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Korkyt Ata Kyzylorda University, Kyzylorda, Kazakhstan.
E-mail: Akmaral.93_07@mail.ru

CRITERIA FOR EVALUATING STUDENTS' ACHIEVEMENTS IN MATHEMATICS IN INCLUSIVE EDUCATION

Abdigapbarova Akmaral Bolatbekovyna – doctoral student, Korkyt Ata Kyzylorda University, Kyzylorda, Kazakhstan, E-mail: Akmaral.93_07@mail.ru, ORCID: https://orcid.org/0000-0002-4761-3264;
Seitmuratov Angysyn Zhasaralovich – Doctor of Physical and Mathematical Sciences, Professor, Kyzylorda University named after Korkyt Ata, Kyzylorda, Kazakhstan, E-mail: angisin_@mail.ru . ORCID: https://orcid.org/0000-0002-9622-9584;
Menlikozhaeva Sauleh Koilibaevna – Ph.D., Associate Professor, Korkyt Ata Kyzylorda University, Kyzylorda, Kazakhstan, E-mail: saulesh_menli@mail.ru, ORCID: https://orcid.org/0000-0002-6631-7145.

Abstract. In this article, an abbreviated individual program for the academic discipline is compiled for the academic quarter, according to the results of which the program for the next quarter is compiled. Currently, in Kazakhstan, special educational needs arising from deviations in the development of students are fully met only in special schools. They teach 14.2% of the total number of school-age children who have received the conclusion of the psychological, medical, and pedagogical council and 6 proposals. The rest of the children in this category, as well as schoolchildren with learning difficulties for other reasons, study in general education schools that do not provide the necessary psychological and pedagogical support to children due to the unavailability of organizational and methodological issues. "Inclusive education is a continuous process of development of general education aimed at providing quality education taking into accounts the different needs and diversity of students in their education, which blocks all forms of discrimination". The formation of a new cultural norm in the modern world community, taking into account and recognizing respect for the difference between people and the right of each person to individualization, as well as from the society of its particular specifics, features of the

educational environment. Therefore, inclusive education begins with the recognition of different needs and opportunities, and diverse characteristics of the student in the learning process. Based on the opinions analyzed above, a socio-pedagogical model of assessing the needs of children with special educational needs and organizing support in the learning process has developed in many States. It is fundamentally different from the medical and defectological model, which has been preserved to this day in the education system of our country.

Keywords: shortened program, individual curriculum, pedagogical diagnostics, psychological and pedagogical research, subject mathematics, inclusive education.

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Қорқыт Ата атындағы Қызылорда университеті, Қызылорда, Қазақстан.
E-mail: Akmaral.93_07@mail.ru

ИНКЛЮЗИВТІ БІЛІМ БЕРУ ЖАҒДАЙЫНДА ОҚУШЫЛАРДЫҢ МАТЕМАТИКА ПӘНІНЕН ОҚУ ЖЕТІСТІКТЕРІН БАҒАЛАУДЫҢ КРИТЕРИЙЛЕРІ

Әбдіғапбарова Ақмарал Болатбекқызы – докторант, Қорқыт Ата атындағы Қызылорда университеті, Қызылорда, Қазақстан, E-mail: Akmaral.93_07@mail.ru. ORCID: https://orcid.org/0000-0002-4761-3264;
Сейтмұратов Аңғысын Жасаралұлы – ф.-м.ғ.д, профессор, Қорқыт Ата атындағы Қызылорда университеті, Қызылорда, Қазақстан, E-mail: angisin_@mail.ru . ORCID: https://orcid.org/0000-0002-9622-9584;
Меңліхожаева Саулеш Қойлыбаевна – п.ғ.к., қауымдастырылған профессор, Қорқыт Ата атындағы Қызылорда университеті, Қызылорда, Қазақстан, E-mail: saulesh_menli@mail.ru, ORCID: https://orcid.org/0000-0002-6631-7145.

