BRAIN. Broad Research in Artificial Intelligence and Neuroscience
ISSN: 2068-0473 | e-ISSN: 2067-3957
Covered in: Web of Science (WOS); PubMed.gov; IndexCopernicus; The Linguist List; Google Academic; Ulrichs; getCITED; Genamics JournalSeek; J-Gate; SHERPA/RoMEO; Dayang Journal System; Public Knowledge Project; BIUM; NewJour; ArticleReach Direct; Link+; CSB; CiteSeerX; Socolar; KVK; WorldCat; CrossRef; Ideas RePeC; Econpapers; Socionet.

2023, Volume 14, Issue 1, pages: 231-242 | https://doi.org/10.18662/brain/14.1/416
Submitted: April 4th, 2022 | *Accepted for publication:* December 3rd, 2022

Hubristic Motivation as a Self-Regulation Factor in Primary School in the Context of Neuropsychological Research

Viktoriia NADON[1],
Viktoriia FEDORYK[2],
Karyna FOMENKO[3],
Nataliia DIOMIDOVA[4],
Marat KUZNIETSOV[5],
Mariia TATIIEVSKA[6]

[1] PhD student of the Department of Psychology, H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine, https://orcid.org/0000-0003-1939-1980, Vik_Tory183@ukr.net
[2] Assistant of the Department of Psychology, Berdyansk State Pedagogical University, Ukraine, https://orcid.org/0000-0002-9446-330X, fedorikvv@gmail.com
[3] Full doctor in Psychology, professor of psychology department, H. S. Skovoroda Kharkiv national pedagogical university, Ukraine, https://orcid.org/0000-0003-2511-6803, karinafomenko1985@gmail.com
[4] PhD in Psychology, Associate Professor, Department of Psychological and Pedagogical Anthropology, H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine, https://orcid.org/0000-0002-2488-0220, nataliia.diomidova@gmail.com
[5] Doctor of Science in Psychology, Professor of the Departament Psychology, H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine, https://orcid.org/0000-0001-7662-9938, marat704@ukr.net
[6] Associate professor of the Department of Social System Control Pedagogy and Psychology named after I. A. Ziaziun, National Technical University, Ukraine, pochta939@gmail.com

Abstract: *The article highlights the conceptual aspects of personality motivation as an important phenomenon of human well-being achievement. During the analysis of theoretical approaches to the definition of hubristic motivation highlighted the psychological phenomenon of personality self-regulation as a manifestation of neurophysiological processes. The article presents the findings of scientists regarding motivation factors, in particular, the principle of self-regulation formation in the context of pedagogy and neuropsychology. The components of the psychological aspect of self-regulation in the context of self-awareness and determination of personality behavior, which contributes to self-realization and socialization are analyzed. In order to determine the most effective factors of personal motivation for self-development, the neurophysiological characteristics of the individual were determined. The article is based on the results of an experimental study, namely, determining the indicators of motivation to learn among primary school students as a manifestation of self-regulation in achieving success in a particular case. The study of motivation was carried out according to the Milman method. The indicators of the study became the basis for determining the effectiveness of hubristic motivation as a neurophysiological manifestation of personality. The study was conducted on the basis of the integrative method of synthesis and analysis, based on the results of the research, descriptive and scientific method of studying the basics of neuropsychology and neuropedagogy. The method of questioning was used during the research on the method of determining personality motivation. The results of the study became the basis for conclusions about the factors of self-regulation of personality in elementary school as a manifestation of hubristic motivation.*

Keywords: *Neuropsychology; neuropedagogy; self-realization; socialization; personal self-development.*

How to cite: Nadon, V., Fedoryk, V., Fomenko, K., Diomidova, N., Kuznietsov, M., & Tatiievska, M. (2023). Hubristic Motivation as a Self-Regulation Factor in Primary School in the Context of Neuropsychological Research. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 14*(4), 231-242. https://doi.org/10.18662/brain/14.1/416

Introduction

Today's society is at the stage of development of innovative digital technologies, which have formed the information space for personal development. New challenges form the need to constantly develop and generate new ideas that contribute to the evolution of society in the progress of innovative and information world. Therefore, in the context of the development of the present world, there is a need to form a personality capable of developing effectively, to manifest their individual abilities in the implementation of progressive ideas, which should be the perspective of today's world in the future.

