

# A SYSTEMS APPROACH TO THE DEVELOPMENT OF EDUCATIONAL STANDARDS FOR FOSTERING PERSONAL VALUES

SYSTEMOWE PODEJŚCIE DO ROZWOJU STANDARDÓW KSZTAŁCENIA  
CELEM BUDOWANIA WARTOŚCI W OSOBOWOŚCI

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## ABSTRACT

This article proposes to consider the education system as a factor in the formation of people's personal values. We examine students' perceptions of the degree to which existing educational standards are oriented towards the formation and development of personal values, as well as formulate proposals for the implementation of a systems approach to the development of educational standards as a factor in improving the existing complex of personal values. The methodology applied included: desk analysis by comparison, deduction, and induction; a questionnaire study; variance, discriminant, factor and morphological analysis. Respondents were segmented according to the criteria "presence of groups of values" — "conjugation of groups of values with variables." University students, i.e., the part of society that is considered the most active and progressive, were found to have a low level of moral and ethical values. After considering the place of education in the macro-environment of the country was substantiated, we propose a number of measures to address the problem of raising the level of values among all participants in the educational process, in order to reduce the gap between the pace of technical advancement and humanitarian development of society.

**Key words:** personal values, educational system, educational standards

## ABSTRAKT

W artykule przyjęto założenie, że obecny poziom rozwoju humanitarnego społeczeństwa pozostaje daleko w tyle za wysokim poziomem jego rozwoju technologicznego. Opóźnienie to jest źródłem niezwykle trudnych wyzwań i problemów, z którymi ludzkość już wcześniej musiała się zmierzyć i których intensywność i poziom złożoności wciąż wzrasta. Autorki artykułu proponują uwzględnienie w analizach systemu edukacji, w tym szkolnictwa wyższego, jako czynnika kształtującego zbiór wartości wyznawanych przez jednostkę. Celem artykułu jest zbadanie sposobu postrzegania przez uczniów stopnia ukierunkowania istniejących standardów edukacyjnych na kształtowanie i rozwój wartości osobowościowych. Dodatkową intencją autora jest sformułowanie propozycji realizacji systematycznego podejścia do kształtowania standardów edukacyjnych jako czynnika, który może przyczynić się do poprawy istniejącego zespołu wartości osobowościowych. Aby osiągnąć to zamierzenie, zastosowano metodologię obejmującą: badania desk research, analizy porównawcze, dedukcję i indukcję; badanie ankietowe; analizę wariacyjną, dyskryminacyjną, czynnikową i morfologiczną. Respondenci zostali podzieleni na grupy według kryterium „obecności grup wartości”, tj. „sprzężenia grup wartości ze zmiennymi analizowanymi w badaniu”. Wyniki analiz wskazują na niski poziom wartości moralnych i etycznych wśród studentów, którzy stanowią tę część społeczeństwa, która jest uznawana za najbardziej aktywną i postępową. Dokonano również analizy miejsca i znaczenia edukacji w makrooczeniu kraju. Opracowano szereg działań mających na celu rozwiązanie problemu podnoszenia poziomu wartości u wszystkich uczestników procesu edukacyjnego w celu zmniejszenia dystansu pomiędzy tempem rozwoju technicznego i technologicznego a tempem rozwoju humanitarnego społeczeństwa.

**Słowa kluczowe:** wartości osobowości, system edukacyjny, standardy edukacyjne

JEL: A13; I23; Z10

## Introduction

Humanity has reached the third millennium AD, having achieved significant success in studying both the infinite microworld and the vast expanses of outer space. All spheres of human activity are developing rapidly, stimulating the acceleration of changes in market relations. This has prompted various new ways of defining the economy, for instance, as a post-industrial economy (Liebiedieva, 2010) or post-industrial globalism (Tolstoukhov, 2003), as an informational economy (Danylovych-Kropyvnits'ka, 2016), innovative economy (Antokhov, 2019), knowledge economy (Krapivny, 2015), or global converged-network financial economy (Bilorus, Vlasov, Hrycenko, & Yefymenko, 2019) and so on. The studies

that argue in favor of each of the above definitions are mostly optimistic, and this optimism is quite understandable, because it is based on an understanding of the progressive vector of human development, raising the standards of quality of life.

When the expression "quality of life" is used, however, it primarily refers to the material world, which today is full of technological, complex, "smart" devices designed to free people from primitive, routine work and enable them to develop harmoniously. However, even a cursory glance at modern society suggests that, albeit with certain exceptions, it is difficult to call an average representative of that society a "harmoniously developed personality" with a high level of personal values (PV). It is easy to demonstrate this by analyzing such social phenomena as the level of aggression in relations of any scale (from interpersonal to interethnic), the dynamics of crime, wars, environmental degradation due to an unethical attitude to the environment, and many others. However, consideration of these problems is not the subject of our study, and they are mentioned here only to illustrate the contrast between humanity's technical and technological advancement, on the one hand, and its humanitarian development on the other.

In other words, regardless of what definition of the economy is adopted today and how innovative the introduced technologies are, the attention paid to fostering PV is invariably small, not only in Ukraine but also in many other countries. In our view, the fact that the level of humanitarian development of society lags behind the current high level of technological development is a source of extremely difficult challenges and problems that have already faced us and continue to grow and become more complicated. These problems are global, and their severity is due to several factors, among which the following occupy an important place: the level of socio-economic development; features of traditions, religion, and the political and legal fields; the values promoted by the social elite of a given country (primarily through examples set by the lives of the elite, their real practical activities and not just declarations); the education system and level of education, etc.

