OPEN ACCESS



Eurasian Journal of Analytical Chemistry ISSN: 1306-3057 2017 12(Special Issue):607-618 DOI 10.12973/ejac.2017.00195a

Pedagogical Model of Formation of Readiness of People with Health Disabilities to Integration into the Educational Environment of a Higher Education Institution

Guzaliya Zh. Fahrutdinova Kazan (Volga region) Federal University, RUSSIA

Igor E. Konovalov Volga Region State Academy of Physical Culture, Sport and Tourism, RUSSIA

Yuri V. Boltikov Volga Region State Academy of Physical Culture, Sport and Tourism, RUSSIA

Received 24 December 2016 • Revised 13 March 2017 • Accepted 19 March 2017

ABSTRACT

The recognition of the individual as the main value of the society leads to the search for new ways of comprehensive development, socialization and realization of people with disabilities as individuals. Higher education is one of the most important stages of socialization of persons with disabilities into society, it gives freedom of choice, the spiritual and material independence, forms the world and life goals, develops the ability to adapt, gives vital resistance and harmony of existence. The article aims to explore the potential abilities of attraction individuals with health disabilities to enter and study at higher education institution. The article presents a pedagogical model of formation of readiness of people with health disabilities to integration into the educational environment of higher education institution. The article describes the structure of the educational model, which is a diagram where are reflected the basic methodological regulations (goal, objectives, principles), the structure of the communication and the educational course, the educational environment subjects interaction, the efficiency criteria, the expected result. The article submissions are of practical value for specialists realizing his professional career in the field of inclusive education and adaptive pedagogy. Keywords: persons with health disabilities, pedagogical model, integration into the educational environment of higher education institution, inclusive education.

INTRODUCTION

Currently, one of the most important tasks of the state, as a truly social, is the empowerment of persons with disabilities for their full self-realization; it is closely connected with the problem of their adapting to the higher education system. The relevance of the

© **Authors.** Terms and conditions of Creative Commons Attribution 4.0 International (CC BY 4.0) apply. **Correspondence:** Guzaliya Zh. Fahrutdinova, *Institute of Psychology and Education*, Kazan (Volga region) Federal University, Kazan, Russia. Qdautova@mail.ru

study of the question due to the fact that the vocational training of persons with disabilities falls into the category of complex issues in social work, where the great importance has the creation of necessary conditions for the development of abilities of persons with health disabilities, as well as their maximum integration into society and motivation to continue their education. However, the social stereotypes that still occur in the society promote the spread of false principles in relation to disabled people. On the other hand, the inability of persons with disabilities to lead a full life arises because of societal and physical barriers to their full participation in the life of society. Inferiority feelings arise in people with disabilities if they realize that are deprived of opportunities generally available in the society and necessary from the point of view of the basic elements of life, including family life, employment, housing, financial and personal security, participation in social or political groups, religious activities, access to all kinds of public services, freedom of movement. Stereotypical thinking on disability issues also creates additional psychological barriers to realization of rights and access to education, including higher education, by persons with disabilities. In recent years, higher education for persons with disabilities becomes a leading goal in their lives. With education they connect the achievement of the most important life attitudes, the ability to realize themselves in society in general and in the profession in particular.

Today, however, access to higher education for persons with disabilities continues to be a major social problem, so a number of research projects are devoted to its solution, through the implementation of these projects specialists, working in this field, are attracted to them; practical models and programs aimed at formation of readiness of persons with disabilities to enter a higher education institution and their subsequent integration into the environment of educational society are being developed. The aim of our research is the development and implementation of the pedagogical model of formation of readiness of people with health disabilities to integration into the educational environment of a higher education institution.

METHODOLOGICAL FRAMEWORK

Research methods

The study has involved 70 respondents (40 men and 30 women). The study has engaged young people with the health disabilities between the ages of 18 to 35 years. The majority of respondents are disabled people of group III – 45 people (64.29%), the II group of disability - 18 people (25.71%) and I group of disability – 7 people (10%).

