

Contemporary Conditions of Efficient Implementation of Inclusive Education at the University

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The paper analyzes the conditions of introducing inclusive education at universities. The suggested classification of necessary conditions may be applied in practice for efficient inclusion at higher educational institutions. We used the methods of descriptive analysis, observation, and Pearson's chi-squared test (χ^2). The research findings include the identified efficient conditions of inclusive education, such as (1) creating a column about "Inspiring stories" on the website of the educational institution; (2) conducting group psychological training for students, joint activities, and the so-called "student hour"; (3) establishing a department of distance and inclusive education; (4) developing further education courses for teachers with a focus on communication with students with disabilities and health-related conditions; (5) designing courses for tutors and assisting students with disabilities and health-related conditions to provide them with comprehensive support within the entire period of study at universities; and (6) creating online and offline courses for teachers to develop their readiness to introduce inclusive education at universities by five criteria.

Keywords: inclusive education, conditions, university, students, disability, health-related conditions

INTRODUCTION

The introduced topic is highly relevant due to the need for studying the conditions of introducing efficient, inclusive education at universities necessary for creating a comprehensive, inclusive educational environment. There is an increasing number of conditions for efficient implementation of inclusive education, and "a variety of such opportunities help the teaching staff to find approaches to every student so that every student could learn the materials and achieve maximum results of studying" (Shevchenko, Volkov & Pristavka, 2018).

The following definition is deemed to be primary in our research: inclusive education is "a process of developing general and vocational education, which implies its availability for everybody with regard to adaptability to the needs of every person, irrespective of a health condition" (Aismontas, 2015).

Teaching students with health-related conditions and disabilities requires a particular university environment to factor in peculiar educational needs and opportunities, ensuring equal access to education for all students (Panyukova, Sergeeva & Melnik, 2017). Universal access to higher education for people with health-related conditions and disabilities is set forth by the law "On education in the Russian

Federation.” Following the legislation, universities introduce various forms of a teaching process, taking into account the opportunities of people with health-related conditions and disabilities. As a rule, universities offer inclusive education, implying a joint academic group for students without disabilities and students with health-related conditions and disabilities.

The need for particular conditions of education established for students of such category is set in the law “On education in the Russian Federation.” Some conditions include the following (Russian Federation, 2012):

- “Use of special education programs and methods of teaching and mentoring, special textbooks, study guides, didactic materials, special technical teaching aids of shared and personal use”;
- “Rendering services of an assistant (helper) offering technical support required by students”;
- “Providing access to buildings of educational institutions,” and other conditions, which are mandatory for, or make more accessible learning of educational programs for students with health-related conditions (Borytko, 2001).

In this paper, we clarified the research methods and described the required conditions, their classification, and their application in practice at Nosov Magnitogorsk State Technical University [NMSTU].

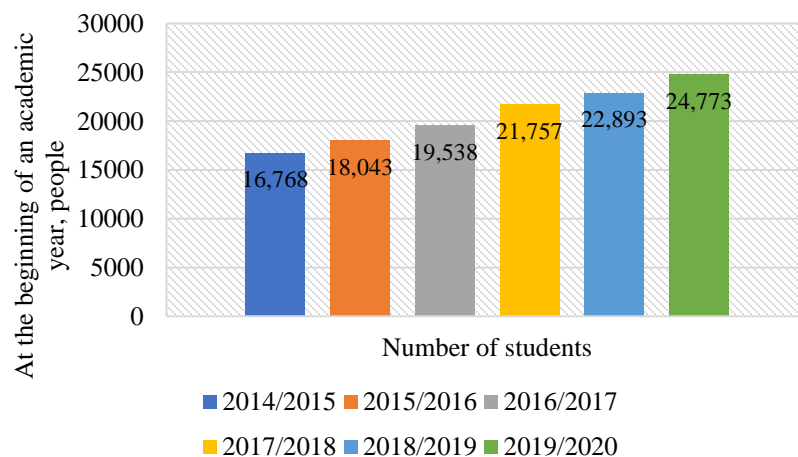
MATERIALS AND METHODS

The research is aimed at determining the conditions ensuring the efficient introduction of inclusion into higher education. The research results can be applied in practice to analyze the level of introduced inclusion into contemporary higher education, as well as create an inclusive environment for people with health-related conditions and disabilities at universities. Given the research aim, the objectives are as follows:

- To analyze the current state of inclusive education at universities;
- To classify current conditions;
- To analyze conditions for inclusive education at NMSTU;
- To carry out a statistical test of the identified conditions for the efficiency of inclusive education;
- To make conclusions about the results.

We applied descriptive analysis to detect a trend in a growing number of students with disabilities at Russian universities (Federal State Statistics Service, 2021). These data are given in Fig. 1.