As the authors of the present article represent the education sector, we are naturally most concerned about the impact of the educational component on PV. There have been opportunities for detailed

consideration of this aspect, both during public discussion in the development of educational standards, and further studies of the dynamics of such development — especially, for instance, in terms of the harmonization of Ukrainian standards with those of the EU. The studies published as a result of such research have described in detail the quantitative and qualitative changes that have taken place in the educational standards of Ukraine under the influence of this harmonization (Shulhina, 2018). One of the most important changes is the development of new standards of higher education, which have replaced the Industry Standards of Higher Education. The new standards are based on a competency-based approach and share the philosophy of defining the requirements for specialists, which is the basis of the international project of the European Commission "Tuning Educational Structures in Europe" (TUNING, 2003). However, we believe that neither the sector nor the New Standards have paid sufficient attention to the development of PV.

Given the complexity and multifaceted nature of the deficit of values in society and the causes of this phenomenon, it is not our aim to simplify the situation and exaggerate the existing opportunities and prospects for its improvement. At the same time, we are convinced that the urgency of the problem of humanity and humanism in Ukraine and the world is so high, and the risks of using modern technologies by people with inappropriate values are so significant, that it is necessary to intensify the search for solutions to the problem. In view of the above, we begin with an analysis of existing educational standards in terms of their focus on the formation of PV, as well as determining how students assess the degree of focus of existing standards on the development of their PV.

## Literature review

Our analysis of the literature was carried out in line with the following chain of assumptions:

1 — Galloping rates of technological development (production, management, information, etc.), contrasted against the lagging development of personal values, gives rise to significant risks (for example,

at the global level — humanitarian, man-made and environmental disasters, undemocratic changes, totalitarianism, loss of freedoms, etc.) (ECHO, 2014–2018).

2 — The level of these risks can be mitigated by strengthening the humanitarian component in the education of individuals, primarily through the formation of their values, which is a necessary step towards the creation of a civil society, which in turn is a condition for sustainable economic development.

3 — Despite the fact that the complex of PV is formed mostly at an early age under the influence of a complex set of socio-psychological and other factors (Haugland, 2018), the role of the educational component is significant.

4 — Preparing schoolchildren and university students for a life in fierce global competition, educators have developed educational standards, curricula, and study programs that focus on the acquisition of professional competencies, qualifications and competitiveness in the labor market, while attention to other aspects of harmonious personality development has remained minimized or absent (Ukrainian Ministry of Education and Science, 2021).

5 — For the reasons mentioned in 1, this approach is an anachronistic, and the education system needs to be improved by introducing a systems approach to the development of base educational standards, which would include primarily the education of individuals on strong life values, good physical and mental health, and not just the production of highly qualified specialists. In other words, the individual should be educated in the context of their readiness for the modern challenges of forming a civil society, which is impossible without citizens that take a high degree of responsibility both for themselves (their own moral and physical health) and for the environment (social, political, legal, economic, technical and technological, and environmental).

These assumptions in their general form seem so obvious that they do not require additional justification. However, in the process of formulating them, a scientific approach was followed and was based on the results of an analysis of current educational standards, a large number of literature sources (Toftul, 2014; Beck, 2001; Filisofs'ky, 2002; Golovaty, 2011; Rouz-Akkerman, 2003), as well as largely on personal observations.

However, the information so gathered did not offer answers to the question that interested us most — how to change the education system to improve the complex of PV and thus take another step towards the humanization of society. The search for an answer to this question motivated the objectives and methodology of the present study.

The aim of this study is to examine university students' perceptions of the degree to which existing educational standards are oriented towards the formation and development of personal values, as well as to formulate proposals for the implementation of a systems approach to the development of educational standards as a factor in improving the existing complex of personal values.

## Research methodology

The study proceeded in several stages:

- an analysis of the definitions of "personal values" presented in the literature and approaches to their classification — for this purpose we used the methods of desk research, comparison, deduction and induction;
- the selection of a sample of respondents based on a set of approaches: targeted, quota-based and clustered; the sample included 1,518 respondents (716 men and 802 women) from 5 universities in Kyiv (selected with quotas of about 20% of respondents from each university); the age of the respondents — 19–22 years — ensured the presence of about 25% of each age; the respondents were students of 11 different specialties (5 technical and 6 humanities), including 72–76 representatives from each specialty;
- developing standardized questionnaire seeking to identify students' perceptions of the degree to which existing educational standards are oriented towards on the formation and development of PV, including 16 blocks — this number allowed a sufficient array of answers to be obtained that were needed to analyze the moral and ethical, social, legal and personality-oriented PV groups (15 blocks), and the identification block started the questionnaire; the questionnaire only included closed

questions, which facilitated the coding and systematization of answers at the analysis stage; place of survey — libraries of the selected universities; survey period — October 2019–March 2021;

- processing of the obtained data, identification of the V complexes in the respondents, as well as formulation of conclusions, using the following methods: variance, discriminant and factor analyses, conjugation detection, and structural-functional analysis; all these methods were used automatically using the SPSS software (11th version);
- the identified discrepancies between the declared characteristics in the normative documents and the actual ones of the respondents' personal values were used to develop proposals for the introduction of a systems approach to the development of educational standards; morphological analysis was used for this purpose.

Given the limitations imposed by the article format, we omit further details of the procedure of the study and proceed instead directly to the explanation of the logic of the survey and description of the results.

## Presentation of the material

The research of the PV complex of respondents was conducted on the basis of the classification proposed by the Ukrainian Ministry of Education and Science (2019a). According to this source, the whole set of personal values can be classified into three groups, namely: moral and ethical (dignity, equality, justice, tolerance and cultural diversity, care, honesty and trust); socio-legal (rule of law, intolerance to corruption and favoritism, patriotism, environmental and ethical values, social responsibility) and personality-oriented (self-realization, leadership and freedom).

