

Development of the concept of training students with special educational needs in institutions of higher education

Desarrollo del concepto de formación de estudiantes con necesidades educativas especiales en instituciones de educación superior

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Recibido: 16/05/22

Aceptado: 27/08/22

Abstract

The aim of the article is to identify the characteristics of the different teaching strategies used in higher education for students with developmental disabilities based on a review of the academic literature on higher education for students with special educational needs and a study of the practical aspects of the issue. Methodology. To conduct the research, analytical and bibliographical methods were applied in reviewing scientific literature on

the application of different learning strategies in higher education for students with special educational needs. In addition, an online questionnaire survey of educators and methodologists working with students with special educational needs was used. Results. The main characteristics of modern learning strategies for students with special educational needs have been analysed as a result of the work.

Key words: inclusive education, students with special needs, learning strategies, pedagogical inclusion strategies, pedagogical approach.

Resumen

El objetivo del artículo es identificar las características de las diferentes estrategias didácticas utilizadas en la educación superior para estudiantes con discapacidades del desarrollo a partir de una revisión de la literatura académica sobre educación superior para estudiantes con necesidades educativas especiales y un estudio de los aspectos prácticos del tema. Metodología. Para realizar la investigación se aplicaron métodos analíticos y bibliográficos en la revisión de literatura científica sobre la aplicación de diferentes estrategias de aprendizaje en la educación superior para estudiantes con necesidades educativas especiales. Además, se utilizó una encuesta de cuestionario en línea de educadores y metodólogos que trabajan con estudiantes con necesidades educativas especiales. Resultados. Como resultado del trabajo se han analizado las principales características de las modernas estrategias de aprendizaje para alumnos con necesidades educativas especiales.

Palabras clave: educación inclusiva, estudiantes con necesidades especiales, estrategias de aprendizaje, estrategias de inclusión pedagógica, enfoque pedagógico.

1. Introduction

Educational international trends, initiated in recent decades by many international and intergovernmental organisations, have gained the support of education systems in many countries around the world. According to these trends, it is the primary responsibility of civil society to ensure and guarantee the right to educational needs in order to obtain a quality basic education.

Reforms and the use of new technologies in inclusive education contribute to the implementation of educational innovations in line with the modern worldview model of the social system.

Accordingly, research into the effectiveness of using various learning strategies for students with special educational needs is particularly relevant in terms of the need to select and apply the best possible forms of educational organisation for this category of educational applicants.

The theoretical part of this study highlights the views of scholars on the organisation of learning strategies in higher education for students with special educational needs. In addition, a brief overview of differentiated, problem-based, programmed and personalised learning strategies has been presented. The advantages of inclusive education have also been identified and the basic principles for developing learning strategies for such individuals have been examined, taking into account patterns and characteristics of intellectual development of students with special needs, their skills and ability to absorb knowledge.

The practical part of the research includes assessment of pedagogical employees' level of theoretical knowledge and practical skills in teaching students with special educational needs, study of the effectiveness of applying individual modern strategies for organizing work with students who have special educational needs. The survey has investigated the spread of certain types of educational strategies for working with students, as well as established the main problems of studying and applying new strategies for teaching students with special educational needs.

According to the results of the study, it was found out that the most pedagogical staff have personified and problem-based approaches to teaching persons with special educational needs. At the same time, according to teachers and methodologists, the most effective for working with students with special needs are socio-game technologies, personified and problem-based types of teaching. According to the results of the survey, the most common are technologies related to the individualization of the educational process, technological solutions aimed at the correction of educational and behavioural difficulties, as well as teaching strategies that provide a special mechanism for assessing the educational performance of special students.

The results of the analysis highlight the problems associated with the introduction of new strategies for teaching students with special educational needs.

2. Literature Review

Any learning strategy in higher education for students with special educational needs should be based on a pedagogical system that is able to maintain a balance between what is needed for successful learning tasks and what teachers can provide, given the limited capacity of education applicants (Zavaraki & Schneider, 2019).

Pedagogical interaction, the role of which is recognised globally, acts as a key and most humanistic principle. It is essential to meet the cognitive needs of each student and to maximise positive learning outcomes within the diversity of abilities, interests and individual psychophysical developmental characteristics of students in the same group (Cameron, Matre & Canrinus, 2022).

