

Major Trends in Contemporary Approaches To the Study of Children's Giftedness

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Abstract: The conducted theoretical analysis allowed identifying the evolution of ideas about the problem of children's talents development and its dynamics in the historical and contemporary context. Applying the structuring method we have determined the period from the middle of the XIX century to the 80-90s years of the XX century as empirical and experimental and the period from the 80-90s to present as experimental and theoretical. After a brief historical analysis of the period prior to the current stage of studying the phenomenon of giftedness, we distinguish four major trends in contemporary approaches to investigation of children's talents, which served a basis for determination of the features of the current phase of the study of child giftedness:

Key words: Giftedness • Abilities • Potential of an individual

INTRODUCTION

From the middle of the XIX century the problem of giftedness has been studied comprehensively by philosophy, psychology, pedagogy, medicine, sociology and other sciences. Interest of psychologists and teachers was aimed at understanding the sources, structure and ways of developing talents (general and special: in music, literature, science, etc.), their determinants and the phenomenon of "child-prodigy".

F. Galton relying on the evolutionary theory of Charles Darwin put forward the theory of hereditary talent and launched an experimental study of abilities. Francis Galton in his book "Hereditary talent: its laws and origin" substantiated the methodological basis of the abilities origin and revealed the following regularities: 1) no one can attain a high position in society, fame or glory, if not blessed with extremely high abilities; 2) only a small number of people endowed with high abilities, do not reach a high position. Having analyzed the biographies of dozens of great talents, he comes to the conclusion that the abilities of any level are due to heredity [1, p. 132].

The most intense in research of giftedness is the XX century; in the beginning of the century W. Wundt, G. Spencer and other researchers conducted experimental study in the framework of "associative psychology". They investigated cognitive processes (functions):

thinking, attention, memory, perception, etc. and developed techniques for measuring individual differences to identify gifted children [2, 3].

At the same time the concept of "intellectual talent" was introduced (A. Maiman, D. Frebes and V.M. Ekzemplyarsky) [4]. However, its concept of "intelligence" is narrowed; it is a genotypic (inherited) setting, later "genotypic intelligence" (D. Hebb) that interacting with the medium formed "phenotypic intelligence" [5]. The level of intelligence (coefficient) was determined using IQ tests until the mid XX century.

Works, performed in the 20s of XX century in Russia (A.P. Boltunov, A.A. Lublinskaya, A.I. Makarova, V.M. Ekzemplyarsky, *et al.*), were dedicated to the study of mental development of pre-school children and were influenced by the ideas of Charles Spearman and W. Stern. Later, the talent began to be seen in connection with the matters of art and creativity (A. Arkin, M.Ya. Basov, P.P. Blonskiy, L.S. Vygotskiy, A.B. Zalkind, A.R. Luria, S.T. Shatsky, *et al.*). But due to the dominant Soviet ideology focusing on the "average child" the study of giftedness was interrupted in the 30s. However, some scientists continue to keep the issue under review. B.G. Ananyev [6], A.N. Leontiev [7], S.L. Rubinstein [8] and B.M. Teplov [9 and 10] solve it through the structure of abilities. Arguing that the ability is manifested in activities they emphasize simultaneous influence of heredity and social environment on the development of giftedness.

While the research on this problem in Russia recommenced only half a century later, overseas they are characterized by permanence. In Germany, for example, the universal understanding of the psyche as the highest form of adaptation was the main basis for determining the nature of intellectual giftedness. Mental giftedness is seen primarily as an opportunity to adapt to new tasks, situations, conditions of life of a child or an adult. Such a characteristic allows differentiating between the levels of giftedness. Studies conducted in the XX century in the United States were devoted to identification of high intellectual abilities and psychological characteristics of children (L. Thurman and L. Hollinwords). During this period, L. Thurman, M. Oden and others based on a longitudinal study convincingly demonstrated that the development of gifted children needs special educational programs [11, 12], which was the beginning of large-scale studies of giftedness (J. Guilford, *et al.*) [13, 14].