It should be noted that a variety of approaches to the content and structure of the PV complex can be found in the existing literature. For example, Schwartz and Boehnke (2004) consider the following list of values: independence, security, discipline and order, freedom of action, enthusiasm, empathy, sensitivity, commitment to progress, creativity, innovation, responsibility, entrepreneurship, wealth, comfort and prestige. However, the classification set out by the Ukrainian Ministry of Education

and Science (2019a) was selected because the values listed in this source are fundamental ones, based on which the perception, understanding and, consequently, the presence of the whole range of derivative personal values can be based.

The tasks were meant to identify the respondents' understanding of the essence of the listed ethical categories and describe their perceptions of the presence in the existing educational standards of elements aimed at the development of the given PV in the system of student values.

These tasks determined the structure of the questionnaire. The identification block was needed to determine the possible impact of such factors on respondents' responses such as age, gender, specialty, place of study, region of origin, social origin, characteristics of the reference group, types of additional education, hobbies, obstacles / achievements, ideal to follow, life goals and teachers. Each of the next 15 blocks contained a set of questions, the first of which was a question in the form of a closed test with a Likert scale, the answers to which allowed to establish the degree of agreement or disagreement of the respondent with the proposed definition.

The answers to the successive questions in the blocks, formulated in the form of semantic differentials, became a source of information for the main task, as well as the definition of conjugation and the density of the relationships identified. In addition to each block, questions in the form of projection tests were included, on the basis of the answers to which it was determined which factors in the opinion of the students themselves had the greatest influence on the formation of their PV. In addition, responding to the projection tests, students gave information about the structure of the student environment according to the criteria of the degree of PV presence.

The interpretations of the categories which were the basis of the study, and which were chosen from a wide range of options, taking into account their relevance, completeness and accuracy of formulation, are as follows (drawn from: Beck, 2001; Filisofs'kyi entsyklopedychnyi slovnyk, 2002; Rouz-Ackerman, 2003; Toftul, 2014; Universal'nyi slovnyk, 2006):

*Dignity* is a concept of moral consciousness, which expresses the idea of the value of any person as a moral person, as well as the category of ethics, which means the particular moral attitude of the individual to themselves and society's attitude to them, which determines the personal value.

Equality, in turn, was viewed from two standpoints — as social equality and equality before the law.

*Social equality* is a social system in which all members of society have the same status in a particular area. Both the political and economic aspects of social equality are considered in the literature. The political aspect of social equality concerns the rules of public administration: the right to participate in elections, the rules for determining leaders, the rights and responsibilities of leaders, *equality before the law*. The economic aspect, in turn, concerns the process of distribution of benefits: the right to work, the distribution of resources, equality of opportunities.

Equality before the law is one of the fundamental constitutional requirements, an important condition for the existence of the rule of law, the basic principle not only of the exercise of individual rights and freedoms, but also the functioning of statehood itself. The real equality of the person before the law and the court is seen as a sign of a law-based state, which ensures the rule of law in all spheres of state and public life.

*Justice* is morality and virtue, vulnerability to both public good and evil. Justice is a socio-ethical and moral-legal category, one of the basic principles of law. The concept of justice means the presence of rights and principles in the social world and expresses their correctness, imperativeness and necessity.

*Tolerance* is respect for the right of another person to be what he or she is. A tolerant person is someone who respects the interests, habits and beliefs of other people, seeks to understand them and reach mutual agreement without violence and pressure. Tolerance for other people's way of life, behavior, customs, feelings, ideas and beliefs is a pre-condition for the stability and unity of societies, especially those that are not homogeneous in religious, ethnic or other social dimensions.

*Care* is a set of actions in relation to an object aimed at its well-being; attention to someone's needs; caring for someone and something.

*Honesty* is one of the main facets of human virtues, a moral quality that reflects one of the most important requirements of morality. It includes truthfulness, principledness, fidelity to commitments, subjective belief in the rightness of the case, sincerity to others and to oneself in relation to the motives by which a person is guided, recognition and observance of other people's rights to what legally belongs to them.

*Trust* means confidence in the decency and friendliness of the other party with whom the person who trusts is in a relationship. This confidence is based on the experience of a person who trusts the other person.

The *rule of law* is a fundamental legal principle and doctrine that states that no one is above the law and no one can be punished by the state except for breaking the law, and that no one can be convicted of breaking the law otherwise than in the manner prescribed by law.

Interpretation of the "intolerance to corruption and favoritism" category is divided into components. *Intolerance* is an antonym of the term "tolerance", i.e., an unwillingness/inability to be tolerant to someone / something or an intolerant attitude.

*Corruption* is a negative social phenomenon that manifests itself in the criminal use by officials, public and political figures of their rights and job opportunities for the purpose of personal enrichment.

*Patriotism* is a civic feeling, the content of which is love for the homeland and willingness to sacrifice one's own interests for its sake, devotion to the people, pride in the national culture, a special emotional experience of belonging to a country and its citizenship, language, history, traditions, and a willingness to act in the interests of the homeland and stand up for it if necessary.

*Ecological and ethical values* pertain to the moral and spiritual aspects of the human attitude to the living world and inanimate nature, proper human relations with nature based on the recognition of the moral status of nature, high appreciation of its inner and intangible values, respect for natural rights.

*Social responsibility* is a general sociological category that expresses a person's conscious attitude to the requirements of social necessity, responsibilities, social tasks, norms and values. Responsibility means awareness of the essence and importance of human activity, its consequences for society and social development, the actions of a member of society in terms of the interests of society or its specific group.

*Self-realization* is the realization of an individual's potential when they are aware of themselves.