Аннотация. Бұл мақалада инклюзивті білім беру жағдайында ерекше білім беруге қажеттілігі бар оқушылардың оқу жетістіктерін бағалаудың критерийлері мен тәртібі қарастырылған. Қазіргі уақытта Қазақстанда оқушылардың дамуындағы кемістіктерден туындайтын ерекше білім беру қажеттіліктері тек арнайы мектептерде ғана толық қанағаттандырылады. Олар психологиялық-медициналық-педагогикалық кеңестің қорытындысын алған мектеп жасындағы балалардың жалпы санының 14,2%-ын оқытады және алты мектеп ұсынымдарын алған. Осы санаттағы қалған балалар, сондай-ақ басқа себептерге байланысты оқуда қиындықтары бар мектеп оқушылары, ұйымдастырудың әдістемелік мәселелерінің дайын болмауы себебінен балаларға қажетті психологиялық-педагогикалық қолдау көрсетпейтін жалпы білім беру мектептерінде оқиды. «Инклюзивті білім беру – барлық дискриминация формасына тосқауыл қоятын, оқушының білім алуындағы әртүрлі қажеттіліктері мен алуан түрлілігін есепке ала отырып, сапалы білім беруді қамтамасыз етуге бағытталған, жалпы білім беруді дамытудың үздіксіз процесі». Әлемдік заманауи қоғамдастықта жаңа мәдени норма қалыптастыру, адам арасындағы айырмашылыққа сыйластықпен қарау және әр адамның даралану құқығын, сонымен бірге қоғам тарапынан

оның қандай да бір өзгешелігін, білім алу ортасындағы ерекшеліктерін есепке алу және мойындау. Сондықтан да инклюзивті білім беру оқушының оқу процесі барысындағы әртүрлі қажеттіліктері мен мүмкіндіктерін, алуан түрлі ерекшеліктерін мойындаудан басталады. Жоғарыда талданған пікірлердің негізінде көптеген мемлекеттерде ерекше білім беруге сұраныстары бар балалардың қажеттіліктерін бағалаудың және оқыту барысында қолдауды ұйымдастырудың әлеуметтік педагогикалық моделі қалыптасты. Ал, ол біздің еліміздегі білім беру жүйесінде осы күнге дейін сақталып келген медициналық және дефектологиялық модельден түбегейлі ерекшеленеді.

Түйін сөздер: қысқартылған бағдарлама, жеке оқу бағдарламасы, педагогикалық диагностика, психологиялық-педагогикалық зерттеу, математика пәні, инклюзивті білім беру.

© **А.Б. Абдигапбарова*, А.Ж. Сейтмуратов, С.К. Менлихожаева, 2024.**
Кызылординский университет имени Коркыт Ата, Кызылорда, Казахстан.
E-mail: Akmaral.93_07@mail.ru

КРИТЕРИИ ОЦЕНКИ УСПЕХОВ УЧАЩИХСЯ ПО МАТЕМАТИКЕ В ИНКЛЮЗИВНОМ ОБРАЗОВАНИИ

Абдигапбарова Акмарал Болатбеккызы – докторант, Кызылординский университет имени Коркыт Ата, Кызылорда, Казахстан, E-mail: Akmaral.93_07@mail.ru, ORCID: https://orcid.org/0000-0002-4761-3264;
Сейтмуратов Ангысын Жасаралович – д.ф.-м.н, профессор, Кызылординский университет имени Коркыт Ата, Кызылорда, Казахстан, E-mail: angisin_@mail.ru, ORCID: https://orcid.org/0000-0002-9622-9584;
Менлихожаев Саулеш Койлыбаевна – к.п.н., ассоциированный профессор, Кызылординский университет имени Коркыт Ата, Кызылорда, Казахстан, E-mail: saulesh_menli@mail.ru, ORCID: https://orcid.org/0000-0002-6631-7145.