Among student learning strategies there is differentiation, which is based on some form of consideration of the individual characteristics of higher education applicants with

special needs when grouping them for the purpose of separate learning in the classroom. Differentiation can be seen as one of the means of implementing person-centred learning, providing for the construction of individual educational trajectories taking into account the child's subjective experiences, preferences and values, as well as the actualisation of personal physical and mental functions in the process of solving learning tasks. On the basis of this principle, differentiated teaching takes place, allowing for maximum approximation to the cognitive needs of the students and their individual characteristics. In terms of the differentiation approach, the educator modifies the learning process in such a way that each student has the opportunity to improve his/her skills as much as possible, working in a group that takes into account the similarities in the individual-typological development characteristics of several classmates (Rodríguez-Cano, Cuesta-Gómez, Delgado-Benito & Fuente-Anuncibay, 2022), (Smith, Tani, Yates & Dickinson, 2022).

Problem-based learning strategy is a type of learning organisation in which the assimilation of scientific knowledge is aligned with the student's independent exploratory activities. The system of methods is based on problem solving (Morley, Banks & Haslingden, 2020).

This type of teaching structures the learning process in such a way that it is transformed from informational to personal. This is possible through the teacher's conscious creation of problem situations – certain psychological states arising in the process of performing tasks and requiring the discovery (assimilation) of new knowledge about the subject, methods and conditions of performance. The use of elements of problem-based learning in pedagogical practice of higher education requires the educator to have the technique of identifying challenges and constructing their solution system (Maher, Morley & Fimusanmi, 2019).

Programmed learning is learning with material implemented from a programmed source (a textbook designed according to specific requirements or a computer programme) (Smith & McGannon, 2018).

The major premise of personalised learning is to focus on the individuality of the student, the development of his personality in the learning process (Reyes, Meneses & Melián, 2021).

However, a review of the literature on the topic of research has demonstrated that the issue of developing special strategies for working with higher education applicants with special educational needs remains unresolved, since there are no specialised strategic systems for working with students that take into account their specific development and educational needs.

3. Aims

The aim of the research is to determine the position of methodologists and educators working with students with special needs in higher education regarding the application of various learning strategies that would be effective for such education applicants.

4. Materials and Methods

Practical research on current approaches to the application of different teaching strategies for students with special educational needs was conducted by interviewing 719 people. The respondents were methodologists from education departments of oblast state administrations, educators and pedagogical staff who carry out teaching activities working with students with special educational needs in higher education institutions in Lviv, Kyiv, Khmelnytskyi and Ternopil oblasts of Ukraine. The survey was organized by means of a questionnaire survey through the Typeform service.

In the survey, respondents were asked a number of questions on the prior aspects of applying learning strategies for students with special educational needs. Survey participants were asked to express their position on each question as a percentage between 0 and 100 %.

5. Results and Discussion

The first set of research questions concerned establishing the degree of preparedness of the educational process participants to implement the latest types of technologies and strategic directions of special needs students' education. The participants of the survey were asked to assess the level of mastery of different strategic directions in teaching students with special needs (Figure 1).

As can be seen from Figure 1, pedagogical staff are most proficient in personalised and problem-based approaches to teaching persons with special educational needs. At the same time, methodologists rated the degree of mastery of these approaches higher than pedagogical staff by 3–4 per cent.

A crucial aspect of effective education for students with special needs is the issue of the effectiveness of applying selected modern teaching strategies in the educational institution where the interviewees work or with which they cooperate (Figure 2).

As the study has shown, the most effective, according to teachers and methodologists, for working with students with special needs are socio-game technologies (the effectiveness of this type of strategies is estimated at 39 and 42 per cent respectively), personalised learning (52–57 per cent) and problem-based learning (43–46 per cent).