The category of *leadership* is currently deeply studied and characterized ambiguously. There are several approaches to its interpretation:

- leadership as a kind of power, the specificity of which is the direction from top to bottom, as well as the fact that its bearer is not the majority, but one person or group of people who motivate other members of society to actions;
- leadership as a managerial status, senior and social position associated with decision-making by directing and organizing the collective behavior of some or all members of society;
- leadership as the ability to influence other people.

Freedom is the ability to make choices according to one's desires, interests, and goals based on knowledge of objective reality. Legally, freedom is a person's ability to behave in accordance with their will, that is, to do whatever is desired, but not something that harms the freedom and rights of others.

The use of a combination of targeted, quota-based and clustered sampling methods enabled the proportional participation of respondents of different ages, genders, specialties, etc., to be ensured, as provided for in the research program,. To obtain information about the significance of the influence of these factors on the respondents' perception of the value orientation of educational standards, a one-factor analysis of variance was used. Firstly, it should be noted that the assessments were carried out on a 5-point scale, from 1 — minimum attendance to 5 — maximum attendance. However, Tables 1–3 comprise grades in a range from 1 to 3 points, as there were no grades outside the specified limits. In this analysis, a score of 1 was considered very low, 2 — low, 3 — average. The average values of variables and maxima by factor layers made it possible to identify three groups of variables according to the degree of influence on the respondents' assessments and to make preliminary assumptions. From the large number of variables that were taken for analysis, one variable from each of the three groups in Table 1 were included.

Given that the respondents' perception of the personal values within one group was almost the same, the fragments selected for illustration represented average statistics for the whole group of moral and ethical (Table 1), social and legal (Table 2) and personality-oriented (Table 3) characteristics.

**Table 1. Three-layer analysis of variance of the factor "assessment of the focus of educational standards on the formation of moral and ethical personal values"**

Variables	Codes	Number of observations	Average values	Standard deviations	Standard errors of averages	95% confidence intervals		Min	Max
						Lower limit	Upper limit		
Specialization	1	1,158	1.43	0.497	0.036	1.40	1.46	1	11
	2	322	1.49	0.501	0.038	1.41	1.47	1	11
	3	18	1.61	0.489	0.044	1.43	1.49	1	11
	Total	1,498	1.44	0.496	0.037	1.41	1.47	1	11
Social Origin	1	1,224	2.92	1.351	0.134	2.92	3.23	1	5
	2	257	2.95	1.345	0.125	2.76	3.14	1	5
	3	19	2.93	1.361	0.132	2.70	3.19	1	5
	Total	1,500	2.93	1.349	0.133	3.09	3.26	1	5
Ideal to Emulate	1	1,227	5.02	2.123	0.189	4.62	5.42	1	7
	2	255	5.05	2.121	0.194	4.66	5.45	1	7
	3	16	5.01	2.134	0.197	4.69	5.43	1	7
	Total	1,498	5.02	2.123	0.191	4.63	5.44	1	7

According to the data in Table 1, more than 77% of respondents believe that the focus of educational standards on the formation in students of the group of moral and ethical personal values is extremely insufficient, and only 1.2% of respondents gave this indicator an average rating. Table 1 presents data on three variables, the first of which — "Specialization" — demonstrates the practical absence of its impact on the assessments of respondents. At the same time, the second variable "Social Origin" had a slight influence on the respondents' assessments, and the third factor was the most influential — the presence of an ideal for the respondents to emulate. We can assume that the very fact of the existence of such an ideal in the life of a young person, which is the embodiment of high PV, is to some extent evidence of the presence of this PV in the respondent.

Estimates of the group of social and legal PV differed a little from the previous ones — the vast majority pointed to the low level of focus of educational standards on their formation (Table 2).

**Table 2. Three-layer analysis of variance of the factor "assessment of the focus of educational standards on the formation of socio-legal personal values"**

Variables	Codes	Number of observations	Average values	Standard deviations	Standard errors of averages	95% confidence intervals		Min	Max
						Lower limit	Upper limit		
Gender	1	1,153	1.34	0.477	0.038	1.27	1.42	1	2
	2	326	1.38	0.487	0.033	1.32	1.45	1	2
	3	21	1.41	0.493	0.029	1.35	1.47	1	2
	Total	1,500	1.35	0.484	0.036	1.29	1.43	1	2
Region of Origin	1	1,216	3.41	1.428	0.117	3.29	3.76	1	16
	2	261	3.47	1.429	0.109	3.24	3.72	1	16
	3	22	3.43	1.412	0.123	3.25	3.51	1	16
	Total	1,499	3.42	1.428	0.118	3.28	3.73	1	16
Information Channels	1	1,219	4.72	1.636	0.133	4.46	4.99	1	7
	2	259	4.84	1.798	0.127	4.49	5.10	1	7
	3	22	4.96	1.844	0.136	4.53	5.18	1	7
	Total	1,500	4.75	1.691	0.134	4.48	5.04	1	

The "Gender" variable is among the variables that had no significant effect on the presence of V. This group also includes such variables as: age, university, specialty, etc. The "Region of Origin" variable indicates the area in which the respondent lived before entering university. This variable indicated the origin of the respondent from one of the 16 regions whose representatives were included in the sample and was included in the list because the regions of Ukraine have certain differences in attitudes towards the values of civil society, such as justice, dignity, intolerance to corruption, etc., which could affect the assessments of respondents.

Taking into account the three variables presented in Table 2, only information channels had a significant impact on the respondents' perception of the categories, and hence on their assessments. The explanation provided to the respondents in the questionnaire to the "Information Channels" variable indicated the need to select the most important sources of information for the respondent in various spheres of life from the provided lists. It is quite logical that this variable showed a significant connection with the choice of assessments by respondents.

