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MOTIVATION IN SCHOOL FROM THE SOCIAL-ANTHROPOLOGICAL POINT OF VIEW

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ABSTRACT

In this paper the theory of motivation of Abraham Maslow and the systems model of human behavior are briefly presented. This represents the theoretical framework to evaluate the hypothesis that self-concept and self-esteem are decisive factors of motivation of students in Slovenian upper secondary schools. If we observe the results of our empirical study from the system theory of human behavior it is indicative that cognitive and behavioral patterns are those which most determine the regulatory system of human behavior. Then it becomes obvious that emotional systems do not influence the motivation and behavior of our students. Very well developed self-concept and self-esteem of students influences their way of self-actualization, however the spiritual dimension of personality is missing, which would enable then to transcend their behavior. Only then, when students would transcend their behavior in the sense that they would help others to find self-fulfillment and realize their potential, could they exceed their egocentrism, which is now present in the feature of pleasantness as a personal characteristic. In this way they would become more open (extroverted) to the world in which they live.

KEY WORDS: motivation, educational anthropology, sistems theory, self-concept, self-esteem, theory of personality, cognitive development, emotional growth, behavior, students of upper secondary schools, Slovenia, empirical study, extroversion, introversion

INTRODUCTION

Abraham Maslow (1954) attempted to synthesize a large body of research related to human motivation. Prior to Maslow, researchers generally focused separately on such factors as biology, achievement, or the power to explain what energizes, directs, and sustains human behavior. Maslow posited a hierarchy of human needs (see Figure 1.) based on two groupings: deficiency needs and growth needs. Within the deficiency needs, each lower need must be met before moving to the next higher level. Once each of these needs has been

satisfied, if at some future time a deficiency is detected, the individual will act to remove the deficiency. The first four levels are:

1) Physiological: hunger, thirst, bodily comforts, etc.;
2) Safety/security: out of danger;
3) Belonginess and Love: affiliate with others, be accepted; and
4) Esteem: to achieve, be competent, gain approval and recognition.

If and only if the deficiency needs are met is the individual ready to act upon the growth needs. Maslow's initial conceptualization included only one growth need -self-actualization. Self-actualized people are characterized by: 1) being problem-focused; 2) incorporating an ongoing freshness of appreciation of life; 3) a concern about personal growth; and 4) the ability to have peak experiences. Maslow later differentiated the growth of self-actualization, adding two growth needs prior to self-actualization and one beyond that level. They are:

5) Cognitive: to know, to understand, and explore;
6) Aesthetic: symmetry, order, and beauty;
7) Self-actualization: to find self-fulfillment and realize one's potential; and
8) Transcendence: to help others find self-fulfillment and realize their potential.

Maslow's basic position is that as one becomes more self-actualized and transcendent, one becomes more wise (develops wisdom) and automatically knows what to do in a wide variety of situations.

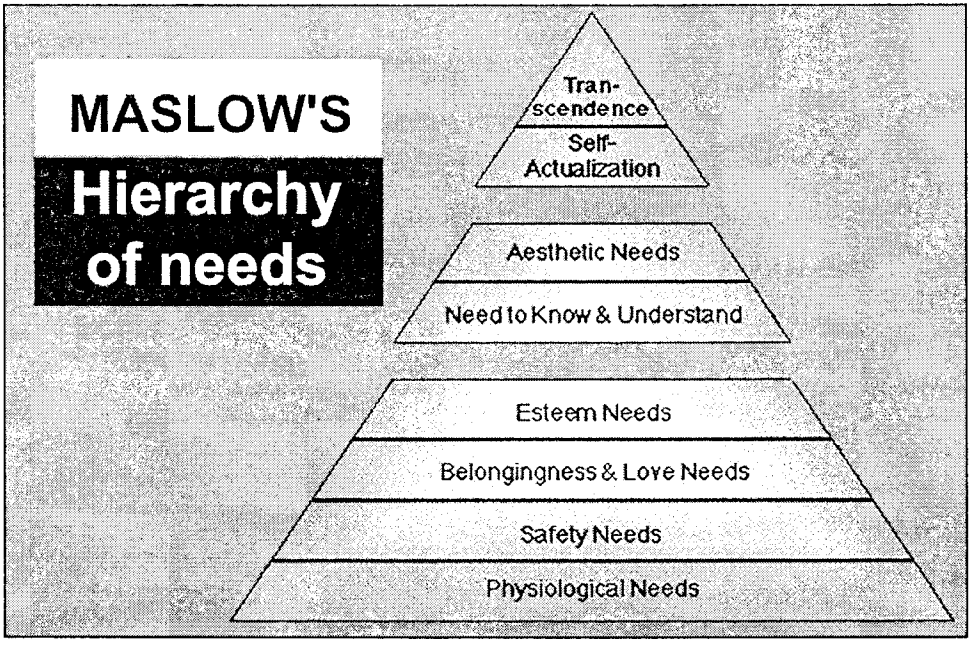

Figure 1. Maslow's hierarchy of Human Needs (Source: Maslow, 1954)

Maslow published his first conceptualization of his theory over 50 years ago (Maslow, 1943) and it has since become one of the most popular and often cited theories of human motivation. An interesting phenomenon related to Maslow's work is that in spite of a lack of evidence to support his hierarchy, it enjoys wide acceptance (Wahba & Bridgewell, 1976; Soper, Milford & Rosenthal, 1995).

The few major studies that have been completed on the hierarchy seem to support the proposals of William James (1892/1962) and Mathes (1981) that there are only three levels of human needs. James hypothesized the levels of material (physiological, safety), social (belongingness, esteem), and spiritual. Mathes' three levels were physiological, belongingness, and self-actualization; he considered security and self-esteem as unwarranted. Alderfer (1972) (see Table 1.) developed a comparable hierarchy with his ERG (existence, relatedness, and growth) theory. His approach modified Maslow's theory based on the work of Gordon Allport (1960, 1961) who incorporated concepts from systems theory into his work on personality.