To study the status of work on the integration of persons with disabilities into the educational environment and their adapting to the educational process in the higher educational institution we have conducted the questionnaire survey. We have developed a questionnaire consisting of 28 questions and 132 subquestions of closed and open types. A questionnaire survey was conducted twice in 2015 and in 2016.

For the construction of the formative stage of the experiment we have used the method of pedagogical modeling. The formative stage is a set of measures of realization of the pedagogical model of formation of readiness of persons with health disabilities to integration

into the educational environment of a higher education institution. This complex is designed in the form of working with a problem group of persons with health disabilities. Work in the group is focused on the formation of entering and learning motivation at higher education institution for this category of the population.

Theoretical and methodological basis of research

In the pedagogical science modeling is one of the most effective methods of investigation. Theoretical analysis [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] shows that modeling method is applied on both empirical and theoretical level.

Model in all cases acts as an analogue of the research object, i.e. it is similar to the last one but not identical to it. One of the most important requirements for the model is its reproducibility. Model (in particular pedagogical) is a definite framework within which the procedural aspect of pedagogical activities (education, training, learning or development) is enclosed. The pedagogical model consists of technologies, methods or programs which contribute to the reconstruction of the procedural and methodological aspect of pedagogical influence [11, 12].

The functions performed by the model in solving pedagogical problems may have a different character. The pedagogical model allows us to identify current and future directions of the educational process, to identify, explore and scientifically substantiate terms of a possible rapprochement between the expected and desired outcome.

Any educational model should meet the following criteria:

- coherence or integrity, which is intended to limit the release of the study by material dependencies between objective areas;
- constancy and stability, the main features of which are reproducibility and manufacturability;
- observability, i.e. the need to connect the key elements of the theoretical model with real effects which can be fixed in the studied object;
- visibility the inclusion of minimal manageable number of parameters into the model [13]

Thus, on the basis of the above mentioned we have identified the model as a form (shell), within which there is a system process of o formation of readiness of people with health disabilities to integration into the educational environment of a higher education institution [14].

RESULTS

In 2015 a study was conducted to identify the problems of persons with health disabilities while entering and studying at higher education institution. There were identified four such problems.

The first problem is the physical state of patients with health disabilities. This problem is due to the specificity of the biological functioning of persons with health disabilities and is manifested in many different forms. In higher educational institutions, as a rule, regulated temporal and space-environmental forms of organization of educational process do not take into account the specificity of life of students with disabilities, their special way of life, habits, the rhythm of life, especially of biological functioning. The very presence in the walls and classrooms of university, unsuitable for their capabilities, cause considerable difficulties in terms of transportation, studying, preparation for classes, leisure and so on. The location and layout of the buildings, stairs, doors, elevators, ramps, public spaces, lighting, ventilation, acoustics, temperature, equipment, furniture - all that takes on particular significance in the organization of the educational process of students with health disabilities at university.

The second problem is the psychological peculiarities of persons with health disabilities. Psychological peculiarities of persons with health disabilities, their inner psychic dissonance, social deprivation, psychosomatic condition - all this in the educational process of the university, both in terms of training and education, as well as in the aspect of entry is not taken into account. Subject teachers, as a rule, do not know and, unfortunately, ignore these factors which require not only understanding but a directed psychological-pedagogical influence in order to eliminate the psychological dissonance and social deprivation.

The third problem is the ability to use the information environment, i.e. information culture. This problem is connected with the processes of transmission, perception and reproduction of information, primarily educational one. Moreover, the problem of persons with health disabilities having different nosologies, obvious circumstances of violations of auditory and visual analyzers, motor skills of oral and written communication, as well as any other kinds of physical health problems. Each physical flaw, as experience shows, to a varying degree disturbs attention concentration, reduces the activity and communication skills in the educational process between students and teachers, as well as between persons with health disabilities and ordinary people.

The fourth problem is the degree of education of persons with health disabilities. The essence of the problem lies in the insufficient level of ownership by persons with health disabilities knowledge, skills and abilities of the previous stage of education, which are necessary for entry the university and further studying in it. In relation to persons with health disabilities we can say such a thing as a hidden underachievement related with the low level of requirements and indulgent attitude to them in previous periods of study [14].

