

РОЗДІЛ І

ПЕДАГОГІЧНІ ПРОБЛЕМИ ОБДАРОВАНОЇ ОСОБИСТОСТІ

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ІНТЕЛЕКТ ЯК ПСИХІЧНИЙ АПАРАТ РОЗУМНОЇ ПОВЕДІНКИ

З невідомої причини людство завдяки силі свого інтелекту зазирнуло в глибини мікро- і макросвіту, вичерпно не знаючи в той же час, що собою являє цей потужний і дивовижний конструкт, який дозволяє людині пізнати суть життя і змінити його.

Ключові слова: інстинктивна поведінка, розумна поведінка, інтелект, структура інтелекту.

По неизвестной причине человечество силой своего интеллекта заглянуло в глубины микро- и макромира, исчерпывающе не зная в то же время, что собой представляет этот мощный и удивительный конструкт, который позволяет человеку познать суть жизни и изменить ее.

Ключевые слова: инстинктивное поведение, разумное поведение, интеллект, структура интеллекта.

For century philosophers, psychologists, educators, scientists of other research areas conduct theoretical and empirical researches to clarify the nature of intelligence. In this case theoretical concepts, complementing or denying each other, vary in the range of intelligence identification with one ability to putting in the structure of intelligence few basic skills, from considering intelligence in an ability plane to going beyond its borders into the global scope of the psychics, from an emphasis on cognitive activity to placing creativity into its basis.

It is found in the early studies of intelligence that individuals, who do well on one test of intelligence, are similarly well with other tests of intelligence, and conversely, individuals unsuccessful in one test are the same in other tests. The above correlation led to assume that intelligence tests measured a certain element of global and specific cognitive abilities. Ch. Spearman should be called in the first place due to mentioned, who tried to identify empirically common and different in the different tests of intelligence, using appropriate mathematical methods of statistical array of test results. As a consequence, this author concludes that intelligence consists of a general part (g), it is inherent in all types of intellectual activity, and a special part (s), it is a characteristic of a specific component of the various types of intellectual activity. Ch. Spearman develops a more complex theory later, introducing scientific use of a common group of the components of intelligence. However, he has remained true to his fundamental principle according to which the basis of intellectual activity is one construct. Due to the lack of a more apt term he used mental energy.

We conclude from the above that g may be distinguished between scores of different tests of cognitive abilities. Conversely, because of every mental test is dirty with effect of specific cognitive abilities, no intelligence test only measures g . However, it is assumed that these impurities are not substantial in most cases and the performance IQ and g -value are considered identical.

Noteworthy factor analysis, introduced at the beginning of the 20th century by Ch. Spearman, determines the minimum number of variables (factors) required to explain the correlation in measurement results. The covering total component involved in research tests is not necessary result of factor analysis. In particular, no general component was found in the analysis of personality tests. But according to Ch. Spearman, a common ingredient must appear on the analysis of the testing of mental abilities.

The analysis shows that the theoretical orientation of Ch. Spearman served as the foundation for the following theories of intelligence. The concept of intelligence that provides for common and special components was the basis of the theories proposed by C. Burt, Ph. Vernon, A. Jensen and others.

Quite different from the theories of intelligence which distinguish g are those which emphasize specific skills, which in combination form general skills. L. Thurstone developed the technique of analyzing of a statistic array that allowed to separate primary components that represent discrete intellectual abilities. He classifies verbal comprehension, verbal speed, math skills, spatial relations, memory, speed of thinking and perception as primary mental abilities.

R. Cattell tried to combine the approaches of Ch. Spearman and L. Thurstone. In particular, he combines primary elements of L. Thurstone in determining the content of g -component to form a secondary, higher order constructs. This author found two types of higher order components and three types of lower order components. The components of higher order were called fluid (gf) and crystallization (gc) intelligence. Fluid intelligence represents basic biological skills. Crystallization intelligence represents capabilities necessary for cognitive activity. R. Cattell called lower order factors as visual abilities (gv), playback memory (gr) and execution speed (gs). The concept described by R. Cattell was used by different authors, including J. Horn.