Research works of American scientists allowed introducing more detailed differentiation in the definition of the concept of "talent" (intellectual, creative, artistic, aesthetic, social leadership, psychomotor, etc.) and specified the need in special programs for its development. While at first the basic research was conducted in the field of intelligence and talent structure, later J. Guilford offered to divide thinking into convergent (logical) and divergent (creative) [15]. In the 70s, the creative aspect became pronounced in the problem investigation (R. Gardner [16], J. Renzulli [17], R. Sternberg [18-21], P. Torrens [22], *et al.*); it includes creative objectives and content of the educational process, teachers creative work on the development of training and methodological support, engaging creativity into pedagogical models and extrapolation of the laws of creativity on all the processes of personal growth [23].

So, the considered empirical and experimental period is characterized by the following features:

- Giftedness is understood as a complex multi-factor structure.
- The study of giftedness is complex.
- Pedagogical support to the development of children's giftedness is seen as an integral multifactor process.
- Purposeful work on the development and implementation of technologies and methodological approaches focused on the support of the talent of individual student is carried out.

The 80-90s of the XX century became a new stage in the research of giftedness in the world. The performed analysis of the literature on the problem allowed identifying four major trends in contemporary approaches to the study of children's talents.

The first trend is the organization of various associations, exploring the issue of giftedness. Today, this problem has been under the jurisdiction of the World Council for Education of Gifted Children, including several organizations from North and Latin America, Asia and Europe (an association Eurotalant was established under the Council of Europe). Every year abroad and in Russia there are conferences devoted to giftedness and new Web sites appear in the global information network, the Internet. Thus, the world experience is generalized in interactive mode, which creates new opportunities for the development of scientific understanding on the issue of children's talents.

The second trend is the development and implementation of new approaches, predominantly conceptual ones. The development of new conceptual approaches to the talent realization was influenced by such concepts and theories as "Theory of multiple intelligence" (R. Gardner) [24], "Structure of intellect" (D. Guilford), the theory of programmed instruction (B. Skinner), Gestalt theory of assimilation (M. Wertheimer, G. Muller, B. Kohler, K. Koffka) [25, 26], the theory of neuro-linguistic programming (John Grinder, R. Bandler, R. Dilts, F. Perls, V. Satir, M. Erickson, *et al.*) [27].

R. Dilts based on selection of patterns (patterns of behavior and thinking) of geni has created a number of successful models in business, psychology and pedagogy that are where the new behavior and talents develop in the work with people [28].

Among a variety of Russian conceptual approaches we should pay attention to "the concept of age (mental) giftedness" by N.S. Leites [29-32], "the concept of creative gifts" by A.M. Matyushkina [33-36], the method of developing discomfort by T.V. Khromova [37], the model of L.A. Wenger [38, 39], the theory of intellectual over-situational activity and "model of creative field" by D.B. Bogoyavlenskaya [40, 41 and 42], a dynamic theory of giftedness by Yu. D. Babayeva [43, 44], "synthetic approach" by I.N. Semenov [45], eco-psychological approach by V.I. Panov [46], psychodidactic approach to learning and development of gifted children in the context of mass educational school by V.P. Lebedeva, V.A. Orlov and V.I. Panov [47], the concept of ecology of creativity

for gifted children by V.G. Gryazeva and V.A. Petrovskiy [48], interdisciplinary psychological and acmeological approach by A.A. Bodalev and N.Yu. Sinyagina [49], etc.

The works of Kazakh scientists are devoted to the consideration of theoretical and methodological approaches to determination of the essence and nature of giftedness, psychological and pedagogical and methodological foundations of education and development of gifted children (E.M. Aryn [50], A.M. Bulatcheeva [51], S.N. Laktionova [52], T.A. Linchevskaya [53], the problems of diagnostics and development of gifted children (U.B. Zhaksenbaeva [54-57], N.D. Ivanova [58], A.K. Satova [59-61], B.O. Baytukova [62] and S.S. Mendigalieva [63]. In the works of N.N. Khan [64, 65] a lot of attention is paid to the creative role of the teacher in the process of training and education of students.