To solve these identified problems it was developed the pedagogical model of formation of readiness of persons with health disabilities to integration into the educational environment of a higher education institution, which was based on the experience gained in the domestic science in the field of pedagogical modeling.

In constructing the model we can identify a number of logically arrayed successive stages.

In the first stage of constructing the model was created the theoretical version of the model, which was a very general requiring more specific and clarifying ideas about what

kind should be an ideal system of formation of readiness of persons with health disabilities to integration into the educational environment of a higher education institution of athletic orientation. Formation of such a model was possible due to critical analysis of the legal documents, controlling and regulating the rights and opportunities of persons with disabilities studying at a higher education institution.

On the second stage of the model construction (the stage of transformation of a theoretical model into a practical one) were identified the following main directions of modeling:

- Identification of the main components of the model;
- The establishment of a hierarchy of the model components;
- The allocation of the aggregate links between the components of the model and the identification of their interaction;
 - Immediate creation of a visual image model (scheme).

The third stage of construction of the model provides a comprehensive analysis of the results of theoretical and practical viability of the model, correction of the content of its main components.

The developed model of formation of readiness of persons with health disabilities to integration into the educational environment of a higher education institution of athletic orientation is a diagram reflecting the key methodological regulations, the structure of the communication and educational course, the interaction of the subjects of the educational environment, effectiveness criteria, the expected result (Fig. 1).

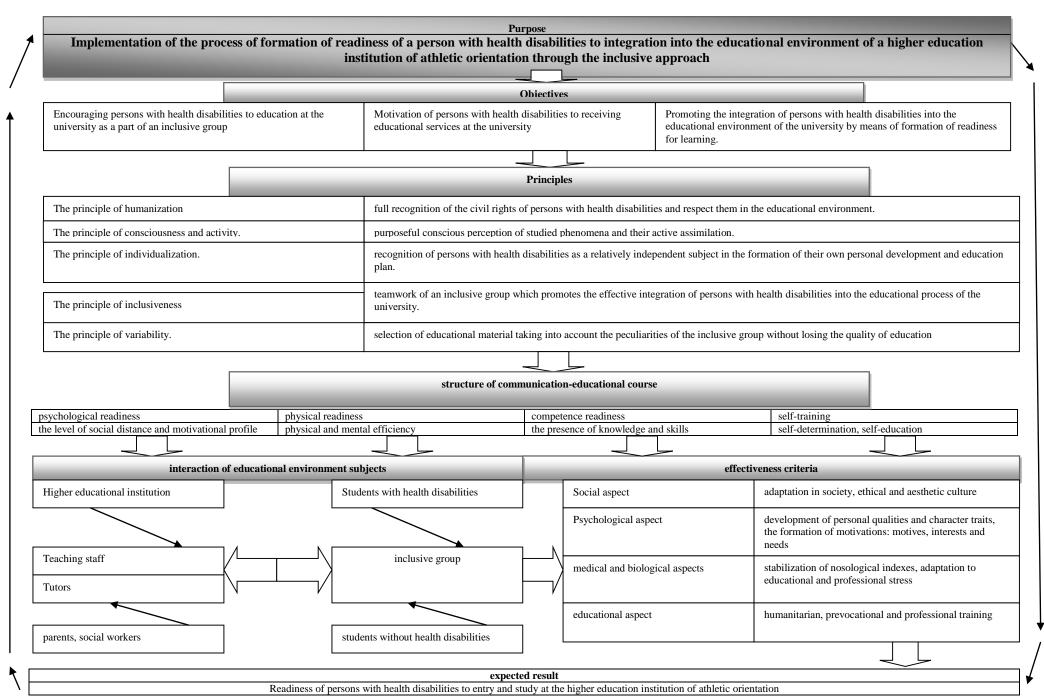


Figure 1: Pedagogical model of formation of readiness of persons with health disabilities to integration into the educational environment of a higher education institution

The purpose of the model is the implementation of the process of formation of readiness of a person with health disabilities to integration into the educational environment of a higher education institution of athletic orientation through the inclusive approach.