Several decades of analytical research of intelligence tests confirmed the hierarchical model of intellectual abilities. Modern psychometric studies generally support a hierarchical model of intelligence by R. Cattell – J. Horn. Construct g is at the top of the hierarchical construct, groups of components gf and gc are step below. There are specific skills (practical ability to perform specific problems) more below. Most intelligence tests focus on evaluating g or gf and gc , because of this approach maximizes the prediction difference in the achievements of different persons in solving intellectual tasks and situations.

The study [1] reviewed the possible convergence in the structure of cognitive abilities specified with classical psychometric theory and the two latest theories proposed by R. Case and A. Demetriou. In general, the interpretation of the results suggests that the theory of Demetriou's specialized areas and Case's central conceptual structures as well as comments on the hierarchical building of general and special abilities can be integrated into a single expanse system – a model of intelligence.

The negative results of one construct, which is responsible for the level of intelligence, as well as some factors of a social nature led to abandon the interpretation of intelligence as a unified construct and put different types of intelligence into scientific use, which embody a set of narrow abilities that are at the core outlet achievements. Specifically H. Gardner posits 8 independent intelligences represented in different domains of achievement. He does not deny the existence of g , but treats it as a specific factor associated mainly with academic achievements and situations that resemble those that occur in schools. Emotional and practical intelligences are perhaps the best known among the examined ones.

It turns out that general intelligence hypothesis does not contradict the idea of different types of intelligence. In [2] for each of the eight domains of H. Gardner's intelligences – linguistic, logical-mathematical, spatial, interpersonal, intrapersonal, musical, kinesthetic, naturalistic – the authors selected two tests, using H. Gardner's description of their contents. Factor analysis revealed a high content for construct *g* in tests which measure pure cognitive abilities – linguistic, logical-mathematical, spatial, naturalistic, interpersonal domains – and lower levels of it for tests of other domains, particularly kinesthetic. For most domains used two tests showed no *g*-links, thus providing support for coherence of domains that resemble pillar hierarchical model of intelligence.

The article [3] aims to illustrate the usefulness of higher order factor analysis in demonstrating the presence of general intelligence as a construct that underlies the achievement of the thirteen indicators for four of the eight H. Gardner's intelligences. In this regard, the study analyzed the results of J. Plucker, R. Callahan and G. Tomchin. In accordance with data regarding cognitive abilities (D. Carroll) the results obtained reflect the fact that the construct of general intelligence underlies the correlations between the components of the first order.

The theory of emotional intelligence recently gained. Emotional intelligence represents the ability to think reasonably (if using emotions) and use emotions to think better. It includes the ability to perceive emotions and get the knowledge about them, to understand, generate and regulate emotions reflectively for the purpose of emotional and intellectual growth. Generally, a person with high emotional intelligence can better perceive emotions, use them in thought, understand their nature and manage emotions.

The three-component model of intelligence by R. Sternberg and his concept of practical intelligence are equally common.

According to J. Guilford structural components of intelligence are the result of a combination of types of operations, content and format of the information and results of applying particular operations to specific content. It is noteworthy that the author considers creative act as a component of intelligence.

According to J. Guilford, creativity is caused by the state of instability for existing knowledge, which is a consequence of the use in the educational process of divergent thinking [4]. In the concept of combining creativity is associated with the random appearance of new features. New features are generated by combining ideas. Attributes that appear in the combination are treated as a creative product. The efficiency of this process is determined by the influence of certain factors. In the study the linguistic factors that contribute to the appearance of new features in the combination are investigated. Particular relevance and typicality of modifiers are inversely associated with new attributes, and therefore irrelevant and custom modifications increase the likelihood of new features.

In the study [5] an opposite view is advocated, according to which the creative idea is rather result of rethinking for dim idea through successful iterations with different real or imagined perspectives. L. Gabora shows that the mathematical description of contextual change of state introduces a probability distribution (not A. Kolmogorov) and classical formalism such as selection theory can not be applied.

