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Analysis of Science Education Curriculum for Students with Special Needs in Special Schools: The Curriculum of 2013

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ABSTRACT

In Indonesia, the use of the education curriculum continues to grow along with the developments and demands of the times. The Curriculum of 2013 (K-13) is an update from the Curriculum of 2006 (KTSP), especially in the learning process that uses a scientific approach. In special education, the curriculum implementation is still adjusted to the students' barriers, abilities, and needs. This study aims to analyze the Curriculum of 2013 (K-13) in science education for students with special needs in terms of objectives, content, strategies, and evaluation of learning at each level. The method used is descriptive qualitative with data collection techniques in the form of observation and literature review of existing research and relevant theories. The results of the study show that the science education curriculum in special schools is differentiated based on the type of barriers, namely for children with visual impairments (blind), hearing impairments (deaf), intelligence barriers, ADHD, autism, and motor impairments. Content, learning objectives, and learning strategies are also adjusted to the types of student barriers. However, several aspects of K-13 are not by the learning rules for students with special needs, such as the strategies used in science learning for students with cognitive disabilities. Thus, teachers' creativity is needed in implementing classroom learning. Moreover, the K-13 is not flexible enough in developing special education.

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1. INTRODUCTION

Education is an essential aspect of the development of a country. Education aims to produce the next generation of the nation who have superior qualities both cognitively, affectively, and psychometrically. Improving the quality of education will have an impact on the quality of students as the output of education so education must be designed in such a way that the goals of education can be achieved. The design of educational planning is contained in the form of an educational curriculum. The curriculum is used as a reference in the implementation of education. Therefore, curriculum development is the most important element in improving the quality of education. Curriculum development is also aimed at making plans that show the relationship between the learning process and the formation of student experiences as a result of learning (Lase, 2015).

In Indonesia, curriculum development and changes continue to be made from time to time. This curriculum change is inseparable from the results of the analysis carried out by policy stakeholders (Nurhasanah *et al*., 2021). Recently, Indonesia established the Curriculum of 2013 as the National curriculum and applied it to every educational unit, be it SD, SDLB, MI, SMP, SMPLB, MTS, SMA, SMALB, SMK, or MA. The curriculum of 2013 is an update of the curriculum of 2006, especially in the learning process that uses a scientific approach. Gerde *et al*. (2013) explained that the use of this approach has great potential in increasing students' knowledge and interest in science. The learning process applied in the curriculum of 2013 is also designed to form a correlation between one concept (theory) and another through investigation, search, and direct experience from students by developing a critical mindset (Surasmi, 2013). In science learning, students need a critical mindset in understanding the content of the material, especially at a higher level, the content of science becomes more complex and abstract.

Several previous studies have shown that the implementation of K-13 in regular schools has a positive impact on the achievement of educational goals. Lestari (2018) suggest that as much as 95.83% in the city of Palembang can carry out learning according to K-13 implementation guidelines. Mirnasulistyawati *et al*. (2020) explained that the implementation of the curriculum 2013 had an influence on student behavior and could provide equal opportunities for improving students' skills, attitudes, and knowledge. Nonetheless, the application of a student-centered curriculum certainly has drawbacks, especially in the application of science learning in regular schools as in research conducted by Munandar and Amiruddin (2020) which revealed that in the chemistry learning process, students only use LKS (student worksheets), and printed book. That is, during learning students only get experience and exploration which is limited to worksheets and printed books, the teacher is only a facilitator. Even though learning like this still adheres to the student center principle, all students cannot participate in this kind of learning process, especially students with special needs.

Based on the explanation above, it is necessary to analyze the implementation of the 2013 curriculum, especially in learning science in special schools (special schools). This is done to reveal how the implementation was carried out implementing the curriculum of 2013 in science learning in SLB and what the ideal conditions should be in implementing the curriculum.

2. METHODS

The method used in this research is to use a descriptive qualitative method because it aims to reveal comprehensive and in-depth observations based on the search results, processing,

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and analysis carried out on the data obtained from the research results. In addition, this study also describes the phenomenon of the problems raised as the subject of discussion in the study as well as the gaps that exist in each aspect which are raised from the ideal limit to the current conditions. Disclosure and conclusion are based on the results of the exploration that has been done.