Аннотация. В данной статье рассматривается критерии и порядок оценки образовательных достижений обучающихся с особыми образовательными потребностями в условиях инклюзивного образования. В настоящее время в Казахстане особые образовательные потребности, возникающие вследствие отклонений в развитии учащихся, удовлетворяются в полном объеме только в специальных школах. В них обучаются 14,2% от общего числа детей школьного возраста, получивших заключение психолого-медико-педагогического совета и шесть школ получившая рекомендации. Остальные дети данной категории, а также школьники, имеющие трудности в обучении по другим причинам, обучаются в общеобразовательных школах, которые не оказывают необходимую психолого-педагогическую поддержку детям по причине неготовности организационно-методических вопросов. «Инклюзивное образование – это непрерывный процесс развития общего образования, направленный на обеспечение качественного образования с учетом различных потребностей и разнообразия учащихся в их образовании, который блокирует все формы

дискриминации». Формирование новой культурной нормы в мировом современном сообществе учет и признание уважительного отношения к разнице между людьми и права каждого человека на индивидуализацию, а также со стороны общества его той или иной специфики, особенностей образовательной среды. Поэтому инклюзивное образование начинается с признания различных потребностей и возможностей, разнообразных особенностей учащегося в процессе обучения. На основе проанализированных выше мнений во многих государствах сложилась социально-педагогическая модель оценки потребностей детей с особыми образовательными потребностями и организации поддержки в процессе обучения. Он принципиально отличается от медицинской и дефектологической модели, которая сохранилась до наших дней в системе образования нашей страны.

Ключевые слова: сокращенная программа, индивидуальная учебная программа, педагогическая диагностика, психолого-педагогическое исследование, предмет математики, инклюзивное образование.

Introduction. In many developed countries, it has been decided that all children should receive equal and unhindered education in the education system following general human values and social requirements. According to international documents in the field of child protection, the Legislation of the Republic of Kazakhstan includes the following concept: equal rights of children (persons) with special educational needs and all students to receive quality education, taking into account their capabilities.

In the context of inclusive education, the most important tool for evaluating students is the objective and effective evaluation system for continuous improvement of the educational process. In the current system of education, the supervision and evaluation based on the criterion-oriented approach to the assessment of the quality of education of students in inclusive conditions is relevant.

Analyzing this point of view, we came to the conclusion that this educational system has a significant impact on the development of the child's thinking skills.

Students master the program material in accordance with their personal capabilities and pace of mental development, in this regard, the content of the correction material is carefully selected, and adequate teaching methods are used.

Correction and development works include the following areas:

- development of mental processes (attention, memory, thinking, speech, imagination, perception);
- formation of space-time relations;
- formation of comprehensive understanding of objects and phenomena of surrounding reality, enrichment of vocabulary, development of spoken language;
- development of fine and general motor skills, and coordination skills;
- formation or improvement of study skills.

When learning the teaching material of a special teacher, in the lessons of improving study skills, most of the students noticed the weakness of the analytical and

synthetic function of thinking, instability of attention, distraction, poor calculation skills, that hand-eye coordination is not developed, optical-spatial functions, difficulties in learning to write and read, fine motor skills of the fingers made it difficult for students to learn to write (Makoel, 2021) All students had difficulties in learning spatiotemporal concepts and sometimes failed to complete tasks that were unable to follow verbal instructions, which was explained by misunderstanding and incorrect use of "spatial" cues. These and many other abnormalities were combined with a decrease in cognitive activity. Taking into account the results of the diagnostic examination of these students, a program was created to determine the directions, content, and methods of corrective work for private lessons.

A lot of attention was paid to the methodological provision of individual lessons, and a set of educational and visual tools was prepared for all lessons:

- demonstration tables, diagrams, pictures;
- handouts (for each lesson);
- tasks in each student's copybook.

Materials and methods. An abbreviated individual program for the study subject is created for the academic term, and based on its results; a program for the next term is created. It is difficult to predict in advance at what pace a student will be able to master the learning material, which creates the greatest difficulties during the planning phase. Therefore, during the educational process, there may be a need to adjust the program. To change the program in time, it is necessary to constantly monitor the progress of the student. For this, the teacher and support specialists carry out a criterion evaluation of the achievements (Lok, 2015).

In the event that the student faces difficulties in mastering the content of the subject, following the standard of state compulsory education, it is required to shorten (adapt) the educational programs.

Creation of individual study programs "Individual study plan and training according to individual study programs" is carried out under the recommendations of the psychological-medical-pedagogical council. In general classroom conditions, an individual curriculum is created for a student with an intellectual disability. Individualization of the curriculum consists of defining the subjects of the curriculum (for example, algebra or a foreign language) in which the student's participation is not mandatory.