The ability of achievement this goal depends on the implementation of the following groups of objectives:

- 1. Encouraging persons with health disabilities to education at the university as a part of an inclusive group.
- 2. Motivation of persons with health disabilities to receiving educational services at the university.
- 3. Promoting the integration of persons with health disabilities into the educational environment of the university by means of formation of readiness for learning.

As the basic principles of effective implementation of our model have been developed the following:

- 1. The principle of humanization. This principle implies the full recognition of the civil rights of persons with health disabilities and respect them in the educational environment.
- 2. The principle of consciousness and activity. This principle directs persons with health disabilities at purposeful conscious perception of studied phenomena and their active assimilation.
- 3. The principle of individualization. This principle is aimed at the recognition of persons with health disabilities as a relatively independent subject in the formation of their own personal development and education plan.
- 4. The principle of inclusiveness. This principle focuses on teamwork of an inclusive group which promotes the effective integration of persons with health disabilities into the educational process of the university.
- 5. The principle of variability. This principle is aimed at the selection of educational material taking into account the peculiarities of the inclusive group without losing the quality of education.

The backbone core of our model is the communication - educational course. The structure of the course program consists of the following modules: psychological readiness, physical readiness, competence readiness, self-training.

The effectiveness of the organization of the educational environment depends on the involvement of all interest subjects into the process. The subjects of the educational environment of the university according to the model are: university administration, teaching staff, students and students with health disabilities, parents and social workers.

The interaction of all subjects of the educational process should take place with the full confidence of the parties and carry mutually polite character. So the university administration provides a barrier-free environment in the territory and in the premises of the

institution as well as the necessary equipment and other aids of classrooms, creates the conditions for persons with health disabilities preparatory training, accompanies, in the framework of Russian legislation, university entrance of applicants with health disabilities, provides equal rights to all students, including students with health disabilities, in obtaining high-quality educational services, assists in the subsequent employment of graduates with health disabilities [14].

For a successful organization of the educational process, the teacher must have a number of key competencies that will ultimately lead to creation of an effective organizational-management mechanism, which will have humanization character, methods of pedagogical influence and management, of substantive cooperation and "subject-subject" relationships. The teacher must have the competencies (personal, professional, reflective and other competencies) that directly affects on the interest of persons with health disabilities to acquire the proposed material. And the degree of involvement of persons with health disabilities in the educational process depends on the use of variable software at the lesson, reflecting and taking into account the interests and needs of students. The teaching staff working with persons with health disabilities should be aware of psychological and physiological characteristics of the students and take them into account in providing the educational process.

A higher education institution, where students with health disabilities are taught, must have the positions of tutor in its staff. The tutor will organize the process of individual learning of students with health disabilities and their personal support in the educational space. Together with a student with health disabilities he/she allocates and evaluates the available resources of all types to achieve the set goals. The tutor also performs mediation between a student with health disabilities and teachers for the purpose of consultation or additional support of teachers in the acquisition of academic disciplines.

"Academic tutor", who is a Master or PhD student with a mandatory psychopedagogical or specialized tutorial training, can help students with health disabilities in the construction and implementation of individual educational plan.

"Tutor-mentor" is usually a teacher with a degree of candidate of sciences and having special tutorial background, he/she accompanies the process of formation of professional competences of the future specialist. The work of tutors is supervised by the "tutor-supervisor": the teacher with a Ph.D. or the title of professor.

On the first year of study senior or fellow students (tutors, trainees) may help students with health disabilities. Their responsibilities include assistance in the exploration of university space (undergraduates) and a smooth entry into the studying in an inclusive group (fellow students). Students, studying in an inclusive group, in the process of learning provide comprehensive assistance to persons with health disabilities both in training activities and outside the classroom.

Inclusive group is an organized group of students where the learning process is organized on a parity basis and assumes the availability of the entire range of educational services, regardless of the health status of students.

Parents are able to monitor the observance of the students' rights, attend classes and other forms of organization of educational process, contact the university administration, teachers and students. Social workers supervise the observance of the students' rights, attend classes and other forms of organization of educational process, identify the needs of students with health disabilities and their families in the field of social support, determine the direction of help in adaptation and socialization.