In the study [6] two metaphors used in the conceptualization of creativity are compared. The first one describes creativity in terms of the intersection, exit abroad. It is the basis of studies that represent creativity as a point of sharp departure from tradition. The second one describes creativity in terms of the reconfiguration of problem domain or situation. It is the basis of studies linking creativity with the transformation process.

Results of the study showed that the core characteristics of creative potential were the originality and flexibility of thinking, imagination, observation, perseverance, self-confidence. Increased ability to think creatively is linked to schizophrenia, but its specific influence for cognitive benefits has not been elucidated yet. It is only accumulated a few scientific facts so

far. Specifically, in the study [9] high schizophrenia group demonstrated superiority compared with low schizophrenia group in combating deterrent effect when generating original answers. According to H. Gardner [7], creativity does not exist as a common feature; it is always of domain specific.

Researchers have generally concluded that persons appear intuitive sense of how the final products will look like once they are set to perform creative tasks. As an example, E. Policastro [8] indicates the validity of the construct of creative intuition and cites sources of evidence of this phenomenon: the autobiographical evidence, historical evidence, psychometric evaluation, experimental study.

High level of emotional component is inherent for creative activity. Fun of innovative work is among the dominant emotions. But the assessment of personal characteristics shows that some of them can not explain the high level of happiness.

One of the central problems in the study of intelligence is its relationship with the creative potential of a person. W. Hoffman [9] finds the relationship between intelligence and creativity and dialectical psychology by K. Rigel, based on symmetric difference operations contained.

In the study it was evaluated students' ability to think creatively (speed, flexibility, originality and development) with high and average values of *IQ*. It was recorded significant interaction between speed of task solving and verbal *IQ*. As for the tests using geometric shapes, it was observed minor differences between the groups for the first trial. Studies performed for decades show that creativity and intelligence are modestly related. Several studies, however, found that intelligence and creativity were not significantly related. In the study 10 features of creativity correlate with 10 characteristics of intelligence with an average of $r = 0,09$.

Differences in cognitive processes associated with creativity and intellectual activity are investigated [10], using amplitude parameter of EEG in the low ($\alpha_1 = 7,9 - 10,0$ Hz) and high ($\alpha_2 = 10,1 - 12,9$ Hz) bands of α -radiation. In two experiments, subjects were solving closed and open problems at a time when the EEG signals were recorded. Analysis of the data of the first experiment shows that highly intelligent persons exhibit higher amplitude of α -radiation (less mental activity) and greater cooperation between the regions of the brain when they solve closed problems, compared to persons of average intellectual abilities. Highly creative persons show less mental activity compared to average creative persons when they are involved in the solution of open problems. Creative persons, in addition, show greater cooperation between the regions of the brain compared to the intellectual ones. The results of two experiments suggest that the creative and intellectual abilities are different abilities which are, moreover, characterized by different neurological activity shown in the solution of open and closed issues.

IQ threshold hypothesis regarding creative and intellectual abilities suggests that these two constructs are positively correlated, except for high values of *IQ*. The proof of this hypothesis was based on the comparison of correlations between the groups of middle and high *IQ*. However, the methodological flaw of these comparisons is that the variance of *IQ* in the high group is lower compared to the variance of *IQ* in the low group. In the study the authors equalize variance to test better threshold hypothesis. It was found that *IQ* and creativity were correlated at least as strongly in the group with a high *IQ*, as in the group with a low *IQ*, which generally questions the threshold hypothesis. However, the separation of the composite *IQ* on crystallization and fluid intelligences reflected the minimum support of threshold hypothesis for the crystallization *IQ*, but supported it for inverted threshold effect of fluid intelligence.

As you can see, some studies show that the performance of creative abilities is independent the performance of *IQ*, whereas other studies indicate a relationship between these parameters. To clarify the situation, 447 correlation coefficients were calculated in 21 studies with 45880 participants [11]. Overall, the average correlation coefficient was moderately low ($r = 0,174$; 95 %).