The frequency distribution of assessments in relation to the group of personality-oriented PV is somewhat different (Table 3). Compared to the previous two groups, many more respondents (from 21.7% to 27.6%) believed that the focus of educational standards on the formation of personality-oriented PV is unexceptional.

**Table 3. Three-layer analysis of variance of the factor "assessment of the focus of educational standards on the formation of personality-oriented personal values"**

Variables	Codes	Number of observations	Average values	Standard deviations	Standard errors of averages	95% confidence intervals		Min	Max
						Lower limit	Upper limit		
Place of Study	1	542	1.32	0.475	0.037	1.28	1.41	1	2
	2	631	1.36	0.484	0.038	1.31	1.44	1	2
	3	326	1.41	0.492	0.029	1.34	1.46	1	2
	Total	1,499	1.35	0.484	0.037	1.29	1.42	1	2
Reference Group	1	624	2.92	1.351	0.134	2.92	3.23	1	14
	2	557	2.95	1.345	0.125	2.76	3.14	1	14
	3	319	2.93	1.361	0.132	2.70	3.19	1	14
	Total	1,500	2.93	1.349	0.133	3.09	3.26	1	14
Achievements	1	599	5.02	2.123	0.189	4.62	5.42	1	10
	2	485	5.05	2.121	0.194	4.66	5.45	1	10
	3	414	5.01	2.134	0.197	4.69	5.43	1	10
	Total	1,498	5.02	2.123	0.191	4.63	5.44	1	10

In addition, the share of those who gave the analyzed indicator the lowest scores almost halved compared to the data in Table 1 (77% to 36.2–41.6%). In our opinion, the better perception of this group of characteristics is explained by the positive expectations of students studying at university precisely to increase the level of freedom, leadership, and self-realization. They perceive very often their academic success as a guarantee of achieving these goals, which has a positive impact on the assessment of educational standards. However, scores from 1 to 3 on a 5-point scale show the necessity to improve on the situation.

The correlation matrix between some of the variables involved in the analysis, which according to the respondents' assessments could influence

the formation of their V, indicates the existence of connections of different strength. Thus, there is an observable relationship between the variables "Additional Education", "Achievements" and "Ideal to Emulate". The presence of an ideal almost always motivated respondents to obtain additional knowledge, and this in turn contributed to new achievements (Table 4).

**Table 4. Fragment of the correlation matrix of group variables**

Variables	Additi-onal education	Achieve-ments	Ideal to follow	Social origin	Reference group	Specialty	Hobbies	Teachers	Life goals
Additional Education	1.000	0.637	0.528	0.053	0.216	0.160	0.251	0.126	0.427
Achievements	0.637	1.000	0.461	0.098	0.110	0.144	0.273	0.298	0.381
Ideal to Emulate	0.528	0.461	1.000	0.152	0.241	0.059	0.403	0.189	0.659
Social Origin	0.053	0.098	0.152	1.000	0.323	0.319	0.097	0.041	0.073
Reference Group	0.216	0.110	0.241	0.323	1.000	0.276	0.194	0.058	0.136
Specialty	0.160	0.144	0.059	0.319	0.276	1.000	0.235	0.162	0.193
Hobbies	0.251	0.273	0.403	0.097	0.194	0.235	1.000	0.191	0.269
Teachers	0.126	0.298	0.189	0.041	0.058	0.162	0.191	1.000	0.182
Life goals	0.427	0.381	0.659	0.073	0.136	0.193	0.269	0.182	1.000

The average correlation was observed between the variables "Social Origin", "Reference Group" and "Specialty", which indicates a slight influence of the respondents' social environment on their choice of communication groups and future profession. A small correlation was found between such variables as "Hobbies", "Teachers" and "Life Goals". It follows that the influence of teachers on students' choice of hobbies, and hence their life goals is extremely small. Given that an individual's hobbies and life goals are some form of indicator of their PV, the following assumption about the same insignificant influence of teachers on the formation of PV.

Another aspect of the study concerned the identification of the respondents' assessment of the degree of presence of carriers of the studied V in the student environment (table 5).

**Table 5. Segmentation of respondents by the criteria: "Presence of PV groups" — "conjugation of PV groups with variables", %**

Presence of V groups	Conjugation of V groups with the most influential variables		
	High of all three	Average (there are deviations)	Low (contrasts present)
High in 2 groups	1 Convinced Public Activists, 2.4	2 Followers of Public Activists, 4.7	3 Sympathize with Public Activists, 6.4
Average (dominated by PO)	4 Simulators of Public Activists, 17.5	5 Compromise Seekers, 21.3	6 Indifferent to Civil Society, 8.2
Low of all three (their imitation)	7 Conformists, 32.1	8 Alienated from Civil Society, 1.8	9 Aggressive Towards Civil Society, 4.6

Notes:

1 — PO — abbreviations from "personality-oriented";

2 — the percentage of certain groups is indicated in parentheses

This part of the analysis was considered appropriate in the context of identifying the current situation and identifying opportunities to increase the impact of higher education in the following chain: educational standards, including higher education → development of PV, including level of responsibility → harmoniously developed personality → formation of civil society. It is in this context that projective tests were conducted on the students' perception of their classmates as carriers of high PV, the level of their readiness to defend these PV in today's imperfect society.

The presence of all three groups of PV (according to the respondents) was measured on a 10-point scale and was considered as high if it was from 7 to 10 points, medium — 4–6 points, low — below 4 points. The conjugation

between the level of V presence and influential variables was determined by Pearson's formula. All cases when the specified formula showed the most significant chi-square value ( $p < 0.001$ ), were assigned to groups 1, 4 and 7; cases with a relatively significant chi-square value ( $p < 0,01$ ) — to groups 2, 5 and 8; and in cases  $p =$  or  $> 0.01$  to groups 3, 6 and 9.