Considering the tendency of society's orientation towards innovativeness and initiation of individualization, the problem of personality formation research in the present postmodern world arises. In particular, the focus of the study is displaced on the educational factor of personality formation. Especially important is the phenomenon of psychological manifestation of personal growth. This vector of research is insufficiently covered by scientists, which determines the special relevance, in particular in the context of the rapid development of information and communication technologies in public life. An important topic for research is the definition of hubristic personal motivation as a phenomenon of self-regulation, the definition of behavior that contributes to the achievement of well-being for the individual in the conditions of informational social life.

The work was carried out on the basis of theoretical statements of scientists in the context of neuropsychological research covering scientific approaches to self-regulation of a personality (Prots et al., 2021; Sarancha et al., 2021). Thus, some researchers assert that features of self-regulation need to be studied in more detail (Ananiev, 1980; Berne, 1992). Also, the interdependence of hubristic motifs at different age stages of self-consciousness development requires special attention.

The purpose of this article is to identify neuropsychological factors in the formation of hubristic personal motivation as a phenomenon of personal self-regulation in primary school.

Theoretical and methodological foundations of neuropsychological peculiarities of the formation of personal hubristic motivation

Trends in the development of today's society are at the stage of establishing approaches to the formation of a vision of new conceptual norms of behavior of a promising individual, capable of changing and improving spheres of life so that society will evolve. With the intensive

development of information technology as the potential for a progressive "leap" into the future, there is a need to develop an individual who quickly masters the innovation of information technology, and an individual who can use knowledge to implement phenomenal ideas that can surpass the " current fast pace" of progress (Komogorova et al., 2021; Maksymchuk et al., 2020).

Scientists J. Dewey (1938), A. Giddens (1991) and others investigated aspects of the formation of hubristic motivation as a psychological phenomenon of personality. According to some scholars, Steve Peha (2011), education determines the perspective of future social development. Yes, it is important to implement the competence approach of educational activities and the formation of personal value orientations in the conditions of the latest postmodern world.

The concept of hubristic motivation is an essential characteristic of the behavior of a person striving for self-affirmation. An important factor of self-assertion is the achievement by the person of success in a certain area of life activity, which is important for him/her (Vdovychenko, 2017). Hubristic motivation is realized in the context of a person's need to constantly overcome difficulties in the realization of his or her intention. The adult consciously understands the importance of self-development for the realization of personal needs. Researchers define self-regulation as a systematic conscious manifestation of the behavioral state during the implementation of personal goals (Virna, 2017). On the basis of such statement the basic principles of self-regulation have been defined.

A more promising age in the context of the formation of self-regulation to achieve the goal is the period of childhood, because the child can actively acquire the competencies necessary in the current postmodern world (Kolomiets, 2007). The child is not conscious of his or her behavior for the sake of achieving a goal, but he intrinsically motivated to win and be significant among the collective. Such intrinsic motivation is defined in the context of neuropedagogy as a science based on psychological features of child development. In essence, pedagogy contains psychological aspects of personality development.

Man has complex physiological features that determine his behavior, character, temperament (Kudykina, 2003). The work of the brain is a complex process that forms various factors of personality development, including motivation. Neuropsychology studies the structural components of mental processes in the context of the organization of brain activity (Padalka, 2008). Neuropsychology studies the specifics of interaction of

brain functioning and human activity in its social environment and individual self-development.

The formation of personality begins in childhood, so in elementary school special attention is paid to the neuropsychological manifestations of child development. The child from the physiological point of view can quickly perceive new skills and abilities, he is the most active to implement educational goals. However, the educational program is designed for the functional capabilities of the child's body, because at this age he learns knowledge only when the central nervous system and brain function are ready to perceive and analyze new knowledge.

Neuropsychology determines a child's capabilities in mental activity and mastery of surrounding events while forming competence and fostering a value attitude toward social phenomena. Based on the data of neuropsychology it is possible to understand the extent to which a child's functionality in learning depends on his inner motivation (Sikorska, 2007). Motivation combines the child's physiological need for self-assertion and success, the desire to be the best, to win, to be successful with the direct objectives of pedagogy, which directs the influence on the development of a socialized person, capable of self-actualization and achieving a certain level of desired well-being.