Thus age impacts on relation between intelligence and creativity much of all. The type of creativity test is in the second place on the strength of influence on the specified connection factor.

As a result of the above, you can specify the results of the study, which states that the key difference between intellectual activity and creativity lies in the nature of intention: limit or transcendental. Added to this is that the fixed correlation between the intellectual and creative abilities is the result not only of true connection between psychic phenomena, but also the validity of the diagnostic methods used.

Analysis of the researches shows that a construct is measured using current intelligence tests, has correlation, besides the parameters of creativity, with many other mental components.

Speed of the flow for nerve processes primarily attracts the attention of researchers. It is known that the response time (the time interval between fixed the signal and the response to it – RT) and movement time (the time required to complete a separate action from its launch to termination – MT) reliably indicate individual differences that are significantly correlated with intelligence, measured by using the Standard Progressive Matrices by J. Raven.

The authors evaluated criteria validity of the basic tasks of cognitive processes (TBCP). It turned out that in the age groups of 6 to 19 years the rate of information processing correlates with academic achievements as well strictly as indices of crystallization and fluid intelligences do. Basic components of the cognitive process, moreover, almost exhaustively mediate the correlation between measures of fluid intelligence and achievements and prove to be much better to explain them than the index of fluid abilities.

In studies performed are analyzed in relation to the methodological adequacy in setting the size of individual differences in information processing abilities. Information processing is a change of information in any form, detected by an observer. Information processing can be defined in terms used by C. Shannon as the conversion of latent information into obvious information. Latent and obvious information are determined through timing ambiguity (conservation of uncertainty: what value the sender actually chose), dissipation (uncertainty sender: what value the recipient actually received) and transformation (saved result as a consequence of ambiguity and scattering). The author notes a lot of methodological inadequacies based on the results of the analysis including the use of small samples, questionable procedures in establishing the variables (i.e. the use of raw performance differences), improper or inadequate use of factor analysis and other statistical techniques and poor presentation of results. Overall, there is still very little progress in identifying the psychological processes through the study of individual differences, even if this research approach is viable and potentially useful. Serious theoretical difficulties arise in trying to bring nature and course of psychological processes with simple identification of individual differences in the extent of properties.

Contrary to the above in the study [12] the indices of intelligence, obtained from the use of matrix by J. Raven, and speed of information processing (IT) were recorded in subjects with five levels of nerve stimulation. It was found that, as it is expected from speed theory of intelligence, intelligence and IT performance correlated quite strongly ($r = 0,7$). In accordance with the theory of H. Eysenck it was confirmed significant inverted relationship between the intelligence and excitement. However, no support has been found to the fact that the correlation between IT performance and personal qualities of intelligence are caused by subjects. However, findings are consistent with a model in which the speed of information processing and personal characteristics together influence the achievement of intelligence test through additive effects of the speed of information processing and quadratic effect of the interaction of excitation and personal qualities.

V. Mohan and D. Kumar [13] analyze the relationship between neuroticism and intelligence testing achievements. This research was based on the assumption that subjects with high neuroticism will perform heavier tasks worse compared with those with low neuroticism. This assumption is related to the law by Yerkes-Dodson, which reflects the empirical relationship

between arousal and object achievement. The law states that achievement increases with increasing physiological or mental arousal, but only up to a certain extent. When the excitement level reaches very high values, achievement reduces. The results showed that neurotics were better in simpler tests, but for complex tests the stable neurotics demonstrated significantly better results compared to the neurotic ones.

A number of studies are devoted to the correlation between intelligence and memory. In particular it was performed an experiment to test whether individual differences in short-term memory are accompanied by corresponding *IQ* values. The results obtained led to a positive conclusion on the specified connection. Study participants are proposed Wechsler Adult Intelligence Scale and tests for visual and auditory memory. Various factors seem to represent auditory and visual memory. However, the survey found that memory performance generally showed low to moderate level of correlation with cognitive performance test. Particularly significant paired correlations were found for 3 of the 11 characteristics of memory. In the study the relationship between the amount of working memory (WMC), obtained by using the Operation Span, and level of intelligence, obtained by administering Advanced Progressive Matrices by J. Raven, is tested. The analysis concludes that the relationship between scores on Operation Span and Advanced Progressive Matrices is sufficiently constant for different loads of memory. The above allows to state that something other than the number of objects which can be kept in memory is important for the intelligence differences.