According to the most pronounced characteristics and the level of activity/civic position (from the point of view of the respondents), the outlined segments were given conditional names.

From the point of view of respondents, "Convinced Public Activists" (1) are idealists, with a high level of self-motivation for the development of their own PV and at the same time active advocates of the spread of progressive ideas in society. Representatives of segments 2 and 3 differ from them only in the degree of activity in defending their own values in different life situations.

Quite a large segment is formed by the "Compromise Seekers" (5), whose behavior is determined by the predominance in the system of their values of exclusively personality-oriented V, interpreted in a somewhat distorted fashion (for example, freedom for me and freedom for others are understood differently), which in the absence of other PV groups does not contribute to sustainable moral priorities.

The main feature of "Simulators of Public Activists" (4) is the desire to build their own career using popular slogans and the trust of those who sincerely believe in them. However, the largest was the share of "Conformists" (7), who, given the lack of stable moral convictions, adapt very well to any conditions due to their passive acceptance of the existing order of things.

The level of rejection of high V in other segments increases from 6 to 8 and then to 9. Their position within the matrix (Table 5) shows that the "Indifferent" (6) have a mediocre perception of PV, and at the same time they underestimate the importance of civil society as an environment and conditions for their implementation. The term "Alienated" for segment (8) was chosen to emphasize their rejection of both PV and civil society, albeit without the aggression shown by segment 9.

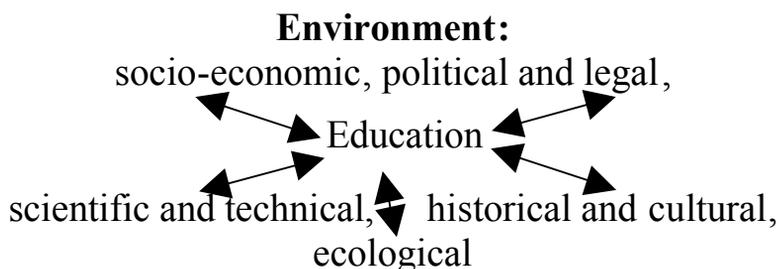
It will be recalled that these are the results of only a single, quantitative study, which therefore need further confirmation and complementation through qualitative research. However, even the data obtained give grounds to draw some conclusions:

- only 7.1% of respondents (the sum of the shares of quadrants 1 and 2) are characterized by a high level of presence of PV and show an active civil position on their advocacy;
- 27.7% of respondents (quadrants 3 and 5) can be considered as a group that is positive about progressive change, but without obvious civic activity;
- 49.6% of respondents (quadrants 4 and 7) are carriers of unstable V with a tendency to their change in any direction depending on the circumstances;
- 14.6% of respondents (quadrants 6, 8 and 9) are the most difficult group in terms of PV development.

In our opinion, these data indicate a low level of PV among university students, i.e., the part of society that is considered the most active and progressive. We are convinced that this conclusion should be considered as a sufficient argument to intensify the development of appropriate measures, and especially in the field of improving educational standards based on a systems approach.

The systems approach will provide the consideration of education as a system of interconnected and therefore interdependent elements (Fig. 1).

**Figure 1. The place of education in the macro-environment of the country**



Firstly, education depends significantly on the complex environment in which it operates. On the one hand, it is a derivative of all the factors of this environment, and on the other — it is their determinant. Therefore,

ignoring any of these factors is inevitably reflected in the result — that is, at the level of education of the population, the system of PV of its members, and hence the competitiveness of the country. Examples include the decline in the quality of education through underfunding and the deterioration of the psychological atmosphere at universities in Ukraine due to their untimely gaining of autonomy. We consider the granting of autonomy to universities in Ukraine to have been untimely due to the low level of social and legal responsibility, which in practice often leads to administrative arbitrariness, difficult working conditions for teachers etc., and in general to conditions unacceptable for the development of PV. Hence, the first steps to implementing a systems approach should be as follows: 1) the creation of a subsystem of information support solutions, which will allow for the development of 2) a thorough and impartial analysis of the causal links of education with its environment and 3) a strategy for the development of education that is most appropriate to real conditions.

Secondly, education involves the transition of participants in the educational process from a lower level of education to a higher one, and this transition should be as effective as possible. We believe that the effectiveness of education (in general) and the formation of PV (in particular) will be significantly higher if two conditions are met: 1) ideological unity of all educational levels, and 2) sufficient participation and development of each element involved in the educational process.

1) The ideological unity of educational standards at all levels is a necessary condition for the formation of stable PV in individuals. According to the National Qualifications Framework (Ukrainian Ministry of Education and Science, 2019b), 11 levels of education are represented in Ukraine (from preschool to the academic level of higher education). The main ideology of education, regardless of its level, should be the education of harmoniously developed individuals with high PV. However, our analysis of higher education standards has shown that they focus exclusively on instilling professional competencies in students, whereas attention to the development of a mentally and physically healthy personality is minimal. Curricula are built according to standards, and therefore do not take into account the

needs of young people. The result, although in a very simplified form, is presented in Tables 4 and 5.

- 2) In the system of higher education, we distinguish the following elements: the core of the system — teachers and students, as well as all possible subsystems — financial, infrastructural, technical, etc. It is clear that all subsystems are important, but teachers/lecturers are crucial for the development of students — not only their qualifications, but also their PV. From Table 4, it follows that a small proportion of teachers are considered by students to be an ideal to emulate, and this is the basis for revising both the current criteria for the selection of lecturers and the requirements for the conditions for their development.