A shortened individual curriculum is created by the class teacher together with a special teacher based on pedagogical diagnosis (assessment) and taking into account the content of the model curriculum for the subject, following the model curricula of the state mandatory education standard for students with intellectual disabilities. (Begezhanova, 2019)

In the content of the shortened individual curriculum, the learning goals and the most effective teaching methods and methods for this student are shown in the form of expected results (student skills and abilities) according to the sections of the typical curriculum. During the group discussion, the purpose and methods of teaching are determined based on the results of the psychological and pedagogical study of the student's capabilities.

Examples of abbreviated and individualized curricula for students with special educational needs, such as mathematics. A shortened program on the subject of mathematics for the first semester (Abdrakhmanov, 2011)

1st grader Special Working Group_____
The teacher who created the program: (Special Working Group)
Special teacher: (Special Working Group)

Program units	Expected results	Achievements
Natural numbers and the number 0	1.1.1.1 Obtaining a new number using +1,-1 operations: • name 10 numbers in forward and reverse order; • determine the number of 10 different objects by counting.	+ + +
	1.1.1.2 onwards, • writing; • comparison of one-digit numbers;	+ + (Number 6) +
	1.1.1.3 determine the composition of single-digit numbers:	+ (numbers around 5 by memory, numbers 6-10 by relying on real objects)
	1.1.1.4 Creating an enlarged unit of ten: • naming decimal numbers forward and backward; • write numbers up to 100 and decimals by speaking; • compare decimals.	+ +(using a visual aid: sticks) + +(by using a visual aid)
1.2 Operations on numbers	1.1.2.1 - to understand the act of addition as a union of sets without common elements, and subtraction as the removal of a part of the set;	+ +
	1.1.2.3 - Using property 1 when adding and subtracting around 10	+
	1.1.2.4 - construct, - use the table of addition of one-digit numbers around 10	+ (based on the model) +
	1.1.2.5 - Add and subtract around 10;	+(based on the table in the second five)
	1.1.2.5 - adding and subtracting decimals;	+(based on visual aids)
1.3 Volume and their units of measurement	1.1.3.1 - separation of dimensions: length / weight / volume (capacity); - selection of measures and tools for measurement;	+ +
	1.1.3.2 - measuring volumes using units of measurement: cm / kg / l;	+ (with the help of the teacher's periodic guide and his supervision)
	1.1.3.3 - comparison of length (cm), weight (kg), capacity (l) - adding and subtracting values	+ (about 10) + (about 10)
	1.1.3.4 - conversion of units of length cm, dm based on the ratio between them	+ (according to the teacher's guiding questions, based on these tables, based on the table with the unit ratio of length measurements)

3.1 Geometric figures and their classification	1.3.1.2 - distinguish between flat figures (triangle, circle, square, rectangle) / three-dimensional figures (cube, sphere, cylinder, cone, pyramid) and compare them with objects of the surrounding world	+
	1.3.1.1 - recognition and naming of geometric figures: points, straight lines, curves, broken lines, closed and open lines, segments, rays, angles;	+ (shows the drawing by name and has trouble naming pictures: closed and non-closed lines, ray,)
3.2 Image and construction of geometric figures	1.3.2.2 –draw a segment of a given length	+
	1.3.2.5 - determining the location and direction of objects in the surrounding world (in front-behind, left-right, up-down, between, next to, above, below, inside, outside, in the middle);	+ knows and shows the location of objects in relation to his body (in front, behind, left, right, up, down);
3.3 Coordinates of points anddirection of movement	1.3.3.1 determining the position of the marked points on the digital ray relative to each other	+ (according to the teacher's guiding question)
4.3 Chains	1.4.3.1 - Creating a forward and reverse sequence of numbers from 1-10	+
5.1. Calculations and mathematical model	1.5.1.1 Modeling the task in the form of a picture; 1.5.1.3 Analysis and solution of sum and balance finding problems; 1.5.1.4 analyze and solve the problems of adding and subtracting a number to several units 1.5.1.5 analyze and solve problems to find unknown components of addition and subtraction	+ + + (find an answer to the teacher's guiding question) + (find an answer to the teacher's guiding question)
5.2 Mathematical language	1.5.2.2 use of signs "+", "-", "=";	+
	1.5.2.3 Add and subtract numbers/ compare numbers (more/less)	+
	1.5.2.4 Use names of addition and subtraction operation components when reading and writing expressions	+(understanding the teacher's speech)
Strategies and teaching methods used (underline as needed, others can be added)		
ALLOWS TO BE USED DURING THE LESSON: • rules; • multiplication table, weight, length, time measurement table; • calculator; • algorithmic records; • patterns of task performance TO CONCENTRATE • must pay attention to the purpose of the performed task; • purposeful attention is paid to the stages of task performance; • achievements are taken into account; • different methods of praise are used. DOES MONITORING AND ASSESSMENT WORK • independently; • providing minimal assistance (clarification of instructions); • with the help of a special teacher;		