The critical role of information ordered in language leads to the suggestion that verbal ability may be associated with memory for orderly information. S. Schwartz and T. Wiedel [14] performed a brief review of the literature devoted to test this hypothesis. Results show that information about the order and nature can be maintained independently, verbal abilities are associated with reference to order, verbal abilities are not associated with the memory of the procedure when testing involves recognition rather than reference, relationship between verbal ability and memory for order is most evident when the output is presented with transformed original order. Moreover, the authors discuss the process of release in which the material is encoded and retained in the source buffer as long as it stops decoding, as the most likely locus of verbal abilities to capture a serial connection. In the study the memory of two-year children of normal and delayed development is compared. The survey results confirmed that individual differences were minimal in problems with a relatively low load memory but substantial individual differences emerged when more cognitive effort was required. The achievements of normal persons and children with developmental delays were quite similar in the tasks that require remembering the location of a hidden toy. However, significant individual differences are observed in children's ability to infer a plausible location of a hidden toy. When children find out that a toy is not there, where (as they remember) it was hidden, normal children group are looking a toy in places which are near or related to the primary toy's place. They use the memory as to where the toy was hidden to generate plausible alternative places to search. In contrast to these children, persons with developmental delay after finding out that the toy is removed from the place where it was research it hardly in the same place.

D. Egan [15] studies the achievements of persons for items adapted to standard tests of spatial orientation. In his study, participants expressed about whether spatial types were observed for differently oriented persons. For experimental subjects time to respond to the task was approximately a linear function of the number of abstract spatial dimensions, for which the spatial type and orientation of the observer are compatible, making it possible assumptions under which the intellectual ability of subjects is related to their ability to encode spatial measurements.

A lot of studies find links between intelligence and thinking. In particular, for a long time the relationship between divergent thinking and cognitive skills is in the field of research. In the study it is found that divergent thinking produces unique effects inherent in solving

creative problems that can not be attributed to intelligence or expertise. In turn, intelligence and expertise are also reflected in the creative problem solving. However, the direct relationship between intelligence and divergent thinking was not found.

The results of studies of intelligence and its relationship with other mental phenomena are of practical use in the development of diagnostic methods. It is known that the first scale suitable for measuring intelligence was proposed by A. Binet and T. Simon in 1905. The most common scale for intelligence measurement was developed by D. Wechsler in 1939. The intermediate and last intelligence tests are essentially the same as their earlier versions. However, it is stated increasing the number of components, measured by tests of cognitive ability and some other trends.

Increase in the number of components measured by tests of cognitive ability is the result of complications of models of intelligence, requirements of the utility of evaluation methods with greater interpretative values and inclusion of minor components that may be of interest to researchers, liberal statistical criteria for determining the factor structure of tests. Study finds the number of components measured by several historic and modern tests of cognitive abilities. As expected, there is a significant increase over time of the number of components measured by tests of cognitive ability ($r = 0,56$; $p = 0,030$). The results also show an excessive number of components in tests of cognitive abilities.

Historically almost all intelligence tests include tasks which are limited in time. P. Vernon clarifies the relationship between cognitive processing speed of setting information and performance for an intelligence test. Persons involved in the study were asked to tests that measure encoding speed, scanning the short memory, search in long-term memory, storage and processing efficiency in the short memory, selective and simple reaction time, speed of decision making. They were also asked to Adult Intelligence Scale by D. Wechsler and Advanced Progression Matrices by J. Raven. The obtained results showed that the timing of cognitive information processing significantly associated with *IQ* performance. Analysis shows that this relationship can not be attributed neither to the general content which reaction time and intelligence tests overlap, or the fact that some WAIS items are oriented over time. As a result, we conclude that tests for reaction time measure basic cognitive operations that are included in intellectual activity and individual differences in intelligence can not be reduced to the variance in the speed or efficiency individuals can perform these operations.