FIGURE 1
STUDENTS WITH DISABILITIES STUDYING UNDER PROFESSIONAL EDUCATIONAL PROGRAMS OF HIGHER EDUCATION



As part of the research, we used the methods of observation and analysis of the conditions at NMSTU. Theoretical provisions of the classification of efficient implementation of inclusive education were tested by (1) analyzing the work of the educational support staff; (2) studying the attitude of the teaching staff and employees to students with health-related conditions and disabilities; and (3) examining continuing education courses on inclusive education for specialists and university teachers (Nikitina, 2001).

To give an unbiased assessment of efficiency of the stated conditions, we used a non-parametric method of Pearson's chi-squared test (χ^2), showing that efficient implementation of inclusive education at the university was attributed to the availability of the stated conditions ($\chi^2_{0.05}$).

RESULTS

The exercise of rights of people with disabilities to education is associated with some difficulties related to reforming education and social policy. The existing trend shows an increasing number of students with various medical conditions. Thus, the Russian education system is being gradually rebuilt to make education available for all categories of people. However, there are factors preventing the full inclusion of students of such category into the educational environment of the university. The university offers contemporary conditions contributing to a more efficient inclusion of students with health-related conditions and disabilities into the university system to solve this problem.

The efficient introduction of inclusive education is understood as the creation of an educational environment including the conditions "above the system" of the university (e.g., internet, mass media, or social environment) and "in the system" of the university. The latter case implies (1) accessible (barrier-free) environment of the university; (2) relations between the teaching staff, specialists, and the management of the university and students with health-related conditions and disabilities; (3) psychological and teaching assistance for students with health-related conditions and disabilities, including psychological support; (4) readiness of university teachers for inclusive education, ensuring the efficient introduction of inclusive education into university environment).

When developing a set of conditions aimed at the successful introduction of inclusion into education, we should consider the following factors:

- Social mandate for good quality inclusive education;
- Peculiar features of teaching in an inclusive environment;
- Readiness of university teachers for introducing inclusive education.

Below we described the necessary conditions that, in our opinion, contribute to the efficient implementation of inclusive education at the university.

The conditions "above the system" of the university include:

1. Internet and mass media. A strong society means "inclusive society." Inclusion in society starts from the attitude of society toward people with disabilities and health-related conditions. The internet and mass media play an essential role in forming such attitudes. There are many real-world examples of people with health-related conditions proving that people with disabilities and health-related conditions can live a full-fledged life. Using the internet and mass media, one can share such examples to enhance activities on expanding opportunities for people with disabilities, developing additional measures, and an environment to fulfill their professional, intellectual, and creative potential. In this case, we suggest creating a section on "Inclusive education" on the website of the educational institution to post relevant information about this issue. Additionally, we recommend forming a particular column about "Inspiring stories" containing stories of successful people with health-related conditions. Moreover, this step will contribute to the development of group empathy and the acceptance of people with disabilities by society.
2. Social environment. Social environment plays a critical role in the formation of an inclusive educational environment. A tolerant educational environment is based on humanist moral

values; it is the key to humanist education developing and upbringing a tolerant personality. In turn, tolerance and empathy are one of the key conditions for inclusive education.

Tolerance is mainly determined by the established social norms and rules of behavior. Therefore, the educational environment should contribute to improving mutual understanding, strengthening solidarity and tolerance in relations between all participants of a learning process. To fulfill this condition, we recommend delivering psychological group training for students, organizing their joint activities during the teaching process and beyond, organizing team competitions, and supporting joint projects. An efficient method is the so-called “student hour,” when a group gathers in a lecture room one day a week and jointly solves all issues, problems, and conflicts faced within a week.

The required conditions “in the system” of the university include:

1. Accessible (barrier-free) environment of the university. The accessible environment includes several aspects, and one of them is removing physical barriers for people with mobility impairments. However, in this case, we want to focus on forming a barrier-free educational process. Thus, we suggest that the university structure include a department of distance and inclusive education to organize and support university teaching and other staff involved in inclusive education.