Table 1. Alderfer's Hierarchy of Motivational Needs
Source: Alderfer (1972), Maslow (1954)

Level of Need	Definition	Properties
Existence	Includes all of the various forms of material and psychological desires	When divided among people one person's gain is another's loss if resources are limited
Relatedness	Involves relationships with significant others	Satisfied by mutually sharing thoughts and feelings; acceptance, confirmation, understanding, and influence are elements
Growth	Impels a person to make creative or productive effects on himself and his environment.	Satisfied through using capabilities in engaging problems; creates a greater sense of wholeness and fullness as a human being

Maslow recognized that not all personalities followed his proposed hierarchy. While a variety of personality dimensions might be considered as related to motivational needs, one of the most often cited is that of introversion and extroversion (see Table 2.). Reorganizing Maslow's hierarchy based on the work of Alderfer and considering the

Table 2. A Reorganization of Maslow's and Alderfer's Hierarchies

Level	Introversion	Extroversion
Self (Existence)	Physiological, biological (including basic emotional needs)	Connectedness, security
Other (Relatedness)	Personal identification with group, significant others (Belongingness)	Value of person by group (Esteem)
Growth	Self-Actualization (development of competencies [knowledge, attitudes, and skills] and character)	Transcendence (assisting in the development of others' competencies and character; relationships to the unknown, unknowable)

introversion/extroversion dimension of personality results in three levels, each with an introverted and extroverted component. This organization suggests there may be two aspects of each level that differentiate how people relate to each set of needs. Different personalities might relate more to one dimension than the other. For example, an introvert at the level of Other/Relatedness might be more concerned with his or her own perceptions of being included in a group, whereas an extrovert at that same level would pay more attention to how others value that membership.

At this point there is little agreement about the identification of basic human needs and how they are ordered. For example, Deci and Ryan (1991) also suggest three needs, although they are not necessarily ordered: the need for autonomy, the need for competence, and the need for relatedness. Franken (1994) suggests this lack of accord may be a result of different philosophies of researchers rather than differences among human beings. In addition, he reviews research which shows that a person's explanatory style will modify the list of basic needs. Therefore, it seems appropriate to ask people what they want and how their needs could be met rather than relying on an unsupported theory. There is much work still to be done in this area before we can rely on a theory to be more informative than simply collecting data. However, this body of research can be very important to parents, educators, administrators and others concerned with developing and using human potential. It provides an outline of some important issues that must be addressed if human beings are to achieve the levels of character and competencies necessary to be successful in the information age.

SYSTEMS MODEL OF HUMAN BEHAVIOR

There are a number of assumptions that provide the foundation for this systems model. First, the basis of the model stems from an acceptance of the three major aspects of human beings (Mind, Body and Spirit) that have been the focus of study since the ancient Greeks. In terms of mind (or human personality, as it is sometimes called), there is wide support for three dimensions (e.g. Miller, 1991; Eysenck, 1947; 1) cognition (knowing, understanding, thinking); 2) affect (attitudes, predispositions, emotions, feelings); and 3) conation (intentions to act, reasons for doing, will). Body can be considered in terms of 1) biological or genetic influences; 2) bodily functioning, and 3) overt behavior or output. Overt behavior has been extensively studied by the behaviorists (e.g., Bandura, 1977; Skinner, 1953).

Second, human beings do not develop in isolation; they develop in a variety of contexts -- environments which surround the individual human being and with which he/she is in constant interaction play a major role in development (e.g., Bridge, Judd & Moock, 1979; Bronfenbrenner, 1977, 1979, 1989)

Third, there are a variety of sources of knowledge about human beings and human nature. While an attempt has been made to stay within the parameters of a scientific approach to developing understanding and discerning truth, I acknowledge that other sources of knowledge (e.g., my personal experience and intuition, my spiritual and religious training and background, and my study of philosophy) have also influenced the development of this model. I would expect the same to be true for everyone. As this course is based on knowledge derived using the scientific method, there will likely be instances where the findings presented in class do not match knowledge you have acquired through

other sources. View these times of dissonance as opportunities to develop new understandings or to integrate previous understandings in new ways. It is not always necessary to completely discard knowledge derived from other sources, but interpretations may need to be modified in order to include the findings derived from science. I encourage others to develop their own models that might highlight other aspects of human behavior that do not receive adequate attention in this model.

The model of human behavior presented below (see Figure 3.4. and 5.) is based on systems theory and cybernetics and reflects a transactional approach to educational and developmental psychology (e.g. Gordon, 1975; Schiamberg & Smith, 1982; Thompson, 1971). This model also reflects an approach that defines human beings as having both biological and spiritual components of their nature.(e.g., Danesh, 1994; Frankl, 1998).

Bronfenbrenner (1977, 1979, 1989) identifies several layers of context or ecology:

microsystem -- the most immediate and earliest influences such as family, school, religious institutions and peer groups.

mesosystem -- an intermediate level of influences such as local neighborhood or community, social institutions and culture.

While we sometimes tend to focus on family or school influences on human development, we should always remember that there are other important influences. An African, as well as Native American, tradition states that it takes a whole community to raise a child.

macrosystem -- the most removed influences such as international region or global changes.