Another vector in the search space of traditional mechanisms for improving intelligence testing is dynamic evaluation. In the dynamic evaluation is presented as a method of measuring intellectual abilities and criticized traditional intelligence tests. It is concluded that dynamic assessment can be used to identify learning ability of students to determine what and how to teach children, to evaluate talents among persons from minorities and low social status, to monitor individual differences and explore different domains of giftedness.

The above analysis of the results of basic researches for intelligence likely to provoke the next questions than answer to those prior compiled. On the one hand, intelligence is associated with one skill, on the other – it is identified with a set of basic skills. Looking for intelligence in a slightly different plane, it is possible to conclude his identification with both reproductive and productive capacities. Finally, the basic constructs underlying intelligence are taken so diametrically that some talk about intelligence as a unified formation and the different types of intelligences. And if ascertaining the nature of intelligence can be traced some orderliness, we have a chaos in encounter with the diagnosis. For every test there is the author's concept, which has the effect of a change of basic skills, amount of their numbers and variety of time-keeping. To confirm this we can give the definition of intelligence drawn from the philosophical and psychological dictionaries.

Intelligence – the ability to think, especially for its higher theoretical levels.

Intelligence – a relatively stable structure of mental abilities of person.

Generally speaking, in the definition of intelligence we are free to choose constructs as we do not deal with a specific anatomical subject or physiological process but a set of mental properties and states. Intelligence can be identified with one ability but this approach is too emasculated. You can link with intelligence the person's psyche as a whole, but there will be indispensable loss in specificity. From a practical point of view, the first and second approaches are misfires. As a result, we conclude on the feasibility of the coverage set of mental properties and states of mind using the concept of a particular criterion. One of these criteria is reasonable behavior.

To implement this approach, first of all you must decide conceptually about what is reasonable behavior. It is advisable to look for the key for answering this question in the differences of instinctive and reasonable behavior.

Instinctive behavior is based on the responses of the organism to the stimulus. Such actions are always directed to the survival of the organism that provides the necessary conditions for life. A characteristic feature of instinctive behavior is: living organism reacts to the same stimulus as if such an effect is done first.

Another thing, when one deals with reasonable behavior. Reasonable being, i.e. the living being with reasonable behavior, primarily accumulates experience in the memory, that response against the stimulus, leading to a positive outcome. It should be noted that in the case of a human natural factors and social activity can serve as external stimuli directly or in abstract form in a problem situation.

Regular difference between reasonable and instinctive behavior is outline or awareness of the ultimate goal, which is aimed at achieving a physical or intellectual performance.

Achieving the goal in the case of reasonable behavior requires analysis of a situation in terms of exposed target in which there is a living being. If the wording of the final goal is indicated in abstract form analysis actually means an analysis of available data of problem that need to be solved. As a result of this analysis, one way in a slightly modified form to achieve the ultimate goal, or a conclusion about the lack of information among past experience of achieving the ultimate goal of solving the problem are chosen.

In the case where intuition suggests that the selected method will lead to the ultimate goal, the person step by step approaches the finish line, extrapolating the trajectory and comparing it with the ultimate aim.

If there is no way among the data of past experience to achieve the ultimate goal, or in the process of moving it becomes clear that, following the chosen path, you can get past it, a person reviews learned lessons with a view to set off their content and form from the first construct the way to solve the problem that arose before him.

The beings that show reasonable behavior are endowed with intelligence. By the way, some of these acts of behavior and, perhaps, all in varying degrees are inherent even the animal world.

This excursion into the realm of intelligence could be completed, if not three things that can not be overlooked.

First, intelligence interpreted above in terms of reasonable behavior, somewhat simplified and schematic, can not be considered in isolation from other areas of the psyche, against which the behavior occurs.