The following sequence of such measures could change the situation for the better:

- to develop and implement a set of progressive and time-tested models of education funding to attract the best applicants for the position of teachers (this is especially relevant in terms of the reduction in public funding for education);
- to adapt the structure of teachers' pedagogical load to the requirements of educational standards developed on the basis of the competence approach; that is, to take into account the time required for the teacher to continuously update their theoretical knowledge and gain the necessary practical experience, as well as for physical and spiritual self-development, which also involves the development of their PV;
- to include in the list of criteria of conformity of the candidate for the position of teacher a complex of required PV (which is simple at the current level of development of pedagogical psychology and the corresponding tests) in addition to being qualified in a particular field; to carry out a mandatory examination of the applicant for their psychological and moral fitness to set a positive example for students when hiring, as well as during ongoing certifications;
- to give more importance to feedback and the evaluation of teachers by students; however, this requirement only makes sense if there is a well-developed methodology for interviewing and data analysis, which will ensure an objective assessment of the teacher's work;

- to translate the principle of "student-oriented" education from the declarative to the practical plane; to do this, it is necessary to significantly simplify the bureaucratic structure of universities, aimed today at maintaining authoritarianism in higher education, and to leave only those administrative units that provide qualitative organization of educational and research processes.

Clearly, the proposed proposals are not comprehensive; however, we consider them a priority in solving the problem of raising the level of PV among all participants in the educational process — as a first step towards the greater humanization of society, thus reducing the gap between technical and humanitarian development that in turn should reduce the level of risk in our lives.

## Conclusions

An important determinant of the complexity of modern global problems is the growing gap between the levels of technological advancement and humanitarian development of society. This gap, and therefore all the risks associated with it, can be reduced if education, including higher, focuses on fostering harmoniously developed individuals with strong values. However, even the recently developed standards of higher education for the new generation in Ukraine, which are based on a competency-based approach, are aimed primarily at educating a highly qualified specialist without taking their values into account.

Our study of student perception of different specialties of the degree of orientation of existing educational standards on the formation and development of their values in groups of moral, ethical and socio-legal values has shown that, on a 5-point scale, the indicator received scores ranging from 1 point (more than 77% of respondents) up to 3 points (about 1.2% of respondents). In the group of personality-oriented values, these indicators were slightly better: 41.6% and 27.6%, respectively. The correlation matrix of group variables showed a weak correlation between the variables such as "Hobbies", "Teachers" and "Life Goals", which showed the slight influence of teachers on student choices of hobbies, life goals, and hence values.

Segmentation of respondents by the criteria of "presence of groups of values" — "conjugation of groups of values with variables" revealed only 7.1% of respondents with a high level of values and active citizenship; 27.7% are positive about progressive changes, but without obvious civic activity; 49.6% — with unstable values; and 14.6% have a low level.

We propose a systems approach, whereby education is considered as a system of interconnected and interdependent elements. Education significantly depends on the environment of its functioning, so the implementation of a systems approach should begin with the following measures: the creation of the subsystem of informational support of solutions, which will conduct a thorough and unbiased analysis of causal links between education and its environment, and developing a strategy for the development of education that is the most appropriate for the real conditions.

In addition, it is necessary to ensure the ideological unity of all educational levels with the common, overarching goal — the education of harmoniously developed individuals with strong values, which can be reached by sufficient participation and development of each element involved in the educational process. Achieving these goals will be possible as a result of the development and implementation of a set of models for financing of education — to attract the best candidates for teaching positions; adaptation of the structure of teachers' pedagogical workload to the requirements of educational standards, taking into account the development of their values; introduction of teacher values to the list of criteria of conformity of the candidate for the position of teacher, in addition to qualification in a particular field; testing applicants for psychological and moral suitability to be a positive example for students when hiring, as well as during ongoing certifications; giving more weight to the assessment of teachers by students, given the objectivity of such assessment; translating the principle of "student-oriented" education into practice by simplifying the bureaucratic structure of universities and ensuring high-quality organization of educational and research processes.