The data collection method used is documentation by observation and conducting research on documents which can be in the form of books, literature, or scientific journals that are relevant to the study material or problems in this research.

3. RESULTS AND DISCUSSION

3.1. Principles of curriculum development

A curriculum is a unit of educational elements, namely content, objectives, learning process, and evaluation. In developing the curriculum, it starts with the formulation of ideas which are then developed into a program that is contained in documents such as the syllabus format, after which it is developed again in the form of a learning implementation plan (RPP) after the RPP is implemented, an evaluation is carried out to determine the level of effectiveness, from the results of the evaluation materials can be obtained for improving the next curriculum (Fajri, 2019).

Curriculum development is carried out based on the following principles (Shofiyah, 2018):

(i) The principle of relevance

According to this principle, internal and external relevancy must serve as the foundation for curriculum creation. The compatibility of curriculum elements, such as objectives, materials, tactics, organization, and evaluation, is known as internal relevance. While external updates take into account the needs of the times (technology and science) as well as the community and students in their immediate surroundings. Both must be in harmony for educational outcomes to influence the nation's development initiatives (Asmariani, 2014).

(ii) The principle of flexibility

In this principle, curriculum development is directed so that it can contain solid matters, but in its implementation, it is possible to adjust adjustments based on regional conditions. Time and ability and background of the child. This curriculum prepares children for the present and the future.

The curriculum remains flexible anywhere, even for children who have different backgrounds and abilities, curriculum development can still be done. The curriculum must provide space to provide freedom for educators to develop learning programs. Educators in this case have the authority to develop a curriculum that suits the interests, and needs of students and their environmental fields (Mansur, 2016).

(iii) The principle of continuity

According to this principle, there must be vertical and horizontal continuity in the curriculum as it is developed. The curriculum-provided learning experience must take into account continuity at the class level, between educational levels, and by type of work. The curriculum must also maintain consistency between different subjects of study so that they can build on one another (Zainab, 2017).

(iv) The principle of efficiency

Curriculum development must be efficient, so that what has been planned is in accordance with the objectives to be achieved. If a learning program can be held one month at a time and meet all of the stated objectives, that is not a hindrance. So that

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students can implement other learning programs because these efforts are needed so that in curriculum development, they can utilize existing educational resources optimally, carefully, and precisely so that the results are adequate.

(v) The principle of effectiveness

In this principle, two aspects need attention, namely: the effectiveness of teaching teachers and the effectiveness of student learning. In the aspect of teaching teachers, if they are still ineffective in teaching materials or programs, then that will become material in developing the curriculum in the future, namely by holding training, workshops, and others. Meanwhile, in the aspect of student learning effectiveness, it is necessary to develop a curriculum related to the learning methodology so that what has been planned can be achieved with methods that are relevant to the material or learning materials.

Therefore, there are efforts to make curriculum development activities achieve goals without excessive activities, both in quality and quantity. In its implementation in the learning process how the purpose of developing this curriculum can improve the quality of learning expected by all parties, especially the effectiveness of learning in the classroom.

3.2. Implementation of the curriculum of 2013 in science education in special education

The implementation of the curriculum in the realm of special education is certainly different from the implementation of the curriculum in regular schools. This is because the characteristics of students with special needs are unique based on the type of obstacles they have. Thus, in the implementation or application of the curriculum, it is necessary to make some adjustments. For example, mentally retarded students cannot be equated with students who are blind, deaf, disabled, or other children with special needs.

In science learning, the most important thing for students with special needs is to provide opportunities to study the world to explore students thinking and problem-solving skills (Akcay, 2009). The education of children with special needs requires a separate pattern according to their respective needs (Rodríguez-Dorta & Borges, 2017). These limitations attract the attention of the government with its policies, providing the same opportunities as other formal schools by implementing the curriculum of 2013 according to the needs of children in special schools.

In implementing the curriculum 2013 in SLB it cannot be fully implemented, it is necessary to modify several elements such as learning media, learning methods, or assessments. Implementation of the 2013 curriculum for children with special needs also needs to be adjusted to the severity or severity of the conditions or barriers of students (Mayasari, 2016). So far, the 2013 curriculum developed in special education only has curricula for blind, deaf, quadriplegic, and hearing-impaired students. This is because the implementation of the 2013 curriculum is carried out in stages and through the development process of the curriculum for regular schools (Susanti, 2016).