On the other hand, one can cite a lot of acts of animal and people behavior which gravitate to intellectual, but are not so because they have more reflex than intellectual.

After looking at these acts of reasonable behavior, we can conclude that almost all of them do not involve the use of experience in static unchanged state and are associated with its modification, construction the new constructs of the elements contained in the memory. This is nothing but a creative act. In other words, a reasonable behavior is not possible without the ability to create something new. So, intelligence is integrated formation of mental properties that provide an organic combination of reproductive and productive activities.

However, to reduce the referred integrated formation only to mental properties is unacceptable. It is necessary to point out the crucial role in the reasonable behavior of mental states. First of all these are emotions. Emotions, as a catalyst for physical and mental energy, play a crucial role at all stages of reasonable behavior, in fact, increasing its effectiveness. It is difficult to budge without a positive emotional state. Without emotional support, one can probably not reach the ultimate goal. Finally, to achieve the ultimate goal of finding the solution of the problem a big positive emotional release is necessary to neutralize the accumulated negative emotions that accompany temporary setbacks, uncertainty etc., which certainly need to restore physical and mental strength.

The guiding of reasonable behavior is indicated by the senses. Feelings paint it, so to speak.

The above is a reason to doubt the feasibility of distinguishing different types of intelligence, as proposed by H. Gardner, or talk about the practical and emotional intelligences, etc. To confirm this thesis, mentioning the reasons and circumstances in the scientific revolution for which these and other types of intelligence were introduced is worth. In this respect it needs to appeal to two factors at least.

Reasonable behavior is conditioned among other things updating data of the past experience. Clearly, if the person is a long time engaged in some branch of science, you can expect reasonable behavior from him in this academic field that does not mean that he will act reasonably in simple everyday situations not related to his professional activity. As a result, the desire to highlight the academic and practical intelligences is triggered. Similarly, we can talk about reasonable behavior in specific academic fields, say, science and humanities. Certainly, the reasonable behavior is indicated by individual inclinations, abilities, interests, etc., but this question lies in a different plane that does not intersect with the plane of the types of intelligence. It should be noted that the neglect of the life experience of a person and his inclinations, abilities and interests, being backed by social pressure of egalitarian wing psychologists, educators and social scientists, ultimately led to the current confusion in the existing studies of intelligence. Different persons' ability to understand emotions, aesthetic senses and so on is not a reason to talk about the appropriate types of intelligence. Different experience in different domains is the main reason for persons' various achievements in testing if, of course, tests aim at the diagnosis of intelligence. Intelligence as an integral formation of mental properties and states of a person, which ensure a reasonable behavior, is not divided into types, kinds and more.

Intelligence is an organic combination of mental properties and states of a person and other components related of the psyche, providing the efficiency of its reasonable behavior.

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ЦІННІСНІ ОРІЄНТАЦІЇ МАЙБУТНІХ УЧИТЕЛІВ У ГАЛУЗІ МУЗИКИ

В статтє на основе експериментальних даних рассматриваются результаты социологического изучения особенностей ценностных ориентаций будущих учителей в области музыки, а также предпосылки их мировосприятия как неизменных констант в развитии цивилизованного общества. Проанализированы основные показатели ценностных ориентаций: музыкально-эстетическая эрудиция студентов, активный фонд их музыкальных знаний (музыкальный тезаурус), частота общения с произведениями искусства, избирательность индивидуальных предпочтений.

Ключевые слова: *восприятие, ценностные ориентации, музыкально-эстетическая эрудиция, тезаурус.*

The article, on the basis of the experimental data, presents the results of the sociological studying of the characteristics of value orientations of the future teachers in the field of music as a condition for their perception of the world, as unchangeable constants in the development of civilized society. Such main indicators are analyzed: musical-aesthetic erudition of the students; active fund of their musical knowledge (musical thesaurus); the frequency of communication with the works of art; selectivity of individual preferences.

Key words: *perception, value orientations, music-esthetical erudition, thesaurus.*