This tendency of educational activity involves identifying behaviors that contribute to an appropriate goal (Cavell, 1988). Researchers have identified the main approaches of hubristic motivation as a manifestation of neuropsychological features of the individual in the context of neuropedagogy as a science implementing methods, technologies, form of human learning and education taking into account individual abilities and psychological state (Gygli et al., 2019).

Neuropedagogy determines the underlying context of educational activity through the student's brain interpretation of knowledge, as well as based on indicators of his psychology. The dependence of the child's emotional and mental perception of reality can be observed based on a comparison of learning indicators of children living in different environments (Gardner, 1983). Thus, children living in a peaceful environment have higher rates of education, in contrast to children living in a family with unstable conditions of the family environment.

Scientists distinguish three structural and functional blocks in the brain structure of mental processes, i.e. brain components and corresponding functions (Giddens, 1990).

The 1st functional block of the brain is the block that regulates the level of activity. If the components of the corresponding brain block are

immature, it can lead to instability in brain activity, a decrease in the level of cognition due to rapid fatigue. Accordingly, the child has a level of self-regulation that satisfies only his or her quick desires, without appropriate work.

The 2nd functional block of the brain is the block interpreting exteroceptive information. The child receives, processes the information received at the sensory level. The level of self-regulation shows the child's ability to interpret information.

The 3rd functional block of the brain is programming, regulating and controlling the child's mental activity (Gray, 2008). The level of self-regulation is under the control of the child and is determined by the child's commitment.

All levels of self-regulation are determined by hubristic motivation, i.e. the desire of the child to achieve success in a certain activity, to be a leader and to receive recognition among the collective (Smith, 1997). Such motivation is regulated by the brain processes of human behavior, which has been investigated by neuropsychology. Accordingly, educational activity in the primary school is carried out in accordance with the age features and capabilities of the child, which can be investigated in the context of neuropedagogy. Neuropedagogy combines neuropsychological features of motivational self-regulatory behavior of a child and appropriate pedagogical means motivating a student to acquire new knowledge and skills.

Scientists Gray (2008), and Vuckovic (2019) identify basic behavioral tendencies in the context of self-regulation. Especially important are the claims of some researchers about the specificity of children's behavior as natural, manifested through neuropsychology (Smith, 1997).

A study of the factor of hubistic motivation in the context of self-regulation in the learning of children in primary school

The educational process in primary school is implemented in the context of new needs of social development, which reflects the trend of informatization, globalization and innovation of social life. The need for individuals who can change the future, improve certain social achievements is most relevant in the today's post-industrial world. The components of the today's educational process are the competence approach and the formation of value orientations. An important factor in the implementation of effective educational activities is the analysis of their capabilities and abilities, carried out on the basis of neuropsychology (Padalka, 2008).

On the basis of the study it was found that for the effective formation of skills and knowledge in the child, it is necessary to consider the brain activity in the aspect of hubristic motivation, which is a factor in determining the child's behavior in achieving the goal.

In the context of determining the effectiveness of educational activities was formed structural and functional approach in the process of self-regulation. Self-regulation is a manifestation of an integral, closed information system formed as a consequence of specific regulatory functions. Self-regulation performs a self-creative function, realizing the goal of the individual to achieve success in the understanding of the conscious criteria and levels. To achieve the goal the process of self-regulation occurs in the context of a certain model that combines a set of conditions of behavior for executive action and success in the context of mental self-regulation.

An important factor of regulative actions is the information that forms the program of certain actions to achieve the goal according to appropriate subjective personal criteria and motives. It is motives that are decisive in the formation of personality self-regulation on the basis of neurophysiological characteristics. Also important is the external factor of regulation correcting the self-regulation of the personality (Vuckovic, 2019). Thus, in the context of educational activities with primary school students, it is necessary to take into account the pedagogical methods of correction of activity, taking into account the indicators of neuropsychology, determined by the regulatory function of education. In particular, fixing the level of education, control and evaluation of the student's abilities is one of the conditions of external adjustment of children's learning motivation.

Therefore, self-regulation should be determined as a process of awareness and initiative in the context of mental activity to achieve success in the process of personal development (Virna, 2017). Self-regulation is an expression of individual abilities of the person aimed at achieving well-being as a phenomenon of self-organization and hubistic motivation. Each personality has its own style of self-regulation in the context of self-organization, the definition of life values, the achievement of solutions to the subjective problems of life.