Thus, it can be concluded that the learning process in SLB is flexible and refers to the national curriculum. If there are difficulties in implementing it, it will be adapted to existing conditions, such as adjustments in the use of learning tools and resources, materials, and assessments adapted to the conditions of students because the most important thing in special education is not the results of extraordinary students but small changes. experienced by students as a process of development.

3.3. Objective standards for science education in the curriculum of 2013 at special school

Teachers in setting goals that adapt to existing curriculum goals, namely the goals in the syllabus that follow K13. The learning objectives are an effort to form within students to

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develop (Nabihati, 2018). Teachers can group students according to their class characteristics, if they are in groups the teacher can easily organize learning in class so that the learning process goes well. Teachers hope that students will get maximum learning services that are tailored to their characteristics so that students feel comfortable while at school (Maftuhin & Fuad, 2018).

The objectives of learning natural sciences based on the 2013 curriculum are as follows:

(i) Gaining belief in the greatness of God Almighty based on the existence, beauty, and orderliness of His natural creation.
(ii) Develop knowledge and understanding of science concepts that are useful and can be applied in everyday life.
(iii) Develop curiosity, positive attitude, and awareness about the interplay between science, environment, technology, and society.
(iv) Develop process skills to investigate the environment, solve problems and make decisions.
(v) Increase awareness to participate in maintaining, protecting, and preserving the environment.
(vi) Increasing awareness to appreciate nature and all its order as one of God's creations.
(vii) Acquire the provision of scientific knowledge, concepts, and skills as a basis for continuing education to the next level.

3.4. Content standards for science education in the curriculum of 2013 at special school

The following criteria should be taken into consideration while choosing instructional materials: compatibility with learning objectives, student characteristics, and time constraints (Haqiqi, 2019). Based on the observation results, the documentation data obtained on the aspects of standards competencies (SK) and basic competencies (KD) is as follows shown in **Table 1**.

Table 1. Competencies standards (SK) and basic competencies (KD) in elementary school for students with visual impairment, hearing impairment, and motor impairment.

Class	Sem	Topic	Competencies Standards (SK)	Basic Competencies (KD)
SDLB I	1	Mortal and the processes of life	1. Recognize body parts and their uses, as well as how to treat	1.1. Recognize the parts of the body and their uses how to treat. 1.2. Identify the body's needs for healthy growth and strong (food, water, clothing, air, environment healthy). 1.3. Get used to a healthy life.
			2. Get to know how to maintain a healthy environment.	2.1. Get to know how to keep the environment healthy. 2.2. Distinguish between a healthy environment and an unhealthy environment. 2.3. Tells about the need to take care of plants, pets, and the environment.

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Table 1 (continue). Competencies standards (SK) and basic competencies (KD) in elementary school for students with visual impairment, hearing impairment, and motor impairment.

		objects and their properties	3. Get to know the various properties of objects and their uses through observing changes in the shape of objects.	3.1. Identity objects in the surrounding environment based on their characteristics through observation. 3.2. Recognize objects that can be transformed. 3.3. Identify uses of objects in the environment.
SDLB I	2	Energy and Change	4. Get to know the various forms of energy and their benefits in everyday life.	4.1. Get to know the various forms of energy and their benefits in everyday life. 4.2. Identify causes of moving objects (batteries, springs, push hands, and magnets).
		Earth and the Universe	5. Get to know various celestial bodies and natural events (weather and seasons) and their influence on human activities.	5.1. Get to know various celestial bodies through observation. 5.2. Get to know the weather conditions around us. 5.3. Distinguish the influence of the dry season from the rainy season on human activities.
SDLB II	1	Mortal and the processes of life	6. Get to know the main parts of the body of animals and plants, the growth of animals and plants, and the various places where living things live	1.1. Get to know the main parts of animals and plants around the house and school through observation. 1.2. Identify the changes that occur in the growth of animals (in size) and plants (from seeds to plants). 1.3. Identify the various places where living things live (water, soil, and other places). 1.4. Identify beneficial and harmful living things.
		Objects and their properties	7. Get to know the various properties of objects and their uses through observing changes in the shape of objects.	2.1. Identify the characteristics of solid and liquid objects in the environment. 2.2. Shows changes in the shape and form of objects (plasticine/clay/flour dough) as a result of certain conditions. 2.3. Identify familiar objects and their uses through observation.