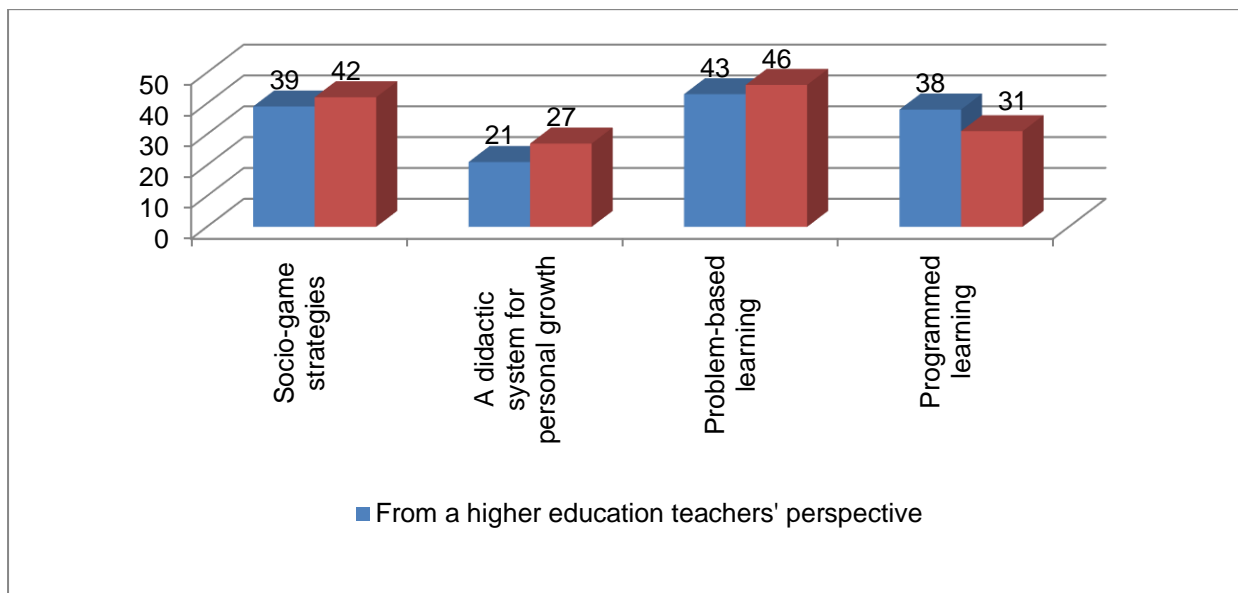


Figure 1. The level of proficiency of survey participants in theoretical knowledge and practical skills for using selected training strategies for students with special educational needs in professional life, %.

Source: constructed by the authors.

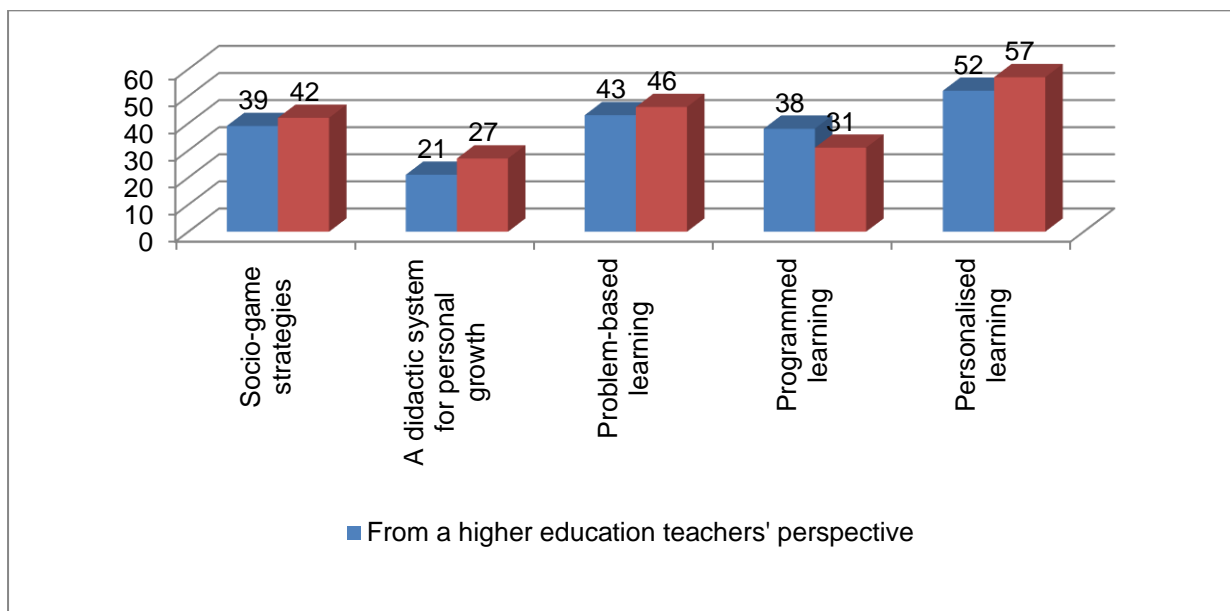


Figure 2. Effectiveness of applying selected modern training strategies to the organisation of work with students with special educational needs at the educational institution, the respondents work at or cooperate with, %.

