

The International Classification of Functioning, Disability and Health: applicability in educational practicumFaina Lazarevna Ratner¹ and Victoria Leonidovna Efimova²¹Kazan (Volga region) Federal University, Kremlyovskaya St., 18 , Kazan, 420008, Republic of Tatarstan, Russian Federation²Scientific-methodical center «Logoprognoz», Manezhny Per.,8, St-Petersburg, 190000, Russia

Abstract. The article discusses the possibility of using the International Classification of Functioning, Disability and Health in the school for the purpose of organizing pedagogical support of children with learning disability. The authors come up with the conclusion that the use of the International Classification of Functioning is extremely important for the contemporary educational sciences, since this classification: - allows evaluation of all aspects of the child's life within a comprehensive holistic pattern; - is the "common language" that facilitates communication between all professionals working with the child and parents; - is applicable both to analyze life-sustaining activity of healthy children and children with disabilities.

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Introduction

In the early XX century, first in the USA and then in Russia, the attempt was purposed to create an integrated science of the child, namely pedology. Famous Russian scientists, such as M.Ya. Basov, V.M. Bekhterev, P.P. Blonskiy, L.S. Vygotsky, V.P. Kaschenko, A.F. Lazursky, G.Ya. Troshin etc. believed that disparate knowledge about the child, which is given by different disciplines (psychology, physiology, pedagogy, neurology, and psychiatry) is insufficient. Specialists needed synthesis of scientific information, centered on the child. Thus, the basic idea of the new science was the idea of progressive education [1].

Unfortunately, this science has existed for a short time. Vygotsky L.S. was an active contributor to the development of pedology. At the same time, he was one of the first scientists, who began to note the weaknesses that were typical for a new science. In one of his books he describes in detail the episode that occurred during pedagogical expertise. Psychiatrist, who conducted the expertise, informs the mother of eight-year "maladjusted" boy that her child is epileptoid. On mother's question: "What does this mean?" psychiatrist lists all the problems in the child's behavior, which five minutes ago was informed by the boy's mother; this leaves her perplexed. Commenting on this case, L.S. Vygotsky writes: "The concept itself is not something that can solve the practical problems, which emerged in front of challenged child's mother and forced her to seek advice Mother did not know what to do with the child, how to respond to his outbreaks, how to get rid

of them, how to make it possible for the child to go to school" [2, p.6].

We believe that one of the major problems in pedology was the lack of "common language" that would allow people of different professions and parents to share information about the child. While many experts at the time called themselves paedologists, each of them went on to say in the "language" of their specialty: they were psychiatrists, physiologists, psychologists, and neurologists [3].

The problem of lack of unified language was repeatedly arising later. Professionals, working with children, often faced and still are facing difficulties in interpreting the data presented in the framework of different terminology systems. Thus, in 90-s of the XX century in Russian schools, there were compensatory education classes for children with learning disability [4]. The decision to enroll a child in such a class had to be taken by school's special psycho-pedagogical conference based on recommendations, developed by the Defectology Research Institute of the Russian Academy of Education. However, these recommendations were written "in medical terms". For example, a child with the following violations could be recommended for the enrolment to the compensatory education class: cerebral states (compensations and subcompensations, dropsy of brain, cerebro-endocrine status, post-somatic and post-traumatic encephalasthenia) without violating intellectual development. In our opinion, such a description of the problem gives little information for the teacher, because it does not reflect the difficulties that may arise during a child's education at school [5].

At present, the problem of interaction between professionals, working with children and, especially, between professionals and children's parents have not been solved. Moreover, in the case of educational problems or disabilities, the diagnoses (attention deficit hyperactivity disorder (ADHD), dyslexia, minimal brain dysfunction), which can be made by different specialists, do not provide the understanding on how pedagogical support should be organized. Most often, the presence of such diagnoses becomes an occasion for teacher to believe that such child needs care from physicians and speech pathologists.

Thus, the situation with communication between the experts in different specialties over 80 years did not take a turn for better. Attempts to implement an interdisciplinary approach when providing help to the child in the absence of a "common language" usually lead to the fact that a child with learning disabilities is, in fact, "between" representatives of various specialties and does not receive the needed support [6].

In October 2007, the World Health Organization published the "International Classification of Functioning, Disability and Health for Children and Youth" (ICF-CY). Earlier, in 2001, a similar classification was published for adults. ICF belongs to the "family" of international classifications of the World Health Organization, which are applicable to various health aspects. In the case of individual's disease, one should use the International Classification of Functioning along with the International Classification of Diseases (ICD). We can say that the ICD is a classification of diseases, while the ICF is the classification of health. Various diseases can cause similar problems in the life-sustaining activity of the child, and, conversely, the existence of life-sustaining activity problems not always are the result of the disease [7].