Individual style of self-regulation is formed as an integration of internal physiological and psychological, which are expressed subjectively personal qualities and individual abilities. A person's self-regulatory behavior is a controlled phenomenon that has a feedback, the result of the corresponding activity.

In childhood, a person is not aware of cause and effect relationships in a global context, but understands the consequences of their behavior, so they form self-regulation in the context of their own resources provided by brain activity (Vdovychenko, 2017). Mental manifestations demonstrate different patterns of persistence or refusal in achieving personal goals. Self-control forms the desire for self-actualization in socialization and individual growth.

For the child, the most effective in the context of self-regulation is hubristic motivation. Hubristic motivation systematizes and summarizes psychological manifestations in the context of personal self-expression and self-esteem. The educational process determines the determinant of hubristic motivation in order to conceptualize the desire for excellence and self-improvement (Vdovychenko, 2017). Therefore, increasing the effectiveness of hubristic motivation in the context of child self-regulation determines the main content of today's psychology and definition of neuro-pedagogical approaches in the definition of educational activity.

In the neuropedagogical paradigm, hubristic motivation is an indispensable component of personality development, determining its evolution. Continuous progress of a human being is an indispensable condition of his life throughout historical evolution. The child has acute physiological and psychological needs, especially in the manifestations of intrinsic motivation. Neuropsychology expresses the relationship between nature and human activity. A manifestation of personality is an activity in which the commonality of intention of desire and motive of a person to achieve a goal is manifested. Therefore, it is important to identify a child's hubristic motivation as a self-regulation factor that determines his behavior in the process of competence acquisition.

In order to determine the effectiveness of hubristic motivation, we conducted a study using the Milman (2017) method of personal motivation, which is an indicator of both the motivational component of personality and the emotional component that expresses neuropsychological manifestations of child development. The sample was formed on the basis of the "Snowball" technique. One primary school was selected and an online survey was conducted with them. Five parents of different children were involved in the survey and were asked to determine their child's level of motivation to learn. Further parents involved their acquaintances, and thus a sample of 100 participants was formed for the study.

Milman's (2017) methodology questions were encoded into Google forms, and the mailings were sent to the respondents' email addresses. The survey was conducted over the course of a month, taking into account age-

specific characteristics. Based on the survey, indicators of the motivational structure of the personality were determined, as well as the emotional manifestation of the child, reflecting the self-regulatory behavior of the individual. The level of hubristic motivation is reflected in the indicators obtained and analyzed on the basis of the study. Also, the child's hubristic motivation reflects his or her desire for self-development.

The study tested the assertion that hubristic motivation determines the child's desire for self-affirmation, in particular, achieving a goal in the predominance of their peers, which is determined by the motives of learning and cognitive activities and methods of determining academic performance. Hubristic motivation of primary school students is expressed by the corresponding motivational types according to the disposition of striving for excellence and perfection. Accordingly, the indicators of motivation of the child's personality according to the survey according to the methodology of Milman (2017) were analyzed and the diagram is concluded (Fig. 1)

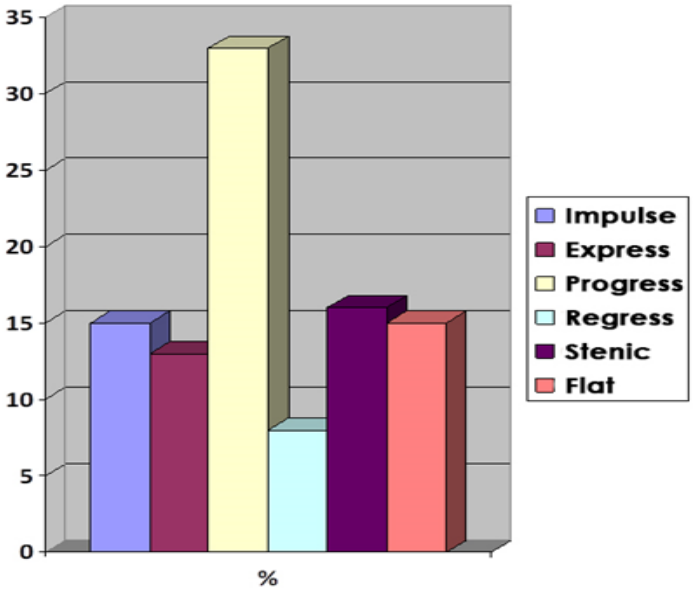

Fig. 1. Indicators of the study of the effectiveness of hubristic motivation (designed by the authors)

Based on the indicators of the study, we can argue that children have a predominant progressive type of motivation, as they have certain neuropsychological manifestations of motivational activity.