Source: constructed by the authors.

The interviewees emphasise that through socio-game strategies, the didactic tasks of cooperative learning are accessible to all actors in the educational process. Their use makes it possible to successfully involve students with special educational needs in collaborative learning, allows all participants to acquire the skills of interaction with peers and at the same time creates a different development strategy for each subject of the educational process.

An important step in the research is to establish the issue of the spread of individual educational strategies for working with students with special educational needs in higher education institutions. Highlighting the most common technologies is necessary in order to further plan the implementation of new learning strategies (Figure 3).

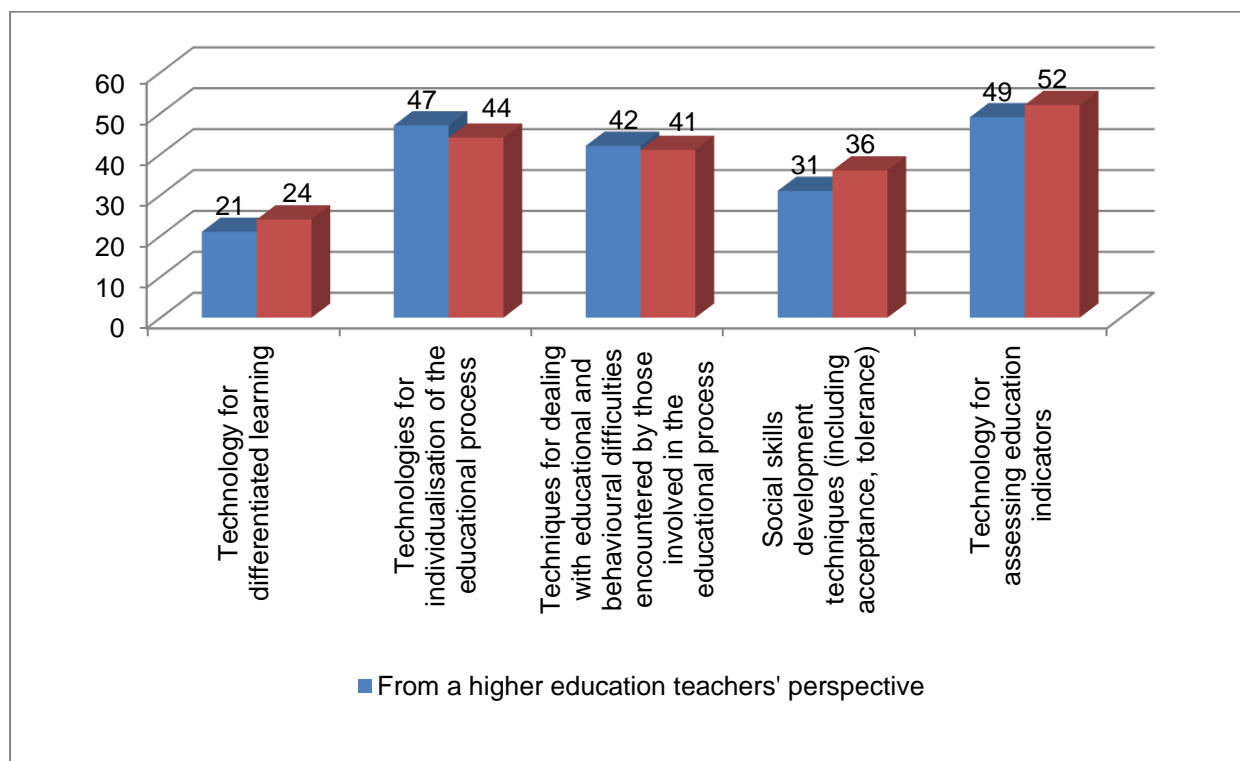


Figure 3. Extent to which certain types of educational strategies for working with students with special educational needs are disseminated in higher education institutions, %. Source: constructed by the authors.