Semester results (within each section of the program): The student has mastered the shortened program in mathematics in all sections.
The student learned to compare the first ten and decimal numbers (using visual material), perform addition and subtraction of numbers of magnitude 10 using number composition (in magnitude 5), subtract and add of 1; solve text arithmetic problems for addition and subtraction, the sum of a given quantity creating an outline, determining the length of the segment using a ruler.
Recommendations for further training: • continue training with the general program; • to continue teaching with the general program with the individual competence of the teacher (methods, methods of teaching, ways of evaluating achievements); • to continue training according to the shortened program with the teacher's personal competence (method, methods of teaching, ways of evaluating achievements); • it is required to revise the program;
Notes, suggestions: Initiate mathematical terminology from different parts of the program, words that express the spatial arrangement of objects concerning each other in the student's independent speech. Gradually reduce reliance on visual aids. Purposeful work is required on the forming general ways of solving arithmetical problems, the developing knowledge of the composition of single-valued numbers (6-10), and accepting knowledge of the composition of single-valued numbers when performing addition and subtraction.
Acquaintaned: _____ Parent's signature, date

Table 1. A sample of abbreviated and individual curricula for the mathematics subject

Results and discussion. During the pedagogical diagnosis, teachers should determine the skills that the student knows on his own (relevant level) and the skills that are in the stage of formation (zone of immediate development) within the framework of the study subject (Telegina, 2014).

The criterion for determining the zone of proximal development is the student's ability to use the help of a teacher to complete a learning task or to implement a specific task or skill (for example, solving an arithmetic problem, measuring a quantity, and writing a result).

The teacher can use leading questions, a visually presented algorithm, illustrative material, subject activities, and a model, to help the student and can show the performance of work.

Attention should be paid to existing "problems" in the knowledge of previously studied material or skills that are basic to mastering school programs when conducting a needs assessment. They can cause difficulties in gaining the learning material, they need to be supplemented. The goal of forming these skills should be included in the student program. (Eliseeva, 2019)

It is necessary to pay attention to the formation of components of educational activities (motivation, self-organization, planning, performance and control of educational activities), work capacity, pace of work, and forms of educational work (written, oral, practical) that help the student to better understand the educational material based on activity (illustrative material, etc.) during the pedagogical

diagnosis, because it is the basis for choosing the most suitable teaching methods for the student, and ways of organizing his activities in the classroom. (Lloyd, 2008)

Using tasks and exercises in accordance with learning goals within the framework of determining the section and topic of the study subject as diagnostics. Instructions should be clear, concise, and step-by-step. The test should not be used. The student may make mistakes because he has difficulties in consciously understanding the conditions of the task, rather than mastering the software material. Pedagogical diagnosis is carried out by the teacher in class, and by a special teacher in private lessons.

The result of the pedagogical diagnosis is registered to determine the level of education acquired by the student and the content of assistance (achievement card by topic and section of the educational content). A student may have an area of proximal development and level of skill acquisition that corresponds to the previous terms or even grade's curriculum. In any case, the results of pedagogical diagnostics are the starting point for determining the content of the program for the student.