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SDLB II	2	Energy and Change	8. Get to know the various forms of energy and their benefits in everyday life.	3.1. Identify energy sources (heat, electricity, light, and sound) in the surrounding environment. 3.2. Identify the most frequently used types of energy in the environment and how to save them.
		Earth and the Universe	9. Get to know various celestial bodies and natural events (weather and seasons) and their influence on human activities.	4.1. Identify the appearance of the sun in the morning, afternoon, and evening. 4.2. Describe the use of heat and sunlight growth of animals (in size) and plants (from seeds to plants) in daily life.
SDLB III	1	Mortal and the processes of life	10. Understand the characteristics and creature needs life and mortal that affect changes in living things.	1.1. Identify the characteristics and needs of living things. 1.2. Classify living things simply. 1.3. Describe the changes that occur in living things and things that affect the growth and development of children (food, health, recreation, rest, and exercise).
			11. Understand the environment of the condition that affects health, and efforts to maintain environmental health.	2.1. Distinguish the characteristics of a healthy environment and an unhealthy environment based on observations. 2.2. Describe environmental conditions that affect health. 2.3. Explain how to maintain the health of the surrounding environment.
		Objects and their properties	12. Understand the properties and changes in the properties of objects and their uses in everyday life.	3.1. Identify the properties of objects based on observations including solids, liquids, and gases. 3.2. Describe changes in the properties of objects (size, shape, color, or taste) that can be observed as a result of burning, heating, and being placed in the open air. 3.3. Explain the use of plastic, wood, glass, and objects paper.

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		Energy and Change	13. Understand the various ways of motion of objects, and their relationship with energy and energy sources.	4.1. Summarize the results of observations that the motion of objects is influenced by shape and size. 4.2. Describe the results of observations about the effect of heat energy, motion, and vibration in everyday life. 4.3. Identify energy sources and their uses.
			14. Apply the concept of motion energy	5.1. Make a windmill to show how wind energy can be converted into motion energy. 5.2. Apply ways to save energy in life daily protecting and preserving nature.
		Earth and the Universe	15. Understanding the appearance of the earth's surface, the weather and its effects on humans, and its relationship with the human way.	6.1. Describe the appearance of the earth's surface in the surrounding environment. 6.2. Describe the relationship between cloud conditions and weather. 6.3. Describe the influence of weather on human activities. 6.4. Identify how humans maintain and preserve nature in the surrounding environment.
SDLB IV	1	Mortal and the processes of life	16. Understand the relationship between the structure of human organs and their function, as well as their maintenance.	1.1. Describe the relationship between the skeletal structure of the human body and its functions. 1.2. Apply ways to maintain a healthy skeleton. 1.3. Describe the relationship between the structures of the five senses with their function. 1.4. Apply ways to maintain the health of the five senses.
			17. Understand the relationship between the structure of plant parts and their functions.	2.1. Explain the relationship between the structure of plant roots and their function. 2.2. Explain the relationship between the structure of plant stems and their functions.

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				2.3. Explain the relationship between the structure of plant leaves and their function.
				2.4. Explain the relationship between interest and its function.
			18. Classify animals, based on the type of food	3.1. Identify the type of animal food.
				3.2. Classify animals based on the type of food they eat.
			19. Understand the life cycle of various types of living things	4.1. Describe the life cycle of some animals in the environment, for example, cockroaches, mosquitoes, butterflies, and cats.
				4.2. Show care for pets e.g. cats, chickens, and fish.
			20. Understand the relationship among mortal and between living things and their environment	5.1. Identify some typical types of relationships (symbiosis) and the relationship "eat and be eaten" between living things (food chain).
				5.2. Describe the relationship between living things and their environment.
		Objects and their properties	21. Understand the various properties and changes in the form of objects as well as various ways to use objects based on their properties	6.1. Identity solid, liquid, and gaseous states that have certain properties.
				6.2. Describe the change in liquid-solid to a liquid state; liquefied gas liquefied; gas-solid.
				6.3. Explain the relationship between the properties of materials and their uses.
SDLB IV	2	Energy and Change	22. Understanding force can change the motion and/or shape of an object	7.1. Summarize the experimental results that force (push and pull) can change the motion of an object.
				7.2. Summarize the experimental results that force (push and pull) can change the shape of an object.