Figure 3 shows that the most common technologies, according to the respondents, are those related to individualisation of the educational process, technological solutions aimed at correcting educational and behavioural difficulties, and learning strategies that provide a specific mechanism to assess the performance of the educational process.

Based on this analysis, the following challenges related to the implementation of new strategies for teaching students with special educational needs are highlighted (Figure 4).

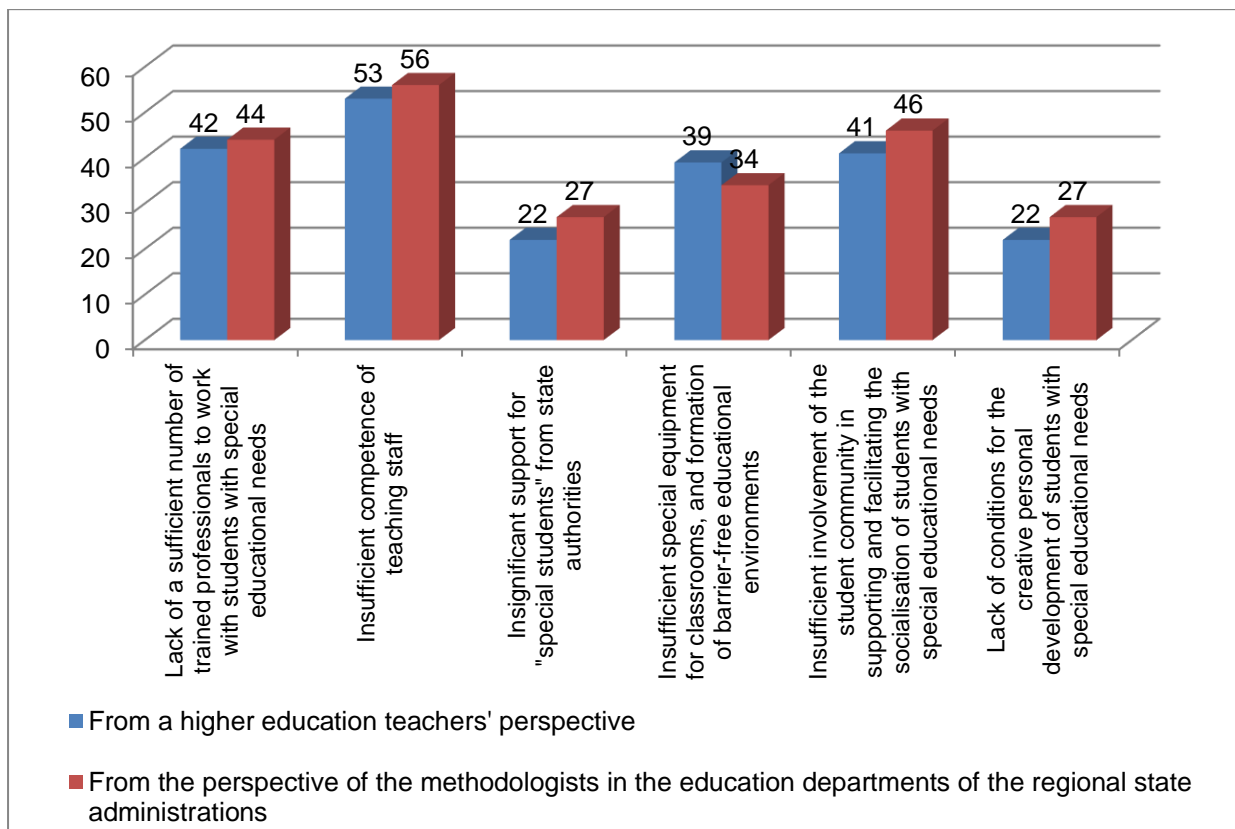


Figure 4. Main challenges in exploring and applying new strategies for teaching students with special educational needs, %.

Source: constructed by the authors.

Research on the system of organising education for students with special needs in higher education institutions reveals a number of problems. Firstly, there is a lack of trained professionals to work with students with special educational needs. Secondly, there is low family and peer support for “special students” and insufficient special equipment for classrooms, classrooms and the barrier-free educational environment of higher education institutions (Zanobini & Viterbori, 2020).

Thus, the results of the study of scientific literature on the topic of research allow us to state that in the modern system of higher education provision for students with special educational needs different approaches are used. They involve learning in the general education environment and consider the accessibility, taking into account the individual characteristics of each student, in particular the level of psycho-physical development. Any discrimination becomes impossible through this (Molina Rolda'n, Marauri, Aubert & Flecha, 2021).