## References

1. Antokhov, A. & Kotel'ban, C., (2019). Reguliuvannia innovatsiynogo rozvytku ekonomiky v umovakh globalizatsiyi: zmist, metody, instrumenty, [Regulation of innovative economic development in the context of globalization: content, methods, tools]. *Innovatsiyna ekonomika*, 1–2(78), 41–35. Retrieved from: [http://ie.at.ua/IE\\_2019/inneko\\_1-2-78-2019.pdf](http://ie.at.ua/IE_2019/inneko_1-2-78-2019.pdf)
2. Beck, I., (2001). Pochuttia tsinnosti inshoi liudyny jak moral'nyy priorytet osobystosti, [Sense of value of another person as a moral priority of the individual]. *Pochatkova shkola*, 12, 32–35.
3. Bilorus, O., Vlasov, V., Hrycenko, A., & Yefymenko, T., (2019). *Global'na konvergentno-merezheva finansova ekonomika*, [Global converged-network financial economy]. Kyiv, Globe Edit, 612. Retrieved from: <http://www.nas.gov.ua/EN/Book/Pages/default.aspx?BookID=0000015932>
4. Danylovych-Kropyvnits'ka, M., (2016). Informatsiyna ekonomika yak platforma merezhyzatsiyi, [Information economy as a networking platform]. *Ekonomika i suspil'stvo*, 7, 273–278. Retrieved from: [http://economyandsociety.in.ua/journal/7\\_ukr/46.pdf](http://economyandsociety.in.ua/journal/7_ukr/46.pdf)
5. ECHO — European Commission, Directorate-General for European Civil Protection and Humanitarian Aid Operations, (2020). *Combined evaluation of the European Union's humanitarian interventions in Iraq and in the protection sector, 2014–2018: final report*, Publications Office. <https://data.europa.eu/doi/10.2795/492838>
6. *Filosof's'kyi entsyklopedychnyi slovnyk*, (2002). [Philosophical encyclopedic dictionary], Kyiv, Instytut filosofii imeni Grygoriia Skovorody NAN Ukrainy, Abrys, 74. Retrieved from: [https://chtyvo.org.ua/authors/Shynkaruk\\_Volodymyr/Filosofskyi\\_entsyklopedychnyi\\_slovnyk/](https://chtyvo.org.ua/authors/Shynkaruk_Volodymyr/Filosofskyi_entsyklopedychnyi_slovnyk/)
7. Golovatyi, S., (2011). Triada evropejskych tsinnosti — verhovenstvo prava, demokratsiia, prava liudyny — jak osnova ukrains'kogo konstytutsiinogo ladu, [The triad of European values — the rule of law, democracy, human rights — as the basis of the Ukrainian constitutional order]. *Pravo Ukrainy*, 5, 159–174.
8. Gonzales, Ju. & Wagenaar, R., (2003). *Tuning Educational Structures in Europe, Final Report, Phase One*. Retrieved from: [http://tuningacademy.org/wp-content/uploads/2014/02/TuningEUI\\_Final-Report\\_EN.pdf](http://tuningacademy.org/wp-content/uploads/2014/02/TuningEUI_Final-Report_EN.pdf)
9. Haugland, B. & Lassen, R., (2018). Professional formation through personal involvement and value integration. *Nurse Education in Practice*, 29, 64–69. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S1471595317301269>
10. Krapivny, I., Prokopenko, O., & Shkola, V., (2015). Kontseptual'ni modeli ekonomiky znan', [Conceptual models of knowledge economy]. *Mechanism of Economic Regulation*, 1, 55–67. Retrieved from: [https://mer.fem.sumdu.edu.ua/content/acticles/issue\\_24/IVAN\\_V\\_KRAPIVNY\\_OLGA\\_V\\_PROKOPENKO\\_VIKTORIA\\_YU\\_SHKOLAConceptual\\_Mode\\_l\\_of\\_the\\_Knowledge\\_Economy.pdf](https://mer.fem.sumdu.edu.ua/content/acticles/issue_24/IVAN_V_KRAPIVNY_OLGA_V_PROKOPENKO_VIKTORIA_YU_SHKOLAConceptual_Mode_l_of_the_Knowledge_Economy.pdf)
11. Liebidieva, L., (2010). Postindustrial'na ekonomika ta postindustrial'ne suspil'stvo: kryteriyi rozmezhuvannia ta isnujuchi modeli, [Post-industrial economy and post-industrial society: demarcation criteria and existing models]. *Ekonomichna teoriia*, 4, 29–36. Retrieved from: [http://www.irbis-nbuv.gov.ua/cgi-bin/irbis\\_nbuv/cgiirbis\\_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP\\_meta&C21COM=S&2\\_S21P03=FILE=&2\\_S21STR=Vchtei\\_2010\\_4\\_6](http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP_meta&C21COM=S&2_S21P03=FILE=&2_S21STR=Vchtei_2010_4_6)

12. *Politychna entsykopediia*, (2011). [Political Encyclopedia]. Kyiv, Parlaments'ke vydavnytstvo. Retrieved from: [https://chtyvo.org.ua/authors/Shapoval\\_Yurii/Politychna\\_entsykopediia/](https://chtyvo.org.ua/authors/Shapoval_Yurii/Politychna_entsykopediia/)
13. Rouz-Ackerman, S., (2003). *Korrupsiia i gosudarstvo. Prichyny, sledstviia, reform*, [Corruption and the state. Causes, effects, reforms]. Moscow, Logos.
14. Schwartz, S. & Boehnke, K., (2004). Evaluating the structure of human values with confirmatory factor analysis. *Journal of Research in Personality*, 38. 230–255.
15. Toftul, M., (2014). *Suchasnyy slownyk z etyky*, [Modern dictionary of ethics], Zhytomyr, Vydavnytstvo Zhytomyrs'kogo Derzhavnogo Universytetu imeni I. Franka, 416. ISBN 978-966-485-156-2
16. Tolstoukhov, A. & Parapan, I., (2003). Kontseptual'ni pidvalyny globalizatsiyi, [Conceptual foundations of globalization]. *Praktuchna filisofiya*, 3, 3–10.
17. Ukrainian Ministry of Education and Science (2019a). *Tsinnisni oriientyry suchasnoyi Ukrayins'koyi shkoly*, (2019). [Values of the Modern Ukrainian School]. Ministerstvo Osvity i Nauky Ukrainy, 63. Retrieved from: <https://mon.gov.ua/storage/app/media/Serpneva%20conferentcia/2019/Presentasia-Roman-Stesichin.pdf>
18. Ukrainian Ministry of Education and Science (2019b). *Natsional'na ramka kvalifikatsii*, (2019). [National Qualifications Framework]. Retrieved from: <https://mon.gov.ua/ua/tag/natsionalna-ramka-kvalifikatsiy>
19. Ukrainian Ministry of Education and Science (2021). *Zatverdzeni Standarty Vyshchoyi Osvity* [Approved standards of higher education]. Ministerstvo Osvity i Nauky Ukrainy. Retrieved from:
20. *Universalnyi slownyk-entsyklopediia*, (2006). [Universal dictionary-encyclopedia]. 4th edition, Kyiv, Teka. Retrieved from: <http://irbis-nbuv.gov.ua/ulib/item/UKR0008949> <https://mon.gov.ua/ua/osvita/visha-osvita/naukovo-metodichna-rada-ministerstva-osviti-i-nauki-ukrayini/zatverdzeni-standarti-vishoyi-osviti>

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