Combining different positions in the above concepts, we come to the conclusion that the talent is seen as a process of integral development of personality and consciousness of gifted children, realizing their creative potential. Basic characteristic of giftedness involves creative activity of human as a manifestation of the creative nature of the psyche and its development. In light of this trend, the important are the ecology of educational environment, self-realization of the creative potential of the individual, the achievement of acme by an individual (apex) and the use of ecologically valid diagnostic methods.

The third trend is modeling of the processes of children's giftedness development. The most popular among modern models of giftedness development is the model, developed by one of the famous American specialists in the field of gifted education J. Renzulli. This model is very popular and is actively used for the development of applied problems. Revealing in detail the essence of giftedness as a natural phenomenon, J. Renzulli quite definitely indicates the directions of pedagogical work for its development [66]. According to the model of children's talents, developed by L.A. Wenger and his team, the concept of giftedness is revealed through the concept of abilities [67].

Based on the fact that the feature of the simulation is the transfer of knowledge, gained in the construction and analysis of the model, on the simulated object, i.e. the translation of the theoretical action with the model into practice, these models are a sort of universal schemes, applicable for the development of education and training of not only talented, but all children.

The fourth trend is the governmental approach to the implementation of children's giftedness. The designed and implemented presidential program "Children of Russia" (1996) included a federal targeted program (section) "Gifted children", which at the state level set the task of scientific training, development of programs for identification and development of the gifted children, establishment of various types of educational institutions considering the variety of needs of gifted children. The Order of the President of the Republic of Kazakhstan "On state support and the development of schools for gifted children" and the Government Resolution "On measures to implement the orders of the President of the Republic of Kazakhstan" On state support and the development of schools for gifted children" have laid the foundation of the state policy in the field of work with gifted children. On the Resolution of the Government of the Republic of Kazakhstan dated 24 March 1998 the Republican Scientific-Practical Center "Daryn" was opened at the Ministry of Education and Science of Kazakhstan to perform all the functions for organization of work with this category of students in the country. The State program of support to young talents has been designed and is implemented. "Concept for identification, support and development of gifted children in the Republic of Kazakhstan" has been developed.

At present the problem of children's talents development is in the focus of scientists' attention. Teachers study in detail the various aspects of this multifaceted problem. To identify, train and support gifted children there are modern educational technologies, effective learning environments are created and programs aimed at the development of gifted students are elaborated. In accordance with the Law of the Republic of Kazakhstan "On Education" educational programs for gifted children are introduced in schools. Many scientists have designed program for the development of creative thinking in general (V.K. Tolkachov, E. de Bono, G.S. Altshuller), imagination (M.M. Zinovkina, D.N. Trifanov), image memory (I.Yu. Matiugin), intuition (M. Mikalko), creativity (F.A. Harrison, M. Musiychuk), creative abilities (E.C. Rapatsevich), the application of TIPS for intellectual development of students (I.V. Sartakov, A.V. Shevyrev, M.I. Meyerovich, L.I. Shragina, V.A. Lomova, *et al.*) [68]; most authors interpret art primarily as a category of individual's activity which essence is to produce new and original.

Timely professional diagnostics, creating of conditions to encourage children from early age to a variety of activities, support of gifted children, not only in respect of his or her outstanding abilities, but also in all other aspects of development and education and ultimately creating favorable conditions of work and life support at the stage of professional and personal formation are a national priority, uniting various social institutions, the family, educational institutions, governmental institutions, NGOs, foundations and initiatives of concerned citizens.

So, for the examined experimental and theoretical period the following features are specific:

- In foreign research works the development of children's talents is reduced mainly to the development of the genotype, intellectual gift and support of individual pace of learning. Along with not well-established terminology we observe a prevalence of pragmatism in such researches.
- Local researchers at all pluralism of conceptual approaches and models of children's talents development are united by *personality-developing* (humanistic, biosocial) *concept* of giftedness as realization of the integral wholeness of the individual, his or her creativity at pedagogical support, favorable psychological climate and provision of spiritual development.
- The basic characteristics are motivation, creative over-situational activity of the individual and creation of conditions, i.e. non-regulated, rich in information, developing, reflexive and creative environment and differentiated work on special programs.
- The level of social consciousness requires changes in the attitude of society to the problem of "non-standard" children, the development of mechanisms of adaptation of a gifted child in today's society, the implementation of the control system for the development of children's giftedness, which will allow self-realization of gifted children and a timely use of their creativity and unique results of their activities by the state and society.