At the same time, quality inclusive education is not only a broader process than integration, which involves making education accessible to everyone. It is also a system that includes the development of a child-centred methodology that recognises that all

children are individuals with different learning needs. Therefore, education needs to be flexible enough to meet different educational needs (Kefallinou, Symeonidou & Meijer, 2020).

Based on a rethinking of traditional paradigms of the education system for people with special needs as well as the goals and values of education for such students, ways and means to improve it are actively sought. Moreover, new methodologies for teaching, educating and developing students with special needs are justified (Anderson & Boyle, 2019).

Considering the regularities and peculiarities of the intellectual development of students with special needs and the existing ability to acquire knowledge, skills and abilities, when developing educational strategies for such persons, educational researchers adhere to the fundamental principles, namely:

- the use of indirect methods that are not used in the education of children with normal-typical development and have a corrective and compensatory effect of the impaired function through other mental processes;
- the systematic selection of techniques and methods that provide comprehensive action and provide not only information within the educational programme, but also corrective and physical and mental functions in general;
- nurture the applicant's confidence in retained forms of verbal and non-verbal activity, especially at an early stage of the educational programme, and provide for the development of a personalised system for applying the acquired knowledge in the future, taking into account the student's developmental peculiarities (Brown, Te Riele, Shelley & Woodroffe, 2020), (Cavioni, Grazzani & Ornaghi, 2017).

The education of students with special needs in higher education places increased demands on all participants in the educational process. It requires an increased effort on the part of students with special educational needs – the psychological and intellectual resources of the individual. Understanding, tolerance as well as physical and moral assistance are required from other students. When it comes to educators working in groups with students with special needs, they need professionalism, special knowledge, and specific personal qualities. This, in turn, leads to the need to provide all participants in the educational process with the necessary psychological, medical and social support (Hulvershorn & Mulholland, 2018).

As emphasized by A. Kart and M. Kart, (2021), a crucial component of inclusive-environmental approaches is the adherence to a strategy of psychological and pedagogical support of inclusive education in higher education from the perspective of organised system of reflective, cognitive, activity, affective-volitional aspects. They aim to develop all components of the personal potential of the educational process subjects, depending on their abilities.

The tasks related to the staffing of educational institutions are solved by developing and implementing competency-context strategies in a specially created educational environment of professional training, which aims to develop the preparedness of future educators to work in educational institutions where students with special educational needs will study. The procedural level of training such specialists includes:

- developing a criteria-diagnostic toolkit to investigate the status and development of future educators' readiness to inclusive education for children with special educational needs;
- developing and implementing a practical component of education in the practical training centres for specialists in different disciplines, taking into account their future work in groups where students with special needs will study;
- developing and implementing research training;
- monitoring the formation of professional preparedness of future defectologists in an inclusive environment (Tai, Mahoney, Ajjawi, Bearman, Dargusch & Dracup, 2022), (Davis & Watson, 2001), (Harris & Dargusch, 2020).

Today, experts in educational provision in inclusive settings around the world point to the value diversity of such learning. They see it as a major resource for developing multidirectional collaboration, which helps to generate different perspectives on decision-making in exceptional situations (Kilpatrick, Johns, Barnes, Fischer, McLennan & Magnussen, 2017).

6. Conclusions

Consequently, a review of the literature on the topic of the study leads to the conclusion that the policy of the state and higher education institutions to educate students with special needs should not only focus on motivating people with disabilities to study specifically in higher education institutions, but also consider social environment factors and their impact on the development of higher education in general. Therefore, higher education institutions that develop an inclusive educational environment attract students with special needs who are highly motivated to train, whose potential and skills are often higher than those of other students, and as a consequence, the state will not only receive a diploma but above all a motivated specialist over time.

Research on the system of organisation of education for students with special needs in higher education institutions reveals a lack of sufficiently trained specialists to work with students with special educational needs, low family and peer support for “special students” and insufficient special equipment for classrooms, classrooms and the barrier-free educational environment of higher education institutions.

As a result of a range of effective learning strategies to address the different challenges of special needs education, higher education institutions should become inclusive, where

every student receives support and necessary services according to his or her individual educational path.

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