The learning objectives (skills and abilities) are defined that are not mandatory for a student studying with a general practitioner and that will not be included in his or her program this term when the curriculum is shortened. The purpose of defining mandatory and optional criteria for children with special educational needs (undertakings and skills) is their need to progress in acquiring the basic knowledge and skills within the academic discipline. (Padilla, 2019)

For example, for a learner with special educational needs, in the 1st-grade mathematics course, the learning objectives (skills) of the «algebra elements» section are optional:

- 1.2.1.2 Find the value of the letter expression in the given value of the letter in one operation;

- 1.2.1.3 Presentation and application of the relationship between addition and subtraction in the form of literal equality: a+b=c, c–a=b, c-B=a;

- solving equations 1.2.2.2 by sampling and based on addition and subtraction; From Section 4, "Elements of Logic":

- 1.4.1.1 Combining two sets using a diagram and removing part of a set; From Chapter 5 "Mathematical Modeling":

- Completion of data collection, systematization, and compilation of tables, pictograms, and diagrams with the help of materials under 1.5.2.5 (Sagymbekova, 2013)

Exclusion of the above educational material does not prevent learning the knowledge of numbering, addition, and subtraction calculation methods within 20, methods of solving arithmetic problems, which are the basis of the 1st-grade mathematics course. The basic concepts of the 1st-grade mathematics course mastered by the student within the framework of the abbreviated program allow further study of the following sections in the second grade: numbering of numbers up to 100, arithmetic operations with them, arithmetic problems, quantities, and geometric materials. (Y. Altynsarin National Educational Academy, 2019)

Reducing the amount of educational material for a student with special educational needs allows more time to be devoted to the formation of basic knowledge and skills, and to maintain the student's work capacity and learning motivation.

During the creation of an individual program on a subject (for a student with intellectual disabilities), in each section of the curriculum, skills that are closer to the learning goals and content of the knowledge and skills that are in the "zone of proximal development" of the student are determined.

The teaching of basic general education subjects (mathematics, mother tongue, and reading) in the general classroom according to individual programs can be carried out in combination with private lessons with a special teacher. (Zhumabekova, 2014)

A reduced or individualized program is combined with a teacher's approach to the classroom, the intensity and nature of which is constantly changing as the student's abilities change. An individual approach can be observed by changing the volume and complexity of the learning task within the framework of a shortened/individual program for the student, performing the learning task in stages; the ability to perform the task based on an illustration, an algorithm instruction, a model, a data table, using accounts, a calculator, based on the text of the rules. (Kurmanalina, 2011)

The student performs a task that does not correspond to the subject of the lesson according to his own program. This task is prepared and presented by the class teacher in class. For that, the teacher needs the advice of a special teacher. Therefore, these educators work collaboratively rather than autonomously.

Assessment of achievements is carried out within the framework of a shortened or individual program. Control diagnostic tasks are selected for each goal of the program.

Conclusion. It is our duty to create conditions for every student with special educational needs to get a quality education and become a citizen considering that every citizen of our country is a national value, and every child is the future of our country. In this regard, in the case of inclusive education, a system of critical assessment of the educational achievements of students with special education needs is used (Ryan, 1998).

The most important tool for evaluating student achievement, the evaluation system must be objective and effective in order to continue to improve the educational process. In the current system of education, supervision, and evaluation based on the criterion-oriented approach of evaluating the quality of educational achievements of students is relevant.

In this methodological tool, the updated content of education in the case of inclusive education in elementary, basic secondary, general high school, the features of the implementation of the requirements of the State mandatory education standard, the psychological and pedagogical bases of the criterion evaluation of the educational achievements of students with special educational needs in the case of inclusive education, inclusive tasks and functions of pedagogical assessment of educational achievements of students with special educational needs in the educational environment, requirements for the system of criteria evaluation of

educational achievements of students with special educational needs in the context of inclusive education, criteria for evaluating academic achievements of students with special educational needs in the context of inclusive education and order is provided. (Schwab, 2014)

The methodological tool "Criteria evaluation system of educational achievements of students with special educational needs in the context of inclusive education" is a practical guide for teachers of general education and special schools in evaluating individual achievements of students in the learning process.

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