Creating a version of the Classification of Functioning in conformity with children, its test and discussions continued for 7 years. This was due to the fact that children were a "moving target", i.e. for the classification of their activities during the period of childhood sometimes it was necessary to change the criteria and possible life-sustaining activity forms every 6-12 months. Forms and methods of environmental effect on the functioning of children differ from those of adults. That is why the "children" version of the ICF was supplemented by 237 new codes. The classification of functioning allows us to consider Children and Youth in the context of their health status (structure and function of various body systems), the ability to participate in various activities (e.g., reading, writing, arithmetic, etc.), their social life, as well as personality traits and environmental

factors that affect the development and life-sustaining activity. One of the purposes of creation such classification is the optimization of communication between the experts in different fields: physicians, teachers, sociologists, etc., as well as parents [8].

Thus, the ICF-CY is exactly a single, unified "common language" that allows teachers, physicians, psychologists and parents to collect and analyze information about the child and identify those areas that need special attention [9].

In our view, the fact that this classification allows us to describe both healthy children and children with disabilities is especially valuable [10]. Thus, the teacher should not take the decision to which group attribute a child. Importantly, the ICF does not classify Children and Youth, but only describes how health status affects their life-sustaining activity. Given classification allows to avoid "sticking" of diagnostic labels to the children; thus it can become an indispensable tool for creating individual programs for pedagogical support of children, who have no marked deviations in health status, but have learning disability. According to various sources, the number of such school children in Russia, Europe, and the USA currently comes to 40% [11].

Vygotskiy L.S. wrote: "Each fact, which is given in the history of the child's evolution should serve for the objectives of the whole" [2, p. 55]. If we consider the child in terms of the ICF-CY, a list of body systems dysfunctions ceases to be the sole source of information. It is equally important to identify the environmental factors that affect positively or negatively on the child's ability to participate in all kinds of life-sustaining activity, appropriate to his age.

For example, pupil has reading disorders. Of course, this creates problems in the assimilation of the school curriculum. As many studies of domestic and foreign scientists show, these health conditions always have neurological nature. But the way, these health conditions will affect on the child's functioning, depends not only on the availability of "dyslexia" diagnosis. Environmental factors, such as teacher awareness about this problem and how to help the child, parents' attitudes to the problems of the child, the level of support, provided to the child at school and at home, and extracurricular interests of the child can also affect the child's life-sustaining activity. The current classification considers the following environmental factors that can facilitate or hinder from the normal child's life: technologies and products, environmental condition, support of other people, cultural traditions, special services, organizations, etc. [12].

In case of the adverse impact of environmental factors, the child may eventually refuse to go to school. However, the situation may unfold differently if the child receives support from outside. ICF takes into account the whole range of supporting factors: not only the work of specialists with a child, but even, for example, such factor as the availability of the pet in child's family. Description of child's functioning in the ICF-CY format allows one to create assistance programs and evaluate their effectiveness. Such classification categories can be conveniently used when professionally discussing successes and challenges of the child by all the specialists and parents, as these categories sort with personal experience of any person.

It is important to describe in more detail the structure of the performance classification. It involves the creation of two major data sheets:

- body structures and functions (B - body)
- activity (A) and participation (P)

Thus, the creators of the Classification went from using terms, such as "handicaps", "developmental delay", and "defect". This change made it possible to describe the real-life situation of any child in a more positive way.

"Functioning" is a general term for the detection of any kind of activity or participation in social life. The term "disability" refers to any constraints in activity or participation.

ICF also uses the following terms: "Body functions" mean the physiological functions of body systems, including mental activities; "Body systems" mean anatomical parts of the body; "impairment" mean essential deviations; "activities" means performance of a task or action by an individual; "Participation" means involvement of an individual in a real-life situation; "limitations" means difficulties in implementing activities, which an individual can experience; "restrictions": these are the problems that an individual may experience when involving in real-life situations; "Environmental factors" mean conditions that make up the physical and social environment, mindsets and interpersonal environment in which the child lives.

ICF has two parts, each, in turn, comprises of two components:

- functioning and disability (a), and activity and participation (b);
- environmental factors (a), and personal factors (b).

Both parts and each component can be represented in a negative and positive aspects. Thus, environmental factors can either support the functioning of the individual (facilitating) or hinder normal functioning (preventing).

The standardized coding system allows describing everything that happens to a child without the use of special terminology. For each aspect of livelihood or the child's behavior a certain numeric code is created; for example: "Body structures and functions", section "Specific mental functions": v40 refers to attention function, v44 refers to memory function, v76 refers to cognitive function of consecutive compound motions, v80 refers to self-awareness and internal sense function, and etc.

"Activity and participation", section "Basic skills in training": d140 refers to mastering reading skills, d145 refers to mastering writing skills, d150 refers to mastering numeracy, d155 refers to acquisition of practical skills, etc.