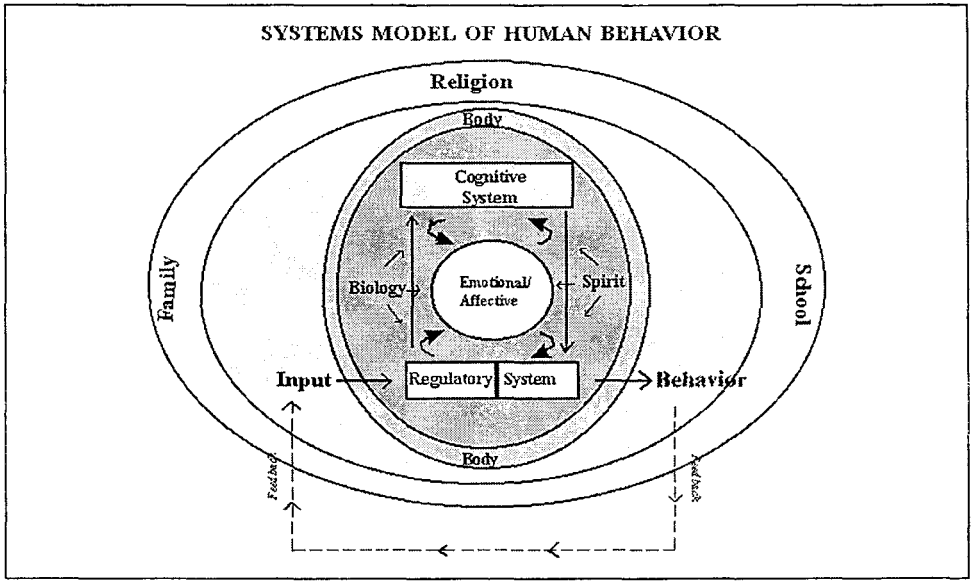

Figure 2. Systems model of human behavior (microsystem)
Source: Huitt (1994), Bronfenbrenner (1977), Norman (1980)

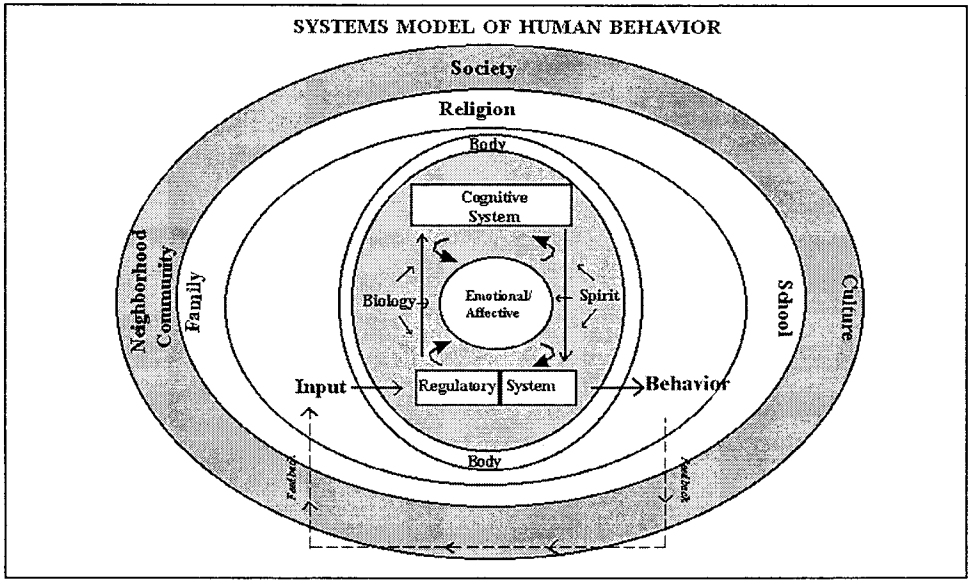

Figure 3. Systems model of human behavior (mesosystem)
Source: Huitt (1994), Bronfenbrenner (1977), Norman (1980)

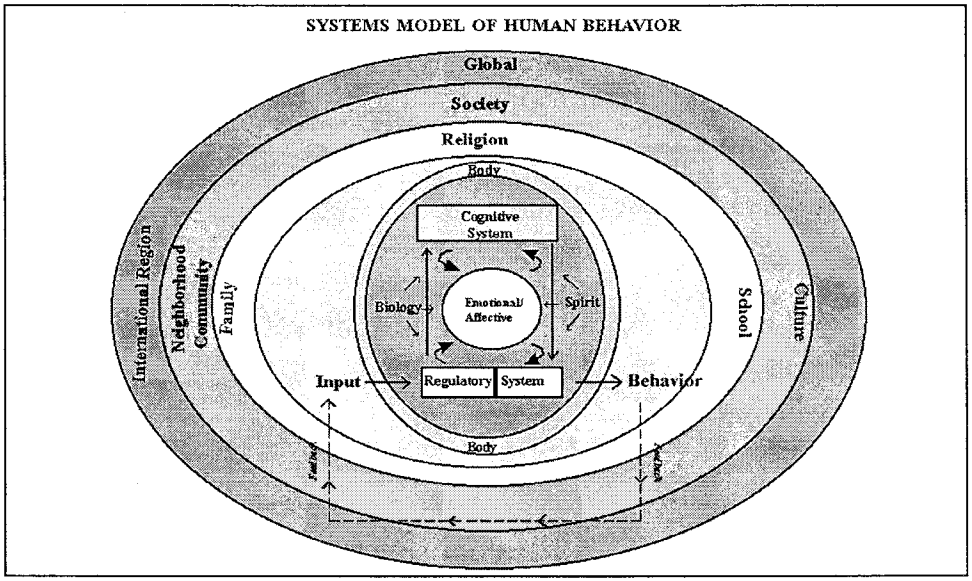

Figure 4. Systems model of human behavior (macrosystem)
Source: Huitt (1994), Bronfenbrenner (1977), Norman (1980)

The systems model presented here uses these three components of the mind to organize any of the major issues and topics discussed in educational anthropology. The regulatory system is redefined as the aspect of the mental system that regulates input and output functions. This model also highlights the fact the mind receives information and displays action through the body; adds a biological and spiritual influence to the development and functioning of the components of mind, and adds a feedback loop connecting overt responses (labeled "output") and resulting stimuli from the environment.