Thus, based on the foregoing, we can highlight the features of the present stage of studying the problem of child's giftedness:

- Consideration of giftedness as a qualitative peculiar combination of abilities, allowing reaching success in one or more activities.
- The study of giftedness as a multi-factor integral dynamic mental formation, which includes the full potential of the individual.
- The need to use the accumulated theory and practice of pedagogical experience to systematize the options of management of children's giftedness development.

REFERENCES

1. Galton, F., 1869. Hereditary Genius: An Inquiry into its Laws and Consequences. London: Macmillan, pp: 1 (Reprinted, Bristol: Thoemmes Press, 1999).
2. Titchner, E.B., 1970. Wilhelm Wundt. The American Journal of Psychology, 296 (7683). <http://www.jstor.org/stable/1413739>; Stewart, Iain (2011).
3. Commandeering Time: The Ideological Status of Time in the Social Darwinism of Herbert Spencer. Australian Journal of Politics and History, 57(3): 389-402. doi: 10.1111/j.1467-8497.2011.01604.x
4. Otcheskaya, I.B., 2004. Giftedness and its Formation at the Present Stage of School Development. Ust-Kamenogorsk: S. Amanzholov EKSU, pp: 150.
5. Hebb, D., 1974. Psychologic, Sciens Moderne. Montreal: Les Editions HRW Ltee.
6. Ananyev, B.G., 1962. Formation of Giftedness. In Inclinations and Abilities. Leningrad: Leningrad State University, pp: 154.
7. Leontiev, A.N., 1983. Selected Psychological Works in 2 Volumes. Moscow: Pedagogics, 1: 391.
8. Rubinstein, S.L., 1973. Problems of General Psychology. Moscow: Pedagogics, pp: 423.
9. Teplov, B.M., 1961. Problems of Individual Differences. Moscow, 535 p.; Teplov, B.M., 1985. Ability and Talent. Sel. Works in 2 volumes. Moscow, 1: 461.
10. Teplov, B.M., 1961. Ability and Talent. Problems of Individual Differences. Moscow: Academy of Pedagogical Sciences of the RSFSR, pp: 536.
11. Zheksembayeva, U.B., 2005. Theory and Practice of Work with Gifted Children. Monograph. Almaty: Tugulym-print, pp: 380.
12. Otcheskaya, I.B., 2004. Giftedness and its Formation at the Present Stage of School Development. Ust-Kamenogorsk: S. Amanzholov EKSU, pp: 150.