Numerical codes provide the opportunity to exchange information between the specialists in various countries, since in this case there is no need to translate information into another language. Each parameter has additional encryption of the abnormality degree, which ranges from mild to significant. Methods for determining the abnormality degree must also be unified; they will be developed as far as the classification of functioning is used in practice.

In the context of this study, it seems appropriate to find out how the ICF can be used to create a program of educational support for child with learning disability.

It seems to be important to analyze the particular situation without using logic ICF.

Pasha N., 7 years.

Before going to school, no deviations in the evolution and the health were observed in the boy (not addressed to specialists and did not attend the kindergarten). Learning disabilities emerged from the first days of attending the school. In November, a speech therapist has diagnosed with "dyslexia" and "dysgraphia." The school psychologist noted the presence of "attention deficient hyperactivity disorder". The child was sent to a neurologist for consultation. Neurological functional diagnostics found dysfunction of the brain stem structures, and a slight disturbance of venous blood outflow from the brain. Teacher recommended to do more reading and writing at home, to refuse classes in the sports section (not to overload the child and give more time to homework). During the classes teacher often calls the child to the blackboard and asks to read aloud (in order to practice reading skills). Classmates laugh at the way he reads. The child cries every day, doing homework. Father is sure that the boy is lazy and needs punishment.

Table 1 presents an example of description the situation in terms of ICF format.

Table 1. Example of the child functioning description.

Pasha N. 7 years

Body: structures and functions [impairment]	Activities [limitations]	Participation in social life [restrictions]
blood supply; brain stem functioning; cerebellum functioning; (functional diagnostics, neurologist conclusion); attention, impulsivity control (inspection of a psychologist)	reading; written language; performance of multistage instructions; time knowledge by the clock; independent homework preparation.	Affiliation with class; assimilation of curriculum.
Environmental factors		Personal factors
Facilitators	Barriers	
Individual sessions with a speech therapist.	Father's attitude; lack of awareness of parents and teachers about the causes of the hardships; attitude of classmates to Pasha's learning disabilities; uncontrolled use of a computer.	Low self-esteem, anxiety (psychologist) On one-to-one lessons with a speech therapist admits fewer mistakes, when reading and writing than at the class sessions.

Life-sustaining activity of the child can be described in terms of the ICF in order to assess the causes of constraints in child's activity and participation in social life, as well as to develop an assistance strategy. Factors of each list have a mutual effect; this should be considered when choosing a child care strategies.

In the case of Pasha N., lack of parents' and teachers' awareness about the possible causes of learning disability becomes apparent. Activity constraints may be caused due to dysfunction of the brain stem and cerebellum, as well as blood supply disturbances that has been revealed through functional diagnostics. This leads to reduced performance of the child, the brain processing speed of information, perceived by ear, is disrupted. Such a child may give the impression of a sleepy and lazy (though this is not a personal factor). This requires special bodily exercises, walking, massage, restrictions against watching TV and using computer at home. In our opinion, the denial of attendance swimming pool is a big mistake. Here training is important not only in terms of health promotion. In case of problems with learning, the achievements in extra-curricular activities can avoid a negative impact of chronic "success-failure" situation on child's self-esteem [13].

Thus, the use of the ICF allows a different look at the capabilities of pedagogical programs to

support child. In the case of Pasha N. it should start with raising awareness of adults about the causes of learning disabilities. In this particular case, the teacher's recommendation "to read and write more" will lead to aggravation of the situation, as well as disciplinary measures, proposed by the child's father.

The question arises: what the expert is able to conduct such an analysis of the child's life-sustaining activity? We believe that if we are talking about an elementary school, this should be done by the teacher. It is teacher, who meets pupils every day, communicates with their parents, and has access to the most complete pattern of all the aspects of child's life. However, this requires availability of at least two conditions: accessibility for teachers to the necessary information about all the possible causes for learning disabilities, capabilities of ICF, as well as high motivation of teachers towards obtaining such knowledge.

Despite the fact that Russian version of ICF for adults was available at WHO web site as far back as 10 years ago, knowledge of experts about this Classification is extremely limited, as well as the need to use it in their work [14].

In conclusion, we believe it important to highlight the main ideas presented in the article:

1. the International Classification of Functioning, developed by the World Health Organization, allows one to

- evaluate all aspects of the child's life-sustaining activity within a comprehensive, holistic pattern;
2. given Classification is the "common language" that facilitates communication between all professionals working with the child, as well as his parents;
 3. these capabilities allow us to organize pedagogical support of a child with learning disabilities at a new quality level;
 4. current Classification is applicable to analyze life-sustaining activity of both healthy children and children with disabilities.

Thus, the idea of using the International Classification of Functioning, Disability and Health seems highly relevant to today's educational science.

Corresponding Author:

Dr. Ratner Faina Lazarevna
Kazan (Volga region) Federal University,
Kremlyovskaya St., 18, Kazan, 420008, Republic of
Tatarstan, Russia

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