The criterion for the efficiency of the developed model is a comprehensive development of the person with health disabilities, which is expressed in the realization of his personal potential reflected in the following key aspects:

- 1. The social aspect: adaptation in society (rules of personal conduct in the group and community, responsiveness and communication skills, comprehension of responsibility and the importance of their own actions, correctness and mutual respect in communication), ethical and aesthetic culture (spiritual initiation, aesthetic and ethical values).
- 2. The psychological aspect: the development of personal qualities and character traits, the formation of motivations: motives, interests and needs, overcoming of psychological internal barriers and external stereotyped perception and patterns.
- 3. Medical and biological aspects: stabilization of nosological indexes, adaptation to educational and professional stress, increase of resilience reserve to negative environmental effects, morphological and functional condition of the body (development of cardiovascular, respiratory and other systems of the body, improving of physical abilities).
- 4. The educational aspect: humanitarian (improvement of acquired knowledge and skills), prevocational and professional training (acquisition of knowledge and related subjects, the formation of professionally significant skills on this basis).

As a result of implementation of the model it is expected the result, which is expressed in the readiness of persons with health disabilities to entry and study at university and admission oneself as a full member of society and an active participant in the educational process.

The developed pedagogical model of formation of readiness of people with health disabilities to integration into the educational environment of a higher education institution was approved in 2016 on the basis Volga Region State Academy of Physical Culture, Sport and Tourism in the period from January to June.

In the framework of the model approbation for persons with health disabilities, participating in our study, were hold several activities.

In January-February 2016 for persons with health disabilities was organized the excursion in order to get acquainted with the available opportunities of Volga Region State Academy of Physical Culture, Sport and Tourism for supplying a barrier-free environment in the organization of educational process and leisure activities.

In March by efforts of the research team was organized a round table with persons having health disabilities on the theme "The legal basis, the rights and opportunities entry and study at a higher education institution.".

In April was implemented a seminar, in its framework was realized a communication-education course. In the context of this study, taking into account the above identified problems, were formulated the types of readiness included in the communication-educational course. Thus, the structure of the course consists of four modules: psychological readiness, physical readiness, competence readiness, self-training.

In May and June 2016 for persons with health disabilities were carried out consultations on the rules of admission to higher education institutions, the availability of benefits for this category of applicants, deadlines for submission and the list of documents, schedule of admission tests (if necessary), the timing of admission and other necessary information.

In order to reveal the effectiveness of implementation of the model of formation of readiness of people with health disabilities to integration into the educational environment of a higher education institution, we conducted the repeated survey (2016). The survey was attended by persons with health disabilities who took part in our research. The respondents have not changed. 70 respondents took part in the questionnaire survey. The main indicator of readiness of persons with health disabilities to obtain a higher profile education is their desire to get this education. So in the result of the survey in 2015 there were almost no persons with health disabilities who wanted to get a higher physical education; respondents mainly chose professions not related to sports activity. In 2016 persons with health disabilities wishing to get higher physical education became 32 (41.71%), moreover 55 people (78.57%) of 70 wanted to get a higher education. We are encouraged by the fact that more than half of respondents (51.4% - 36 people) after graduating want to work in the sphere of physical culture and sport, receiving specialized higher education or retraining courses. At the beginning of the study in 2015 among the reasons of giving up education the majority of respondents showed a lack of barrier-free environment in the educational institution, incorrect attitude of teachers and fellow students, weak motivation of persons with health disabilities. The repeated survey has shown that the reasons of personal nature go to the foreground (weak training, faith in ones' own strength, etc.). The majority of respondents like physical culture and sport and they are ready to exercise.

CONCLUSION

Our research is devoted to the preparation persons with health disabilities to entry and further study at university. Based on the questionnaire survey it identified a need for the development and subsequent implementation of the pedagogical model of formation of readiness of persons with health disabilities to integration into the educational environment of a higher educational institution. The developed model is a scheme which reflects the basic methodological regulations (purpose, objectives and principles), the structure of communication - educational course, the interaction of subjects of the educational environment (the administration of the university, teaching staff, parents, social workers,

students, students with health disabilities), efficiency criteria (social, psychological, medical and biological and educational aspects), the expected result. This model after approbation was introduced into the practice of Volga Region State Academy of Physical Culture, Sport and Tourism. We assume that exactly the introduction of this pedagogical model will create conditions for the formation of readiness of persons with health disabilities to enter the educational institution and create conditions for their integration into the educational environment of the university.