Neuropsychology is formed in the context of brain activity, which determines the child's desire for self-actualization. Since the study was conducted with primary school children, impulsive and expressive indicators of motivation are noticeable.

The child strives to achieve success, not comprehending it as a goal, but only realizing the desire to be successful, to have an advantage over others. This tendency is defined by hubristic motivation as a manifestation of the neuropsychological approach of the individual. Accordingly, the child forms self-regulatory behavior that will lead to the achievement of personal success.

Conclusions

The study was an important basis in the assertion that hubristic motivation is the main effective factor in the formation of self-regulation in the primary school child.

Theoretical and methodological researches of scientists have defined the basic tasks realized at definition of motivation of the person according to the specified technique. The analysis of the works contributed to the conclusions about the importance of neuropsychological manifestations of the child in the educational process and hubristic motivation.

In the course of the study it was found that hubristic motivation forms the self-regulatory behavior of the student. Self-regulation is the main factor in achieving goals in the context of educational activities and implementation of a successful life order. Motivation is an important factor in the child's acquisition of competence and formation of value orientations.

The assumption that hubristic motivation determines the norms of behavior of a child striving to have an advantage among peers was confirmed by a study on the methodology of determining personality motivation. Indicators of motivation are predominantly positive, which confirms the neuropsychological root of intrinsic motivation and determines the self-regulatory behavior of the individual.

Thus, motivation is a determinant of self-regulation as a neuropsychological manifestation of a child's personality, which forms behavior conducive to goal attainment.

References

Ananiev, B. G. (1980). *Izbrannyye psikhologicheskiye trudy [Selected psychological works]. Academy of Pedagogical Sciences of the USSR*. Pedagogica.

Berne, E. (1992). *Igry, v kotoryye igrayut lyudi. Psikhologiya chelovecheskikh vzaimootnosheniy* [The games that people play. Psychology of human relations]. Lenizdat.

Cavell, S. (1988). *Conditions Handsome and Unhandsome The Constitution of Emersonian Perfectionism: The Carus Lectures*. University of Chicago Press.

Demchenko, I., Maksymchuk, B., Bilan, V., Maksymchuk, I., & Kalynovska, I. (2021). Training Future Physical Education Teachers for Professional Activities under the Conditions of Inclusive Education. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 12*(3), 191-213. https://doi.org/10.18662/brain/12.3/227

Dewey, J. (1938). *Experience and Education*. Collier-MacMillan Canada Ltd.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.

Giddens, A. (1991). *Modernity and self-identity. Self and society in the late modern age*. Polity Press.

Gray, P. (2008). *A Brief History of Education. To understand schools, we must view them in historical perspective*. Psychology Today. https://www.psychologytoday.com/us/blog/freedom-learn/200808/brief-history-education

Gygli, S., Haelg, F., Potrafke, N., & Sturm, J. E. (2019). The KOF globalisation index-revisited. *The Review of International Organizations*, *14*, 543–574. https://doi.org/10.1007/s11558-019-09344-2

Kolomiets, A. M. (2007). *Informatsiyna kul'tura vchytelya pochatkovykh klasiv* [Information culture of the primary school teacher]. Vinnytsia State Pedagogical University. http://www.disslib.org/teoretychni-ta-metodychni-osnovy-formuvannja-informatsiynoyi-kultury-majbutnoho.html

Komogorova, M., Maksymchuk, B., Bernatska, O., Lukianchuk, S., Gerasymova, I., Popova, O., Matviichuk, T., Solovyov, V., Kalashnik, N., Davydenko, H., Stoliarenko, O., Stoliarenko, O., & Maksymchuk, I. (2021). Pedagogical Consolidation of Pupil-Athletes Knowledge of Humanities. *Revista Romaneasca Pentru Educatie Multidimensionala, 13*(1), 168-187. https://doi.org/10.18662/rrem/13.1/367

Kudykina, N. V. (2003). *Ihrova diyal'nist' molodshykh shkolyariv u pozaurochnomu navchal'no-vykhovnomu protsesi* [Play activity of junior schoolchildren in the extracurricular educational and pedagogical process]. National Technical University of Ukraine "Kyiv Polytechnic Institute named after Igor Sikorsky". http://www.disslib.org/teoretychni-zasady-pedahohichnoho-kerivnytstva-ihrovoju-dialnistju-molodshykh-shkoljariv.html