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Table 1 (continue). Competencies standards (SK) and basic competencies (KD) in elementary school for students with visual impairment, hearing impairment, and motor impairment.

		23. Understand the various forms of energy and how to use them in everyday life.	8.1. Describe the heat and sound energy found in the surrounding environment and their properties. 8.2. Explain various alternative energy and how to use them. 8.3. Create a work/model to demonstrate changes in motion energy due to the influence of air, for example, rockets from paper/propellers/paper planes/parachutes. 8.4. Explain changes in sound energy through the use of musical instruments.
	Earth and the Universe	24. Understand the change in the appearance of the earth's surface and celestial bodies	9.1. Describe changes in the appearance of the earth. 9.2. Describe the position of the moon and the appearance of the earth from day to day.
		25. Understand changes in the physical environment and their effects on land.	10.1. Describe the various causes of change physical environment (wind, rain, sunlight, and sea waves). 10.2. Explain the effect of changes in the physical environment on land (erosion, abrasion, floods, and landslides). 10.3. Describe how to prevent environmental damage (erosion, abrasion, floods, and landslides).
		26. Understand relationships	11.1. Explain the relationship between natural resources and the environment. 11.2. Explain the relationship between natural resources and the technology used 11.3. Explain the impact of taking natural materials on environmental preservation.
		23. Understand the various forms of energy and how to use them in everyday life.	8.1. Describe the heat and sound energy found in the surrounding environment and their properties. 8.2. Explain various alternative energy and how to use them.

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Class	Sem	Topic	Competencies Standards (SK)	Basic Competencies (KD)
				8.3. Create a work/model to demonstrate changes in motion energy due to the influence of air, for example, rockets from paper/propellers/paper planes/parachutes.
				8.4. Explain changes in sound energy through the use of musical instruments.
		Earth and the Universe	24. Understand the change in the appearance of the earth's surface and celestial bodies	9.1. Describe changes in the appearance of the earth.
				9.2. Describe the position of the moon and the appearance of the earth from day to day.
			25. Understand changes in the physical environment and their effects on land.	10.1. Describe the various causes of change physical environment (wind, rain, sunlight, and sea waves).
				10.2. Explain the effect of changes in the physical environment on land (erosion, abrasion, floods, and landslides).
				10.3. Describe how to prevent environmental damage (erosion, abrasion, floods, and landslides).
			26. Understand relationships	11.1. Explain the relationship between natural resources and the environment.
				11.2. Explain the relationship between natural resources and the technology used
				11.3. Explain the impact of taking natural materials on environmental preservation.
SDLB V	1	Mortal and the processes of life	27. Identify the functions of human and animal organs.	1.1. Identify the function of the human respiratory organs.
				1.2. Identify the function of the respiratory organs of animals such as fish and earthworms.
				1.3. Identify the function of the human digestive organs and their relationship to food and health.

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Table 1 (continue). Competencies standards (SK) and basic competencies (KD) in elementary school for students with visual impairment, hearing impairment, and motor impairment.

				1.4. Identify the human circulatory organs. 1.5. Identify disorders of the circulatory organs man.
			28. Understand how green plants make food	2.1. Identify how green plants make food. 2.2. Describe the dependence of humans and animals on green plants as a food source.
			29. Identify how living things adapt to the environment	3.1. Identify the adaptation of animals to certain environments to survive. 3.2. Identify the adaptation of plants to certain environments to sustain life.
		Objects and their properties	30. Understanding the relationship between the properties of materials and their constituents and changes in the properties of objects as a result of a process	4.1. Describe the relationship between the properties of materials and their constituent materials, for example, threads, fabrics, and paper. 4.2. Summarize the results of investigations regarding changes like objects, both temporary and permanent.
SDLB V	2	Energy and Change	31. Understand the relationship between force, motion, and energy, and their functions	5.1. Describe the relationship between force, motion, and energy through experiments (gravitational force, frictional force, magnetic force). 5.2. Describe simple machines that can make work easier and faster.
			32. Apply the properties of light through the activity of making a work/model.	6.1. Describe the properties of light. 6.2. Make a work/model, for example, a periscope or lens from simple materials by applying the properties of light.
		Earth and the Universe	33. Understand the change that occurs in nature and its relationship to the use of natural resources	7.1. Describe the process of soil formation due to weathering. 7.2. Identify the types of soil. 7.3. Describe the structure of the earth. 7.4. Describe the process of the water cycle and human activities that can affect it.