There are therefore four major components of the individual in this systems model of human behavior

1. Cognitive system -- Perceives, stores, processes, and retrieves information
2. Affective system -- Can modify perceptions and thoughts before and after they are processed cognitively
3. Regulatory system -- Directs and manages input and output functioning
4. Behavioral system -- Overt action of organism (output of the individual)

It is hypothesized that an individual's thinking (cognition), feeling (affect), and willing (conation) as well as overt behavior develop as a result of:

1. transactions among the various components of mind as
2. influenced by biological maturation, bodily functioning and the spiritual dimension of the individual,
3. the environment or context of the individual, and
4. the feedback from the environment as a result of an individual's overt behavior

SOME EMPIRICAL FINDINGS CONCERNING MOTIVATION IN SCHOOL

In our empirical study we were interested to find, to what extent it is possible motivate students for learning. We are trying to do this through observation of different dimensions of personality (through observation of self-concept, self-esteem, personal style and learning style). We followed the systems model of human behavior, presented above, to make the theoretical framework of our study. We have observed motivation to learn by using the terminology of systems theory, by which human behavior is divided into four major components as presented above. These components have been operationalized in the set of different variables. For that reason, the cognitive component/system of human motivation/ development has been operationalized on: mathematical ability, verbal self-concept, academic self-concept, creativity, general self-concept, contemplative observation, active experimentation, self-esteem and abstract conceptualization. The affective component/ system has been operationalized on: religion, emotional stability and emotional stability II. The behavioral component/system consists of: motivation to learn, physical abilities, external appearance, relationships with peer groups of the same gender, relationships with peer groups of different gender, relationships with parents, sincerity, concrete experience, extrovertness, conscientiousness, openness and pleasantness. The regulatory component/ system directs and manages the other three components in an integrative person.

With our analysis we are trying to discover relationships between the different dimensions of particular instruments which we apply (see Table 1. their reliability) and the answers of students from the sample (see Table 2.). In this way we are estimating the

adequateness of the instrumentarium which we used on the one hand, and we are trying to find out the interrelated influence of the self-concept, self-esteem, motivation to learn, personal style and learning style of students on the other hand.

Table 1. Reliability measures; Source: Kobal et.al. (2001)

Questionnaire / Measures	Cronbach - alpha coefficient	Guttman split-half coefficient
Motivation to learn	0.8227	0.7359
Learning styles	0.2644	0.7637
Self-esteem	0.8619	0.7605
Self-concept	0.8481	0.8137
Personal characteristics	0.7640	0.8846

HYPOTHESIS

We started from the assumption that the self-concept of students in the fourth grade of upper secondary schools is in the closest relation with their self-esteem. The higher is the self-concept among students, the better is their self-esteem developed (Kobal, 2001). The general self-concept is related with some personal styles (e.g. extrovertness, emotional stability, relationships with peer groups etc.). If students have a higher self-concept, then they have a more developed personal style which is characterized by better relationships with peer groups, extrovertness, emotional stability etc. (Kobal, 2001). We are assuming that self-concept and motivation to learn are in positive correlation: The higher is the self-concept of students, the higher is their motivation to learn, and the better developed is their learning style.

RESULTS OF THE EMPIRICAL STUDY

Table 3. shows basic statistical data for particular variables. The results related to self-concept show that respondents have relatively high expressed areas of the self-concept. The highest expressed area of the self-concept refers to relationship with parents (M=18.5 points, SD=3.34), while the lowest refers to mathematical ability (M=11.6 points, SD=4.21). Such a result tells us that our students have emphasized the behavioral component/system more than the cognitive component/system, although all areas of self-concept, consisting of the cognitive component, are relatively highly expressed (e.g. general self-concept M=17.0 points, verbal self-concept M=16.5 points and creativity M=16.6 points). Among learning styles the concrete experience (M=17.0 points) is more emphasized than others, which are represented proportionally as almost equal (from M=15.2 to M=15.7 points). Self-esteem among our respondents is also relatively high expressed (M=28.9 points, SD=7.26 points), which contributes also to higher cognitive based behavior. When we observed personal styles data, the most expressed area is pleasantness (M=42.4 points) and the lowest is emo-

Table 2. Descriptive statistics - Sample; Source: Kobal et.al. (2001)

Variable	Modality	Frequency	Percentage %	Cum. percentage %
Gender	Male	114	39.7	39.7
	Female	173	60.3	100.0
Age	16	1	0.3	0.3
	17	83	28.9	29.3
	18	187	65.2	94.4
	19	16	5.6	100.0
The last year's school achievement	1	1	0.3	0.3
	2	32	11.1	11.5
	3	129	44.9	56.6
	4	101	35.2	92.0
	5	23	8.0	100.0
The last year's /3 school achievement	2	33	11.5	11.5
	3	129	44.9	56.6
	4	124	43.2	100.0
Mother's education	Undefined	3	1.0	1.0
	Unfinished ES	6	2.1	3.1
	Elementary school	20	7.0	10.1
	Vocational school	46	16.0	26.1
	Upper secondary school	90	31.4	57.5
	High school	49	17.1	74.6
	Faculty	73	25.4	
	Total	287		100.0
Father's education	Undefined	6	2.1	2.1
	Unfinished ES	6	2.1	4.2
	Elementary school	13	4.5	8.7
	Vocational school	74	25.8	34.5
	Upper secondary school	74	25.8	60.3
	High school	34	11.8	72.1
	Faculty	80	27.9	
	Total	287		100.0
Which study would he/ sheselect:	Art	28	9.8	10.0
	Science	54	18.8	29.4
	Technology	27	9.4	39.1
	Social sciences	126	43.9	84.2
	Humanistic	23	8.0	92.5
	Biomedicine	21	7.3	100.0
	Undefined	8	2.8	
	Total	287		100.0

Table 3. Descriptive statistics - Factors of motivation at school; Source: Kobal et.al. (2001)