On the basis of our research we can make some correction in the model. Despite the fact that the model in its original form is the most optimal and reflects all the major factors influencing the formation of readiness of a person with health disabilities to integration into the educational environment of a higher education institution of athletic orientation, it is necessary to add such a component as organization of opportunity for persons with health disabilities, who are not involved in sports, to be engaged in physical culture. The existence of sports facilities in Volga Region State Academy of Physical Culture, Sport and Tourism allows us to do it. Another component of the model, which will strengthen the interest of persons with health disabilities to enter the higher education institution of athletic orientation, is the creation of a specialized center. The center will be responsible for such issues as supervision, management and coordination of the educational process and recreational activities persons with health disabilities, their legal, social and psychological support. The denoted correction of the model formation of readiness of a person with health disabilities to integration into the educational environment of a higher education institution will be done on the subsequent stages of our research. Another fact, proving the effectiveness of the model, was the entrance of eight people with different levels of nosology and various health disabilities into Volga Region State Academy of Physical Culture, Sport and Tourism in 2016.

RECOMMENDATIONS

The content of this article can be useful for teachers, adapting to the new conditions of professional work in the field of higher education, professionals in the field of inclusive education and adaptive pedagogy.

ACKNOWLEDGEMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University. The basis for this article was the state task for rendering of the state service of the Volga region state academy of physical culture, sports and tourism.

REFERENCES

- 1. Kuzmina, N.V. (1980). System of pedagogical research methods: study guide. Leningrad: Leningrad State University.
- 2. Zagvyazinsky, V.I. (1982). Methodology and methods of didactic study. Moscow: Pedagogika.
- 3. Novik, I.B. (2005). Modeling as a method of scientific research. Moscow: Gardarik.

- 4. Bordovskaya, N.V. (2001). Dialectics of pedagogical research. Saint-Petersburg: RCTI.
- 5. Zagvyazinsky, V.I., & Atakhanov, R. (2005). Methodology and methods of psychological and pedagogical research. Moscow: Pedagogika.
- 6. Zotova, F.R. (2005). The activities of the teaching staff for the prevention of fatigue and maintain the health of schoolchildren in the learning process. Cheboksary: Chuvash State Pedagogical University.
- 7. Geller, E.S. (2008). The logical basis of the method of modeling. Moscow: Ethnosphere.
- 8. Savitha, K. (2015). Waste Generation Trends and Their Socio-Economic Implications: A Case Study. *International Journal of Ecological Economics & Statistics*, 36(4), 104-112.
- 9. Musilek, M., Hubalovsky, S., & Hubalovska, M. (2017). Mathematical Modeling and Computer Simulation of Codes with Variable Bit-Length. *International Journal of Applied Mathematics and Statistics*, 56(1), 1-12.
- 10. Yakubu, Y. (2016). Modeling the Impact of Agricultural Credit Finance and Socioeconomic Characteristics of Farmers on Rice Production: Multiple Linear Regression with Categorical Predictor Variables Approach. *International Journal of Ecological Economics & Statistics*, 37(1), 43-54.
- 11. Khamidullin, I.G., & Huziahmetov, A.N. (2001). Workshop on pedagogy: method book. Kazan: Magarif.
- 12. Fahrutdinova, G.Zh. (2016). Ethno-Pedagogical Factor of Polycultural Training. *International Journal of Environmental & Science Education*, 11(6), 1185-1193.
- 13. Sofronova, N.V. (2011). Modelling of pedagogical systems. Cheboksary: Chuvash State Pedagogical University.
- 14. Konovalov, I.E. (2011). The structure and content of the modern system of physical training of students of musical colleges. Moscow: Nauka.

http://www.eurasianjournals.com