Maksymchuk, B., Gurevych, R., Matviichuk, T., Surovov, O., Stepanchenko, N., Opushko, N., Sitovskyi, A., Kosynskyi, E., Bogdanyuk, A., Vakoliuk, A., Solovyov, V., & Maksymchuk, I. (2020). Training Future Teachers to

Organize School Sport. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(4), 310-327. https://doi.org/10.18662/rrem/12.4/347

Melnyk, N., Bidyuk, N., Kalenskyi, A., Maksymchuk. B., Bakhmat, N., Matviienko, O., Matviichuk, T., Solovyov, V., Golub, N., & Maksymchuk, I. (2019). Modely y orhanyzatsyone osobyne profesyonalne obuke vaspytacha u pojedynym zemљama Evropske Unyje y u Ukrajyny [Models and organizational characteristics of preschool teachers' professional training in some EU countries and Ukraine]. *Zbornik Instituta za pedagoska istrazivanja, 51*(1), 46–93. https://doi.org/10.2298/ZIPI1901046M

Milman, V. E. (2017). *Metod izucheniya motivatsionnoy sfery lichnosti* [The method of studying the motivational sphere of personality] Praktikum po psikhologii [Practicum in psychology]. http://www.miu.by/kaf_new/mpp/2017.pdf

Padalka, H. M. (2008). *Pedahohika mystetstva. Teoriya i metodyka vykladannya mystets'kykh dystsyplin* [Pedagogy of art. Theory and methodology of teaching artistic disciplines]. Education of Ukraine. https://lib.kherson.ua/publ.pedagogika-mistetstva-978-966-8847-79-0

Peha, S. (2011). *Agile Schools: How Technology Saves Education (Just Not the Way We Thought it Would).* Infoq. https://www.infoq.com/articles/agile-schools-education

Prots, R., Yakovliv, V., Medynskyi, S., Kharchenko, R., Hryb, T., Klymenchenko, T., Ihnatenko, S., Buzhyna, I., & Maksymchuk, B. (2021). Psychophysical Training of Young People for Homeland Defence Using means of Physical Culture and Sports. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 12*(3), 149-171. https://doi.org/10.18662/brain/12.3/225

Sarancha, I., Maksymchuk, B., Gordiichuk, G., Berbets, T., Berbets, V., Chepurna, L., Golub, V., Chernichenko, L., Behas, L., Roienko, S., Bezliudna, N., Rassskazova, O., & Maksymchuk, I. (2021). Neuroscientific Principles in Labour Adaptation of People with Musculoskeletal Disorders. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, *12*(4), 206-223. https://doi.org/10.18662/brain/12.4/245

Smith, M. B., & Schwartz, Sh. H. (1997). Values. In J.W. Berry, M.H. Segall, & C. Kagitcibasi (Eds.), *Handbook of Cross-Cultural Psychology* (pp.77-118). Allyn & Bacon.

Vdovychenko, O.V. (2017). Ryzyk osobystosti yak faktor motyvatsiyi dosyahnennya ta hubrystychnoyi motyvatsiyi na kryzovykh etapakh ontohenezu [Personality risk as a factor of achievement motivation and hubristic motivation at the stages of ontogenesis crisis]. *Bulletin of the Kharkiv National Pedagogical University named after H. S. Skovoroda. Psychology, 56,* 41-51 http://journals.hnpu.edu.ua/index.php/psychology/article/view/19

Virna, Zh.P. (2017). Hubrystychna determinatsiya strukturnoyi orhanizatsiyi emotsiynoho intelektu osobystosti [Hubristic determination of the

structural organization of the emotional intelligence of the personality]. *Scientific Bulletin of Mykolaiv National University named after V. O. Sukhomlinsky. Psychological sciences: collection of scientific works*, *2*(18), 17-21 http://mdu.edu.ua/wp-content/uploads/psihol-visnik-18-2017-5.pdf

Vuckovic, T. (2019), The Overall Goal of Education and General Purpose. *International Journal For Empirical Education and Research*, *3*(20), 53-66. https://journals.seagullpublications.com/ijeer/assets/paper/IJ0620191784/f_IJ0620191784.pdf