	Variable	N	Min.	Max.	M	SD	Kurtosis	Skewness
UM	Motivation to learn	285	17	111	68.4	13.53	0.341	-0.070
SP1	Mathematical ability	286	4	19	11.6	4.21	0.287	0.144
SP2	Verbal self-concept	286	4	20	16.5	4.02	-0.391	-0.205
SP3	Academic self-concept	286	4	23	15.4	2.98	0.626	-0.403
SP4	Creativity	286	9	24	16.6	3.07	-0.140	-0.019
SP5	Physical abilities	286	4	24	16.4	5.00	-0.558	-0.358
SP6	External appearance	286	4	24	15.9	3.88	-0.344	-0.367
SP7	Relationships with peer groups of the same gender	286	7	24	17.2	3.02	0.341	-0.368
SP8	Relationships with peer groups of different gender	285	4	24	17.5	4.10	-0.039	-0.540
SP9	Relationships with parents	286	7	24	18.5	3.34	0.409	-0.778
SP10	Religion	284	4	24	10.9	5.09	-0.618	0.430
SP11	Sincerity	286	4	24	16.6	3.32	0.601	-0.309
SP12	Emotional stability	285	4	24	15.6	4.04	-0.124	-0.463
SP13	General self-concept	286	4	24	17.0	4.45	0.018	-0.542
RO	Contemplative observation	284	8	22	15.2	3.16	-0.474	0.054
AE	Active experimentation	284	6	23	15.5	3.05	0.014	-0.230
AK	Abstract conceptualization	285	8	23	15.7	2.72	-0.067	-0.018
KI	Concrete experience	284	7	24	17.0	3.03	-0.211	-0.269
SS	Self-esteem	287	4	40	28.9	7.26	0.329	-0.781
CS	Emotional stability II.	286	13	56	37.9	8.04	0.129	-0.386
E	Extrovertness	286	18	56	38.8	8.18	-0.462	-0.128
V	Conscientiousness	285	20	69	40.5	6.94	0.388	0.065
O	Openness	285	23	56	41.7	6.40	-0.196	-0.143
P	Pleasantness	286	20	56	42.4	6.33	0.385	-0.576

tional stability II. (M=37.9 points). This means that the affective component/system is not so important for our population, when we are observing the human behavior/motivation of our respondents in total.

We used one-way analysis of variance to determine which are the most influential variables considering this topic.When we asked ourselves which variables influence decisions of students regarding which study would he/she select the most(see Table 4.), we got the following results. Mathematical ability (F=5.772, p=0,000) and verbal self-concept (F=7.235, p= 0.000) are those cognitive variables which most determine the decision of students regarding their further studies. Among other variables the active experimentation(F=6.114, p=0.000), one of learning styles, is that variable which contributes to the decision about further studies at the same level as do the first two. Concrete experience (F=3,874; p=0.002) is the fourth variable which influences the decision about further studies among our students. These results show that the cognitive component/sys-

Table 4. Which study would he/she select with regard to learning styles, self-esteem, self-concept and personal characteristics (one-way analysis of variance); Source: Kobal et.al. (2001)

	Sum of squares	df	Mean square	F	P
Self-esteem					
SE	315,862	5	63.172	1.219	.300
Self-concept					
Mathematical ability	479.293	5	95.859	5.772	.000***
Religion	67.934	5	13.587	.518	.763
Sincerity	76.624	5	15.325	1.401	.224
Emotional stability	107.002	5	21.400	1.272	.235
General self-concept	136.683	5	27.337	1.452	.206
Verbal self-concept	529.597	5	105.919	7.235	.000***
Academic self-concept	15.373	5	3.075	.338	.890
Creativity	68.725	5	13.754	1.460	.203
Physical abilities	65.028	5	13.006	.511	.768
External appearance	27.970	5	5.594	.375	.866
Relationships with peer groups of the same gender	58.053	5	11.611	1.282	.272
Relationships with peer groups of different gender	107.048	5	21.410	1.296	.266
Relationships with parents	12.305	5	2.461	.218	.955
Learning style					
Active experimentation	254.555	5	50.911	6.114	.000***
Abstract conceptualization	29.229	5	5.846	.782	.564
Concrete experience	170.873	5	34.175	3.874	.002**
Contemplative observation	40.108	5	8.022	.809	.544
Personal characteristics					
Emotional stability II.	417.464	5	83.493	1.312	.259
Extrovertness	308.621	5	61.724	.929	.463
Openness	213.399	5	42.680	1.038	.396
Pleasantness	124.669	5	24.934	.623	.683
Conscientiousness	126.595	5	25.319	.516	.764

* differences with regard to which study would he/she select are statistically significant ($p<.05$)
** differences with regard to which study would he/she select are statistically significant ($p<.01$)
*** differences with regard to which study would he/she select are statistically significant ($p<.001$)

Table 5. Differences according to gender with regard to learning styles, self-esteem, self-concept and personal characteristics (one-way analysis of variance); Source: Kobal et.al. (2001)

	Sum of squares	df	Mean square	F	P
Self-esteem					
SE	986.320	1	49.450	19.946	.000***
Self-concept					
Mathematical ability	55.073	1	17.621	3.125	.078
Religion	262.138	1	25.145	10.425	.001***
Sincerity	18.451	1	11.004	1.677	.196
Emotional stability	134.176	1	15.907	8.435	.004**
General self-concept	291.739	1	18.824	15.498	.000***
Verbal self-concept	122.967	1	15.803	7.781	.006**
Academic self-concept	8.569	1	8.868	.966	.326
Creativity	58.007	1	9.290	6.244	.013*
Physical abilities	102.370	1	24.789	4.130	.043*
External appearance	176.422	1	14.549	12.126	.001***
Relationships with peer groups of the same gender	.318	1	9.153	.035	.852
Relationships with peer groups of different gender	18.947	1	16.813	1.127	.289
Relationships with parents	50.425	1	11.032	4.571	.033*
Learning style					
Active experimentation	30.715	1	9.261	3.316	.070
Abstract conceptualization	96.395	1	7.069	13.637	.000***
Concrete experience	225.375	1	8.419	26.769	.000***
Contemplative observation	.350	1	10.043	.035	.852
Personal characteristics					
Emotional stability II.	570.614	1	62.839	9.081	.003**
Extrovertness	169.228	1	66.638	2.539	.112
Openness	190.438	1	40.450	4.708	.031*
Pleasantness	3.393	1	40.300	.084	.772
Conscientiousness	136.992	1	47.908	2.859	.092