We emphasize the following activities of such department:

- To give prompt assistance and consult participants of the educational process regarding the distance learning system;
 - To upload and update electronic courses of the distance learning system on the educational platform of the university;
 - To organize teaching, psychological, technological, medical, health-improving, and social assistance for students with health-related conditions and disabilities;
 - To cooperate with the structural departments of the university to introduce inclusive education and set up special conditions at the university for students with health-related conditions and disabilities;
 - To participate in organizing courses on additional and advanced training of personnel on inclusive education, e-learning, and application of distance learning technologies;
 - To develop and introduce regulatory documents.
2. Relations between the teaching staff, specialists, the management of the university, and students with health-related conditions and disabilities. Study at a university also serves as a pedagogical rehabilitation for many students with health-related conditions and disabilities, when the quality of professional interaction between teachers and students implies the development of professional competencies and a broad range of skills and traits attributed to social and psychological competence. Therefore, the relations between the teaching staff, specialists, the management of the university, and students with health-related conditions and disabilities play a crucial role in forming an inclusive educational environment.
To fulfill this condition efficiently, we have developed advanced training courses for teachers, focusing on communication with students with health-related conditions or disabilities.
 3. Psychological and teaching assistance for students with health-related conditions and disabilities, including psychological support. “Psychological and teaching assistance is based on accepting and encouraging a student with special needs; helping them with finding resources and skills to act more efficiently; helping them with developing self-confidence, skills of dealing with difficulties in life independently and creatively” (Aismontas & Odintsova, 2017). This form of help contributes to the psychological comfort of students of such categories and their holistic development.
In this regard, we developed courses for tutors and people assisting students with various medical conditions to provide comprehensive support for students within the entire period of study at universities.
 4. Readiness of university teachers for inclusive education. Then we should consider the concept of readiness of teachers for the introduction of inclusive education. Using the methodology of a

competence approach, V. V. Khitryuk determined the readiness of university teachers for their participation in inclusive education as their “proneness to their professional teaching activities in conditions of educational inclusion based on a complicated integral subjective quality of the personality based on a set of academic, professional, social and personal competences” (Khitryuk, 2013).

S. I. Sabelnikova (2009) asserted that the main competencies for teachers participating in inclusive education are particular competencies formed by receiving primary correction education or basic teaching education with a special professional component. We deem her opinion to be reasonable.

In our view, the training of teachers for inclusion should be considered a targeted creative process of building their professional competence focused on setting humanist objectives and learning teaching values, resulting in their readiness for solving professional tasks in inclusive education.

In this regard, we outlined five criteria ensuring the readiness of university teachers for implementing inclusive education:

1. A technological (digital) criterion of readiness reflects the following set of knowledge and skills contributing to personalizing the teaching process using digital tools and supporting students with health-related conditions and disabilities:
 - Skill of choosing and using IT technologies for educational purposes;
 - Skill of personalizing a teaching process using digital tools;
 - Knowledge of various digital formats of teaching materials and the skill of using them for better learning of such materials by students;
 - Ability to use online tools to introduce modern teaching practices;
 - Competence in using digital tools to assess and monitor students’ progress and understand the need for their additional support.
2. A psychological and pedagogical criterion of readiness is self-analysis, self-control, and self-assessment of the level of knowledge of psychology and pedagogy in inclusive education by a university teacher, taking into account the following factors:
 - Positive attitude to students with health-related conditions and disabilities;
 - Readiness for teaching students with impairments;
 - Sufficient level of professional training and psychological skills;
 - Application of methods and approaches to teaching students with health-related conditions and disabilities and integrating them in a group of students without disabilities;
 - Professional attitude to teaching any students.
3. A motivational criterion of readiness includes motives and needs maintaining the readiness of university teachers for introducing inclusive education, embracing the following aspects:
 - Motivation for successful professional activities;
 - Help for students with health-related conditions and disabilities;
 - Understanding of a social value of working with students with health-related conditions and disabilities in a university environment;
 - Friendly attitude to students with health-related conditions and disabilities;
 - Empathy to students with health-related conditions and disabilities.
4. An organizational and methodological criterion of readiness includes a set of skills for organizing, managing, and implementing inclusive education:
 - Having enough knowledge about inclusive education;
 - Knowing programs on teaching students with health-related conditions and disabilities;
 - Being ready to participate in creating educational programs for students with health-related conditions and disabilities;
 - Using innovative and health-saving technologies;

- Willing to cooperate with specialists of social, psychological, and pedagogical support for students with health-related conditions and disabilities.
5. A medical and social criterion of readiness includes the following theoretical knowledge and practical skills in medicine and sociology for inclusive education:
- Helping students with health-related conditions and disabilities;
 - Considering features of physical and psychological development of students with health-related conditions and disabilities;
 - Obtaining a high level of special knowledge required to organize work with students with health-related conditions and disabilities;
 - Being ready to teach any group of students.

If the university teachers have formed the above criteria at a sufficient level, they will be ready to participate in inclusive education.

To test the efficiency of the proposed conditions, we performed an empirical study among 55 students with health-related conditions and disabilities (it should be noted that these students did not need special conditions) with different majors; 27 specialists and teachers working with this category of people, including 6 tutors. When conducting a survey, the students, specialists, and teachers were to rate the level of conditions for their study at the university on a five-point scale.

