection or matter that saturation greater than 0:19 is considered significant at probability level with error estimates $p < 0.01$.

The basic metric characteristics of instrument and method validation are presented in Bonacin (2017).

Population and research sample
Research population consists of entities of which are expected to be sufficiently similar general characteristics and which can be rationally assumed transparency of results which in this case means that these are sufficient similarities may spread to the area of Split-Dalmatia County and Central Dalmatia. So, in this case the population is pupils in 7th and 8th graders in the county, in the school year 2016/2017. A total of them are close to 16000. The total number of students from 182 students represents 14.1% of the total population. Out of the total population is drawn a sample which is supposed to be good enough to present the population from which it is drawn. Make it, students in 7th and 8th graders in Kaštela in the school year 2016/17. For the purpose of this research is planned a sample of 180 respondents, 90 per sex. It is a quasi-random sample because they are covered by all the pupils and students, all seventh and eighth grade in one school, in the school year 2016/17.

Statistical methods
For the purpose of this study the following methods of data processing will be applied:

1. Normalization of data for insight into the validity and sensitivity of the test and comparison with a Gaussian curve.
2. Descriptive statistics in terms of determining the mode, median, mean, and the like.
3. Correlation of variables and confirmative multigroup factor analysis (Fulgosi 1979 Bonacin, 2010).

All data in this study were processed by program procedures from private libraries and applications owned by Prof. Dobromir Bonacin.

Results

Results of confirmative multi-group factor analysis:

Table 2. Covariance of hypothetical factors (HFxx)

	HF01	HF02	HF03	HF04
HF01	7.80	3.74	2.72	1.70
HF02	3.74	10.16	3.97	3.99
HF03	2.72	3.97	9.76	4.55
HF04	1.70	3.99	4.55	8.20

Table 3. Standard deviation of hypothetical factors (HFxx)

	HF01	HF02	HF03	HF04
HF01	0.36	0.00	0.00	0.00
HF02	0.00	0.31	0.00	0.00
HF03	0.00	0.00	0.32	0.00
HF04	0.00	0.00	0.00	0.35

Table 4. Correlation of hypothetical factors (HFxx)

	HF01	HF02	HF03	HF04
HF01	1.00	0.42	0.31	0.21
HF02	0.42	1.00	0.40	0.44
HF03	0.31	0.40	1.00	0.51
HF04	0.21	0.44	0.51	1.00

Table 5. Set of hypothetical factors

	HF01	HF02	HF03	HF04
JINT	0.45	0.15	-0.07	0.12
JPOZ	0.63	-0.03	-0.04	-0.05
JSTV	0.59	0.14	0.05	-0.09
JSAM	0.59	-0.23	0.00	0.03
JSKR	0.54	-0.04	0.06	-0.00
DALT	0.13	0.62	-0.05	0.08
DSOL	-0.11	0.71	-0.03	0.01
DKOO	0.01	0.62	-0.00	0.04
DPOS	0.01	0.59	0.07	-0.18
DKOM	-0.05	0.64	0.01	0.06
PODG	0.10	-0.12	0.65	0.05
PPAT	-0.00	0.03	0.69	-0.09
PPOS	-0.10	-0.00	0.71	0.03
PDRU	0.07	0.05	0.52	0.08
PPOL	-0.07	0.04	0.56	-0.06
UPRA	-0.02	0.08	0.14	0.50
USLO	-0.07	0.03	0.01	0.53
UHUM	-0.12	0.08	-0.14	0.61
UHRA	0.12	-0.09	-0.04	0.67
UEKO	0.09	-0.09	0.04	0.55

Discussion and conclusion

Confirmative analysis and procedures for this purpose prepared, it is rarely used in practice, e.g. When checking the existence of hypothetical complex models. It's in the nature usually pass as some kind of more or less well-established factor analysis (direct Oblimin in SPSS) although the program often is mistaken, then Orthoblique who does not make mistakes but it is mutual that this is not a confirmative procedure, but these are purely exploratory procedures. This means that with them nearly impossible to adequately verify the existence of a hypothetical model, and if you and try all these procedures provide results that are usually far from the desired or expected thereby often wrongly presupposes that the initial hypothetical model is absolutely wrong. In methodological deliberations forget that example. Oblimin and Orthoblique (including Orthomax, Parsimax and others) are totally unfit for verifying hypotheses in confirmative sense. This is simply for the reason that maximizes variance of explored factors so as to extract the maximum difference between the

factors and therefore undoubtedly minimize variability common system. It is even worse if you are to save the set, it occurs not in real but even in the image space. But the solution to this problem is very simple and consists in the fact that the required number of latent dimensions are fixed to a number of hypothetical factors, allow the existence of common variability lossless and projecting individual variables to target factors with the greatest possible credibility. If such a solution is viable it will give parsimonic structure easy to understand and with the condition of stacking some variables their associated factors. Additional measures justification process and the accuracy of the system will be the correlation of hypothetical the factors, as well as their covariance. It is possible to check the veracity of systematic screenings examining the structure and assembly of latent dimensions where within no maximum level projections must not exceed the value of 1.00. In this way multigroup confirmative analysis is the threshold model credibility. According to the results of confirmation factorial analysis (Table 2-5), there is the following:

a) covariance hypothetical dimensions, and therefore their standard deviations are substantially uniform, which means that the configured factor system structure such that the four hypothetical factors to the same extent in the operating system forms element values. This is quite an important fact because the whole time this model received justification and primary credibility especially because it is a sample of students who do not have a fully formed system of values,
b) in connection with the foregoing, there is no correlation does not show too much variability and they all medium height and all of them significant at the p <0.01. This in turn, testifies to the fact that the hypothetical factors are well integrated into a complete system model worth it, that this is a unique area. However, it is noticeable that the third and the fourth factor of the best connected (0.51) while the lowest correlation is achieved between the first and fourth 0:21) would probably further exploration was obtained only one general factor but that in situations like this usually does not work, because the as already mentioned a word about the lower limit of credibility. However, describing the results also confirm the high potential upon the existence of hypothetical factors, which means that the value system really exists even in the age of 7 and 8th grade students., With of course some legitimate variations.
c) there remains only, after all identification of acquired factors, and it is facilitated by extremely simple assembly. In fact, all the variables / indicators are projected for maximum just on one

factor for which this hypothetical expected. Thus, the first five variables on the first factor, the other five in the second, third, five on the third factor and the fourth five on the fourth factor. In this context, except those maximum values for each variable all others are literally negligible e.g. below the threshold of statistical significance. For these reasons, the first factor we can safely call the individual factor in the general system, the second factor a direct sociological environment of the individual, the third factor of political orientation and activities and the fourth factor of universal moral values.

Results of this study showed three important things. One is that the underlying hypothetical concept of a well-conceived and that it is sustainable and that the general system of values can be segmented into four imaginary lines as the positions of management in education very important. Another thing that is important is that that value system can probably be viewed through any which subsystem which is selected, in this case through IT. In this way, such subsystem station window through which the leather through the lens without distortion, watching world system of values which otherwise cannot be directly measured. It will of course, capital of knowledge that can enable transparency element values between systems in different fields of human endeavor. That area, which is the purpose of this paper, selected with IT technology or the need not to be the case in another study, and that the results are fully transparent. Finally, the results showed and that is all that can be seen already at the age of pupils 7th and 8th graders, means that a set of value system in children of that age already largely established. Size projection however (maximal row about 0.6) shows that not exhausted the maximum variability for each variable but it certainly means that in the coming years, the students of this age will certainly complement your value system and make it even clearer. This is to be expected according to their sociological maturation and that since this is and the social community and the political orientation and moral universal values we can expect only for some at least ten years, so somewhere around the end of high school, e.g. department of the faculty or stronger activation in the workplace or even the formation of the family. In any case, the results justify our ideas on the development of sociological status e.g. the attitudes of the system of values right through the system of education. To that extent this is a more and more important just like task management in education. Of course there's always the additional research in different areas and with different age groups and also by different strata.

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KONFIRMARTIVNA EVALUACIJA JEDNOG SUSTAVA VRIJEDNOSTI IZRAŽENOG KROZ STAVOVE PREMA INFORMACIJSKIM TEHNOLOGIJAMA KOD UČENIKA 7. I 8. RAZREDA OSNOVNE ŠKOLE

Sažetak

Na uzorku od 182 učenika 7. i 8. razreda O.Š. u Kaštelima (Croatia) primjenjena je anketa sa 20 stavova namjenjenih procjeni konceptualno zamišljenog sustava vrijednosti, promatranog kroz IT. Cilj rada bio je utvrđivanje vjerodostojnosti hipotetskog modela sustava vrijednosti uz pomoć konfirmativne, multigrupne faktorske analize. Rezultati su pokazali da je sustav egzistentan iako ne i baš potpuno stabilan te da se njegova stabilnost očekuje u kasnijem uzrastu (vjerojatno oko 25 godine). Takođe se pokazalo da je konceptualno zamišljen sustav vrijednosti održiv u svojoj faktorskoj strukturi te da su indikatori koji ga opisuju jednostavni za interpretaciju i razumljivi. Pokazalo se i da učenici 7-8 razreda OŠ (1-14 godina, +- 0,5) iskazuju popriličnu stabilnost u izražavanju svojih stavova. Sve zajedno čini se kao iznimno zahvalan materijal za lokaciju kritičnih područja a posebno mogućih urgentnih situacija u edukaciji tj. iako primarno u transferu znanja, ne manje važno i u transferu elemenata sustava vrijednosti. Otvoren je ogroman prostor za istraživanje koji se neće tako brzo popuniti.

Ključne riječi: *sustav vrijednosti, stavovi, IT, učenici, konfirmativna analiza.*