* differences with regard to gender are statistically significant ($p<.05$)
** differences with regard to gender are statistically significant ($p<.01$)
*** differences with regard to gender are statistically significant ($p<.001$)

tem and behavioral system are those parts of the person which most determine decisions about further studies in our population. Other variables in the observation do not contribute statistically significantly to decisions about our students further studies. Obviously our students make decisions on a rational rather than emotional or personal characteristics basis.

Differences between gender (see Table 5.) depend on variables that are widespread through all dimensions of personality we took to measure human motivation/behavior. Self-esteem (F=19.946; p=0.000) and concrete experience (F=26.769, p=0.000) are variables which make the biggest difference regarding gender. As important influence on differences between male and female population is also seen in: religion (F=10.425; p=0.001), emotional stability (F=8.435; p=0.004), general self-concept (F=15.498; p=0.000), verbal self-concept (F=7.781; p=0.006), creativity (F=6.244;p=0.013), physical abilities (F=4.130; p=0.043), external appearance (F=12.126; p=0.001), relationships with parents (F=4.571; p=0.033), abstract conceptualization (F=13.637, p=0.000), emotional stability II. (F=9.081; p=0.003) and openness (F=4.708; p=0.031). From results we have obtained we can accentuate the following findings:

1. We can not extract any specific area of human behavior (self-concept, self-esteem, learning styles or personal characteristics), which separate our population by gender.
2. There are two variables which explain the difference between boys and girls the most. Higher self-esteem is more characteristic of boys and concrete experience for girls.
3. We could say that differences between boys and girls proceed from all dimensions we have observed.

The far most important variable influencing the school achievement (see Table 6.) is academic self-concept (F=18.913; p=0.000) followed by mathematical ability (F=8.716; p=0.000). Other important variables in this regard are: self-esteem (F=3.348;p=0.036) and general self-concept (F=4.723; p=0.009), which represent the cognitive component/system in our theoretical model of human behavior. The important variables in this regard are also: extrovertness (F=4.925; p=0.007) and conscientiousness (F=6.599; p=0.001) which are representatives of personal characteristics and in this regard representatives of the behavioral component/system in our theoretical model. The last important variable influenced school achievement is motivation to learn (F=5.190; p= 0.006). Thus, we could say that the cognitive and behavioral variables explain the most variability we could find inside school achievement. These are the results we could expect also if we rely only on common sense thinking.

We hypothesized that internal factors, like self-concept and self-esteem, influenced the human motivation/behavior more than external do. When we observed the data presented in Table 7. it is evident that external variable, background variable, such as the father's education is, is not related to the majority of variables in our theoretical model. Father's education is related only to religion (F=4.172; p=0.000) which is a part of the self-concept and a part of the affective component/system in our theoretical framework.

In Table 8. we could find quite a different picture to the one we found in the previous table. Mother's education is obviously the background variable which influences the

Table 6. Differences according to the last year's school achievement with regard to learning styles, self-esteem, self-concept and personal characteristics (one-way analysis of variance); Source: Kobal et.al. (2001)

	Sum of squares	df	Mean square	F	P
Self-esteem					
SE	347.076	2	173.538	3.348	.036*
Self-concept					
Mathematical ability	293.804	2	146.902	8.716	.000***
Religion	114.866	2	57.433	2.236	.108
Sincerity	32.846	2	16.423	1.495	.226
Emotional stability	40.732	2	20.366	1.260	.285
General self-concept	181.583	2	90.791	4.723	.009**
Verbal self-concept	42.087	2	21.043	1.311	.271
Academic self-concept	298.833	2	149.416	18.913	.000***
Creativity	13.091	2	6.545	.689	.503
Physical abilities	16.478	2	8.239	.326	.722
External appearance	81.516	2	40.758	2.743	.066
Relationships with peer groups of the same gender	52.623	2	26.312	2.939	.054
Relationships with peer groups of different gender	98.220	2	49.110	2.976	.052
Relationships with parents	47.453	2	23.726	2.147	.118
Learning style					
Active experimentation	32.960	2	16.480	1.797	.167
Abstract conceptualization	40.647	2	20.323	2.8027	.062
Concrete experience	11.324	2	5.662	.614	.542
Contemplative observation	31.198	2	15.599	1.578	.208
Personal characteristics					
Emotional stability II.	38.373	2	19.186	.296	.744
Extrovertness	636.610	2	318.305	4.925	.007**
Openness	104.544	2	52.272	1.293	.276
Pleasantness	6.0676	2	3.033	.075	.928
Conscientiousness	610.412	2	305.206	6.599	.001***
Motivation to learn (Sum)	1846.452	2	923.226	5.190	.006**

*differences with regard to school achievement are statistically significant ($p<.05$)
** differences with regard to school achievement are statistically significant ($p<.01$)
*** differences with regard to school achievement are statistically significant ($p<.001$)

Table 7. Differences according to father's education with regard to learning styles, self-esteem, self-concept and personal characteristics (one-way analysis of variance); Source: Kobal et.al. (2001)