The survey results were converted to an ordinal scale by three levels: (1) a high level of efficiency of conditions for inclusive education at the university, (2) a medium level, and (3) a low level. To determine the accuracy of coincidences and differences of experimental data measured on an ordinal scale, we applied the χ^2 method and concluded that the efficient implementation of inclusive education was attributed to the availability of the proposed conditions ($\chi^2_{0.05}$).

DISCUSSION

Efficient introduction of inclusion into higher education directly depends on the rationale, development, and fulfillment of certain conditions:

- “Set of objective opportunities of content, forms, methods and material spatial environment aimed at achieving the stated objectives” (Nain, 1995);
- Sum of internal and external circumstances determining availability and progress of processes aimed at a successful fulfillment of the set tasks (Savva, 2001);
- Results of “an object-oriented selection, design and application of elements of content, methods (approaches), and organizational forms of study to achieve <...> goals” (Andreev, 2000).

In their paper “Classification of pedagogical conditions for the implementation of inclusive education in the system of higher education,” the scholars V. V. Volkova and E. V. Mikhailchi studied “a theoretical classification of pedagogical conditions, consisting of internal and external conditions, forming an inclusive environment in higher educational institutions.” The research of these scholars showed that “relations with the community and admission to a team of the educational institution are more important for people with health-related conditions and disabilities when entering the university than available open, equipped physical environment” (Volkova & Mikhailchi, 2015). We agree with this conclusion; in this paper, we mainly focused on non-material conditions of organizing inclusive education, contributing to the efficient implementation of inclusive education at the university.

Professors B. B. Aismontas and M. A. Odintsova claimed that “social and psychological support for all categories of university students ensures the development of conditions to increase the adaptive capability and social activity, promotes the development of intellectual processes, unlocks creative potential, and forms a system of values” (Aismontas et al., 2017). We share this view and, relying on it, we developed courses for tutors to assist students with various medical conditions and provide comprehensive support to students within the entire period of their study at the university.

CONCLUSION

Higher education provides one of the most efficient ways to create normal conditions of life since it offers broad opportunities for choosing a life path, shapes a worldview, creates the basics of mental and financial independence, develops resilience and ability to adapt to the changing world, harmonizes the existence of personality in society, which is critical for people with health-related conditions and disabilities. Unfortunately, the current availability of higher education for this category of people is a social, psychological, and pedagogical issue.

Consequently, we deem it relevant to introduce such conditions for the efficient implementation of inclusive education at universities. Then students with health-related conditions and disabilities will be successfully integrated into the educational environment of the university. Using theoretical and practical studies on the efficient implementation of inclusive education at universities, we list several conditions aimed at the efficient implementation of inclusive education.

First, it is necessary to design a section on “Inclusive education” on the website of the educational institution to present updated information about this issue, and a special column about “Inspiring stories” containing stories of successful people with health-related conditions.

Second, it is crucial to provide students with group psychological training, organize their joint activities during the teaching process and beyond, carry out team competitions, create joint projects, and have the so-called “student hour.”

Third, in addition to removing physical barriers for people with mobility impairments, it is recommended to form a department of distance and inclusive education to organize and support the work of university teaching and other staff involved in inclusive education.

Fourth, it is vital to improve relations between the university teaching staff, specialists, the management and students with health-related conditions and disabilities. We have developed advanced training courses for teachers, focusing on communication with students with health-related conditions and disabilities.

Fifth, one should provide students with health-related conditions and disabilities with efficient psychological and pedagogical support. We have also developed courses for tutors and people assisting students with various medical conditions to deliver comprehensive assistance to students within the entire period of their study at universities.

Sixth, there is a need to develop the readiness of university teachers for participating in inclusive education. In addition to offline courses, we suggest developing an online course of advanced training, which takes into account five criteria ensuring the readiness of university teachers for introducing inclusive education: (1) technological (digital), (2) psychological-pedagogical, (3) motivational, (4) organizational-methodological, and (5) medical-social ones.

The conditions given above should be implemented; moreover, they should complement each other. This system is integral; therefore, the development of every component entails the development of all components. The listed conditions proved their validity as a result of an empirical study. Consequently, these conditions can be introduced into higher educational institutions to implement inclusive education efficiently.

We contributed to the study of this problem by analyzing the trend of increasing the number of students with disabilities in Russian universities. This fact was used to provide the rationale for the research relevance and the need for new conditions at universities to introduce inclusive education at the university efficiently. These conditions were suggested and proved at NMSTU.

The theoretical relevance of the research constitutes a detailed explanation of the concept of “conditions of efficient implementation of inclusive education” and a description of the necessary conditions for the efficient implementation of inclusive education at universities.

The research results are of practical significance for analyzing the introduced inclusion level into contemporary higher education and organizing conditions for university students with health-related conditions and disabilities.

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