13. Guilford, J.P., 1950. Creativity. *The American Psychologist*, 5: 444-454.
14. Guilford, J.P., 1982. Cognitive Psychology's Ambiguities: Some Suggested Remedies. *Psychological Review*, 89: 48-59.
15. Guilford, J.P., 1967. *The Nature of Human Intelligence*. New York: MC. Graw-Hill, pp: 145.
16. Gardner, H., 1983. *Frames of Mind*. New York: Basic Books.
17. Renzulli, Joseph S. and Sally M. Reis, 1997. *The Schoolwide Enrichment Model*. Second Edition. Mansfield: Creative Learning Press, pp: 5-14.
18. Sternberg Robert, J. and Janet E. Davidson, Eds., 2005. *Conceptions of Giftedness*, Second Edition. Cambridge: Cambridge University Press, pp: 246-279.
19. Sternberg, R., 1995. In *Search of the Human Mind*. Fort Worth, TX: Harcourt, Brace.
20. Sternberg, R., 1986. Inside Intelligence. *Amer. Scientist*, 74(2): 137-143.
21. Sternberg, R., 1988. *The Triarchic Mind: A New Theory of Human Intelligence*. N.Y.: Viking.
22. Torrance, E., 1980. Growing up Creatively Gifted: a 22-Year Longitudinal Study. In *Creative Child and Adult Quarterly*, 5: 148-170.
23. Zheksembayeva, U.B., 2002. Characteristic of world experience in education of gifted children (comparative pedagogical aspect). *Mater. 1 Int. Sci. and Pract. Conf., Ust-Kamenogorsk*, 17-18 April 2002. Ust-Kamenogorsk: Publ. of EKSU, pp: 39-42.
24. Gardner, H., 1983. *Frames of Mind: The theory of Multiple Intelligences*. New York: Basic Books.
25. Petermann, Bruno, 1932. *The Gestalt Theory and the Problem of Configuration*. London: K. Paul.
26. Köhler, Wolfgang, 2001. *Gale Encyclopedia of Psychology*. Encyclopedia.com. (May 21, 2013). <http://www.encyclopedia.com/doc/1G2-3406000371.html> <http://www.encyclopedia.com/doc/1G2-3406000371.html>.
27. Grinder, John, Richard Bandler, Judith DeLozier and Robert Dilts, 1980. *Neuro-Linguistic Programming: The Study of the Structure of Subjective Experience*, Volume I, Capitola, CA: Meta Publications.
28. Dilts Robert, 1983. *Roots of Neuro-Linguistic Programming*, Capitola, CA: Meta Publications.
29. Leites, N.S., 1997. *Age Giftedness and Individual Differences*. Moscow: Institute of Applied Psychology, Voronezh: NGO "MODEK".
30. Leites, N.S., 1984. *On Mental Giftedness*. Moscow: Znaniye, pp: 80.
31. Leites, N.S., 1988. An Early Manifestation of Giftedness. *Questions of Psychology*, 4: 98-107.
32. Leites, N.S., 1984. *Ability and Talent in Childhood*. Moscow: Knowledge, pp: 80.
33. Matyushkin, A.M., 1993. *Mysteries of Giftedness*. Moscow, pp: 128.
34. Matyushkin, A.M., 1989. *The Concept of Creative Gifts*. *Questions of Psychology*, 6: 29-33.
35. Matyushkin, A.M., 1972. *Problem Situations in Thinking and Learning*. Moscow: Pedagogics, pp: 152.
36. Matyushkin, A.M. and D. Sisk, 1988. Gifted and Talented Children. *Questions of Psychology*, 4: 94-97.
37. Khromova, T., 1997. Gifted Children. *Education of Schoolchildren*, 4: 6-9.
38. Wenger, L.A., 1995. *The "Gifted Child" (Basic Provisions)*. Moscow: Novaya Shkola, pp: 61.
39. Wenger, L.A. and V.S. Mukhina, 1988. *Psychology: A Textbook for Students of Ped. Schools*. Moscow: Prosvescheniye, pp: 336.
40. Bogoyavlenskaya, D.B., 2002. A Gifted Child. *Nature of Children's Talents*, 1: 6.
41. Bogoyavlenskaya, D.B., 2002. *Psychology of Creativity: A Textbook for University Students*. Moscow: Ed. Center "Academy", pp: 320.
42. Bogoyavlenskaya, D.B., 1981. *Ways to Creativity*. Moscow: Znaniye, pp: 96.
43. Babayeva, Yu, D., 1997. *Psychological Training for Identifying Giftedness: Method. Manual*, Ed., Panov, V.I. Moscow: Molodaya Gvardia, pp: 278.
44. Babaeva, Yu, D., 2002. The Theoretical Basis for Creating Technology for Training and Development of Gifted Children. *Daryn*, 5: 89.
45. Semenov, I.N., 2000. *Trends in Psychology of Thinking Development, Reflection and Cognitive Activity*. Textbook. Moscow: Moscow Institute of Psychology and Socium; Voronezh: NGO "Modek", 64 p. (Series "Library of School Psychologist").
46. Panov, V.I., 2006. *Giftedness and Learning Environment*. Astana: "Daryn", pp: 225.
47. Lebedev, V.P., 1997. *For a Teacher about Gifted Children (Teacher Manual)*. Moscow: Molodaya Gvardia, pp: 354.
48. Gryazeva, V.G. and V.A. Petrovskiy, 1993. *Gifted Children: Ecology of Creativity*. Moscow-Chelyabinsk ILI RAO CHGIK, pp: 40.