	Sum of squares	df	Mean square	F	P
Self-esteem					
SE	400.384	6	66.731	1.273	.270
Self-concept					
Mathematical ability	111.672	6	18.612	1.050	.393
Religion	609.447	6	101.575	4.172	.000***
Sincerity	62.173	6	10.362	.938	.468
Emotional stability	93.294	6	15.549	.952	.459
General self-concept	145.513	6	24.252	1.232	.290
Verbal self-concept	124.545	6	20.757	1.291	.261
Academic self-concept	77.396	6	12.899	1.469	.189
Creativity	36.729	6	6.121	.642	.696
Physical abilities	123.676	6	20.613	.819	.556
External appearance	89.844	6	14.974	.990	.432
Relationships with peer groups of the same gender	45.071	6	7.512	.820	.555
Relationships with peer groups of different gender	187.687	6	31.281	1.895	.082
Relationships with parents	36.451	6	6.075	.539	.779
Learning style					
Active experimentation	42.848	6	7.141	.761	.601
Abstract conceptualization	76.453	6	12.742	1.753	.109
Concrete experience	70.680	6	11.780	1.290	.262
Contemplative observation	55.572	6	9.262	.924	.478
Personal characteristics					
Emotional stability II.	567.017	6	94.503	1.477	.186
Extrovertness	610.765	6	101.794	1.537	.166
Openness	277.469	6	46.245	1.132	.344
Pleasantness	160.494	6	26.749	.661	.681
Conscientiousness	344.525	6	57.421	1.196	.309

* differences with regard to father's education are statistically significant ($p<.05$)
** differences with regard to father's education are statistically significant ($p<.01$)
*** differences with regard to father's education are statistically significant ($p<.001$)

Table 8. Differences according to mother's education with regard to learning styles, self-esteem, self-concept and personal characteristics (one-way analysis of variance); Source: Kobal et.al. (2001)

	Sum of squares	df	Mean square	F	P
Self-esteem					
SE	986.320	1	986.320	19.946	.000***
Self-concept					
Mathematical ability	55.073	1	55.073	3.125	.078
Religion	262.138	1	262.138	10.425	.001***
Sincerity	18.451	1	18.451	1.677	.196
Emotional stability	134.176	1	134.176	8.435	.004**
General self-concept	291.739	1	291.739	15.498	.000***
Verbal self-concept	122.967	1	122.967	7.781	.006**
Academic self-concept	8.569	1	8.569	.966	.326
Creativity	58.007	1	58.007	6.244	.013*
Physical abilities	102.370	1	102.370	4.130	.043*
External appearance	176.422	1	176.422	12.126	.001***
Relationships with peer groups of the same gender	.318	1	.318	.035	.852
Relationships with peer groups of different gender	18.947	1	18.947	1.127	.289
Relationships with parents	50.425	1	50.425	4.571	.033*
Learning style					
Active experimentation	30.715	1	30.715	3.316	.070
Abstract conceptualization	96.395	1	96.395	13.637	.000***
Concrete experience	225.375	1	225.375	26.769	.000***
Contemplative observation	.350	1	.350	.035	.852
Personal characteristics					
Emotional stability II.	570.614	1	570.614	9.081	.003**
Extrovertness	169.228	1	169.228	2.539	.112
Openness	190.438	1	190.438	4.708	.031*
Pleasantness	3.393	1	3.393	.084	.772
Conscientiousness	136.992	1	136.992	2.859	.092

* differences with regard to mother's education are statistically significant ($p<.05$)
** differences with regard to mother's education are statistically significant ($p<.01$)
*** differences with regard to mother's education are statistically significant ($p<.001$)

majority of variables in our theoretical model. In this regard mother's education influences self-esteem the most (F=19.946; p=0.000) and from learning styles concrete experience (F= 26.769; p=0.000). Variables which are influenced by mother's education also include: religion (F=10.425;p=0.001, emotional stability (F=8.435; p=0.004), general self-concept (F=15.498, p=0.000), verbal self-concept (F=7.781; p=0.006), creativity (F= 6.244; p=0.013), physical abilities (F=4.130; p=0.043), external appearance (F=12.126;p=0.001) and relationships with parents (F= 4.571; p=0.033). Beside this, mother's education influences also abstract conceptualization (F=13.637; p=0.000), emotional stability II. (F=9.081;p=0.003) and openness (F=4.708; p=0.031). So, we could say that differences in mother's education influence the majority of differences in other parts of our systems model, especially when we are take into account the microsystem model of human behavior.

CONCLUSION

If we observe the results of our empirical study inside the conception drawn by Abraham Maslow, then we can conclude that the motives of students in Slovenian upper secondary schools are prevailing at the higher levels in the hierarchy of human needs. Motives for action, such as physiological needs and safety and security needs are, are in the big portion satisfied and they are not any more the factor of motivation in school.

On the basis of the values of some variables, such as religion and emotional stability , we could state that in our population of students the motives of belongingness and love are very weakly expressed. Meanwhile the self-esteem and self-concept are very strong motivators in school (Kobal, 2001). Especially when we are take into account differences by gender, when we are considering the achievement in school and when it goes for the role of the mother's education as an external factor, which is influencing the behavior of students in school.

The cognitive component/system, across all the variables, which we have measured, is very strongly expressed, when we are take into account decisions of students about their further studies, when it goes for differences by gender, for school achievement or for mother's education.

When but we are observing the results of our analysis from the perspective of the systems model of human behavior, we can conclude that the emotional system is not in the centre of motivational forces for the behavior of our students. Emotional stability and religion are not variables which would occur as motivators for the behavior of our students in school. For that reason the emotional system is not connected either with regulatory or with cognitive system as shown in Figures 3., 4., and 5. above. Because the cognitive system is the strongest motivator for the behavior of students, this influences the emotional system, and the emotional system influences the regulatory system, with the assistance of which student's behavioral patterns develop.

We can say that our students are achieving, first of all with developed self-esteem and self-concept, the motive of self-actualization, meanwhile however the spiritual dimension of personality is lacking in them, by which they could transcend their behavior. In this case, the motive of their acting should be to help others to find self-fulfillment and realize their potential. Finally, we can conclude that the specific level of egocentrism is presented

by our students, as is indicated with the highly expressed motive of pleasantness as a personal characteristic of students. In this regard our students stay continually more introverted than extroverted and open to the world around them (compare Table 2. above), which is being developed by the big steps in the information age.

POVZETEK

V pričujočem prispevku sta na kratko predstavljeni teorija motivacije Abrahama Maslowa in sistemski model človekovega vedenja. To nam predstavlja teoretični okvir za preverjanje hipoteze, da sta samopodoba in samospoštovanje odločilna dejavnika motivacije dijakov srednjih šol v Sloveniji. Če opazujemo rezultate empirične študije z vidika sistemske teorije človekovega vedenja se izkaže, da so kognitivni in vedenjski vzorci tisti, ki najbolj določajo regulatorni sistem človekovega vedenja in potem emocionalni sistem ne vpliva na motivacijo in vedenje dijakov slovenskih srednjih šol. Razvita samopodoba in samospoštovanje dijakov vpliva na njihovo pot samouresničevanja, vendar pa manjka duhovna razsežnost v njihovi odraščajoči osebnosti, da bi lahko svoje vedenje transcendirali. Šele ko bi dijaki svoje vedenje transcendirali v tem smislu, da bi pomagali drugim priti do samoizpolnitve in uresničenja njihovih potencialov, bi presegli svoj izraženi egocentrizem, ki je najbolj razviden iz poudarjene osebnostne lastnosti prijetnosti, tako, da bi postali bolj odprti (ekstrovertirani) svetu v katerem živijo.

KLJUČNE BESEDE: motivacija, antropologija vzgoje in izobraževanja, sistemska teorija, samopodoba, samospoštovanje, teorija osebnosti, kognitivni razvoj, emocionalni razvoj, vedenje, dijaki srednjih šol, Slovenija, empirična študija, ekstrovertnost, introvertnost

REFERENCES

ALDERFER, C., (1972). **Existence, relatedness, & growth.** New York: Free Press.

ALLPORT, G., (1960). **Personality and social encounter: Selected essays.** New York: Beacon Press.

ALLPORT, G., (1961). **Pattern and growth in personality.** New York: Holt, Rinehart and Winston.

BANDURA, A., (1977). **Social learning theory.** Englewood Cliffs, NJ: Prentice-Hall.

BRIDGE, R., **JUDD**, C., & **MOOCK**, P., (1979). **The determinants of educational outcomes: The impact of families, peers, teachers, and schools.** Cambridge, MA: Ballinger Publishing Co.

BRONFENBRENNER, U., (1977). **Toward an experimental ecology of human development.** American Psychologist, 32, pp. 513-530.

BRONFENBRENNER, U., (1979). **The ecology of human development.** Cambridge, MA: Harvard University Press.

BRONFENBRENNER, U., (1989). **Ecological systems theory.** In R. Vasta (Ed.). *Annals of child development* , vol. 6 (pp. 187-251). Greenwich, CT: JAI.

DANESH. H., (1994). **The psychology of spirituality.** Manotick, Ontario, Canada: Nine Pines Publishing.

DECI, E., & **RYAN**, R., (1991). **A motivational approach to self: Integration in personality.** In R. Dienstbier (Ed.), *Perspectives on motivation. Nebraska Symposium on Motivation.* Lincoln: University of Nebraska Press.

EYSENCK, H., (1947). **Dimensions of personality.** London: Routledge & Kegan Paul.
FRANKEN, R., (1994). **Human motivation.** Pacific Grove, CA: Brooks/Cole.
FRANKL, V., (1998). **Man's search for meaning** (Revised ed.). New York: Washington Square Press.
GORDON, I., (1975). **Human development: A transactional perspective.** New York: Harper & Row.
JAMES, W., (1997). **The varieties of religious experience** (Reprint ed.). New York: Macmillan.
KOBAL, D., (2001). **Temeljni vidiki samopodobe.** Ljubljana, Pedagoški inštitut (1. izdaja, 3. natis).
KOBAL, Darja, **KOLENC**, Janez, **LEBARIČ**, Nada, (2001). **Temeljni dejavniki učenja in motivacije za učenje v šoli.** Raziskovalno poročilo, Pedagoški inštitut, Ljubljana
MILLER, A., (1991). **Personality types, learning styles and educational goals.** Educational Psychology, 11(3-4), pp. 217-238.
MASLOW, A., (1954). **Motivation and personality.** New York: Harper.
SCHIAMBERG, L., & **SMITH**, K., (1982). **Human development.** New York: Macmillan.
SKINNER, B. F., (1953). **Science and human behavior.** New York: Macmillan.
SOPER, B., **MILFORD**, G., & **ROSENTHAL**, G., (1995). **Belief when evidence does not support theory.** Psychology & Marketing, 12(5), pp. 415-422.
THOMPSON, R., (1971). **A systems approach to instruction.** Hamden, CT: Linnet Books.
WAHBA, A., & **BRIDGEWELL**, L., (1976). **Maslow reconsidered: A review of research on the need hierarchy theory. Organizational Behavior and Human Performance,** 15, pp. 212-240.
ŽAGAR, D., (1991). **Vprašalnik o učni motivaciji.** V: Novak, H. & Pisanski, M. & Arko ,U. & Jurčič , M. & Žagar, D. & Strel, J. & Tihec, J.& Videm, M. & Cerar. M & Skerbinek, M. *Psihosocialno in telesno stanje šolskih učencev z vidika obremenjenosti s šolskim delom. Poročilo o znanstvenoraziskovalni nalogi.* Pedagoški inštitut pri Univerzi, Ljubljana.