49. Sinyagina, N.Yu. and E.G. Chirkovskaya, 2001. Student-Centered Educational Process and Development of Giftedness (Methodical Manual), Ed., Derkach, A.A. and I.V. Kalish. Moscow: Vuzovskaya Kniga, pp: 131.
50. Aryn, E.M., 2002. Pedagogy and Psychology of Gifted Students: a Manual for teachers, psychologists and students of psychological and pedagogical specialties, Eds., Zheksembayeva, U.B. and A.K. Satova. Almaty, pp: 15-23.
51. Bulatcheeva, A.M., 2002. Pedagogy and Psychology of gifted students: a Manual for teachers, psychologists and students in psychology and pedagogics, Eds., Zheksembayeva, U.B. and A.K. Satova. Almaty, pp: 170-182.
52. Laktionova, S.N., 2002. Reform of Education in the World and the Problems of Education, Training and Development of Gifted Children. Pedagogy and Psychology of Gifted Students: A manual for teachers, psychologists and students in psychology and pedagogics, Eds., Zheksembayeva, U.B. and A.K. Satova. Almaty, pp: 8-15.
53. Linchevskaya, T.A., 1998. Formation and development of innovative schools in the Republic of Kazakhstan. Thesis of Candidate. Ped. Science. Almaty, pp: 163.
54. Zheksenbaeva, U.B., 2005. Diagnosis of Gifted Children. Astana: Radian, pp: 40.
55. Zheksenbaeva, U.B., U.B. Zheksenbaeva, K.K. Zhampeisova, N.D. Ivanov and S. Laktionova. 2004. Professional and Personal Qualifications of Teachers for Working with Gifted Children. Almaty: Daryn, pp: 122.
56. Zheksenbaeva, U.B., 1999. Research and teaching basics of working with gifted children in the Republic of Kazakhstan. Thesis of Candidate of Ped. Science. Almaty, pp: 183.
57. Zheksembayeva, U.B., 2005. Theory and Practice of Work with Gifted Children. Monograph. Almaty: Tugulym-print, pp: 380.
58. Ivanova, N.D., 2002. Innovative Educational Technology to Improve Teaching of Gifted Children. Daryn, 3: 92-98.
59. Pedagogy and Psychology of Gifted Students: A Manual for teachers, psychologists and students in psychology and pedagogics, Eds., Zheksembayeva, U.B. and A.K. Satova. Almaty, 2002, pp: 248.
60. Satova, A.K., 2000. The Problem of Giftedness and Objectives of Psychological Services at the Present Stage, Daryn, 2: 101-105.
61. Satova, A.K. and L.O. Sarsenbayeva, 2002. Some Features of the Relation between Types of Giftedness and Personal Development of School Graduates. Mater. 1 Int. Scientific and Practical Conf., Ust-Kamenogorsk 17-18 April 2002. Ust-Kamenogorsk: Publ. RKSU, pp: 35-38.
62. Baytukova, B.O., 2002. Pedagogy and Psychology of Gifted Students: a Manual for teachers, psychologists and students in psychology and pedagogics, Eds., Zheksembayeva, U.B. and A.K. Satova. Almaty, pp: 193-215.
63. Mendigalieva, S.S., 2002. Pedagogy and Psychology of Gifted Students: A Manual for teachers, psychologists and students in psychology and pedagogics, Eds., Zheksembayeva, U.B. and A.K. Satova. Almaty, pp: 230-243.
64. Khan, N.N., 1997. Cooperation in the Pedagogical Process of School. Almaty: Gylym, pp: 212.
65. Khan, N.N., 1998. The theoretical framework for cooperation in the pedagogical process of a comprehensive school. Abstract of PhD Thesis of Dr. Of Ped. Science. Almaty, pp: 45.
66. Renzulli, Joseph S. and Sally M. Reis, 1997. The Schoolwide Enrichment Model, Second Edition; Mansfield: Creative Learning Press, pp: 5-14.
67. Wenger, L.A., 1995. The Program "Gifted Child" (Basic Provisions). Moscow: New School, pp: 61.
68. Selevko, G.K., 1998. Modern Educational Technologies: Textbook. Moscow: National Education, pp: 256.