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Table 1 (continue). Competencies standards (SK) and basic competencies (KD) in elementary school for students with visual impairment, hearing impairment, and motor impairment.

				7.5. Describe the need for water savings. 7.6. Identify natural events that occur in Indonesia and their impact on living things and the environment. 7.7. Identify some human activities that can change the surface of the earth (agriculture, cities, etc.).
SDLB VI	1	Mortal and the processes of life	34. Understand the relationship between the characteristics of living things and the environment in which they live.	1.1. Describe the relationship between the special characteristics of animals (bats, lizards, ducks) and their environment. 1.2. Describe the relationship between the special characteristics of plants (cacti, insectivorous plants) and their environment.
			35. Understand how the mortal reproduce.	2.1. Describe human development and growth from infancy to old age. 2.2. Describe the characteristics of the physical development of boys and girls. 2.3. Identify ways of plant reproduction and animals. 2.4. Identify ways of human reproduction.
			36. Understand the influence of human activities on the balance of the environment	3.1. Identify human activities that can affect the balance of nature (ecosystem). 3.2. Identify the parts of plants that are often used by humans which lead to environmental imbalances. 3.3. Identify animal body parts that are often used by humans which lead to environmental imbalances.
			37. Understand the importance of conserving living things to prevent the extinction	4.1. Identify species of animals and plants that are close to extinction. 4.2. Describe the importance of preserving species of living things for the development of Natural Sciences and people's lives.

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Table 1 (continue). Competencies standards (SK) and basic competencies (KD) in elementary school for students with visual impairment, hearing impairment, and motor impairment.

Class	Sem	Topic	Competencies Standards (SK)	Basic Competencies (KD)
		Objects and their properties	38. Understand the relationship between temperature, conductivity, and the use of objects	5.1. Comparing the conductivity properties of heat from various objects. 5.2. Explain the reasons for choosing objects in everyday life based on their ability to deliver hot.
			39. Understanding the factors that cause change	6.1. Explain the factors that cause changes in objects (weathering, rusting, decay) through observation. 6.2. Identify the determining factors selection of objects/materials for specific purposes (rubber, metal, wood, plastic) in everyday life.
SDLB IV	2	Energy and Change	40. Practice patterns of energy use and transfer	7.1. Experiment to investigate the relationship between force and motion (seesaw model, slingshot/simple spring energy tractor model). 7.2. Presenting information about transfers and changes in electrical energy.
			41. Understand the importance of saving energy.	8.1. Identify the use of electrical energy and participate in its thrift in everyday life. 8.2. Create a work/model that uses electrical energy (electric bells/alarms/traffic light models/ aircraft/ cars/ house lighting models).
		Earth and the Universe	42. Understand the sun as the center of the solar system and the interaction of the earth in the solar system	9.1. Describe the solar system and the positions of the solar system constituents. 9.2. Describe the events of the earth's rotation, earth revolution, and moon revolution. 9.3. Describe the occurrence of lunar eclipses and solar eclipses. 9.4. Explaining the calculation of the Gregorian calendar and the calendar Hijri.

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3.5. Science learning process based on the curriculum of 2013 at special school

The criteria for choosing learning resources include compatibility with KI and KD, compatibility with instructional materials and scientific methodologies, and compatibility with student characteristics. The findings of the analysis in many research (Mayasari, 2016; Susanti, 2016; Ardianingsih *et al*., 2017; Maftuhin & Fuad, 2018; Zulaikhah, 2020) indicate that they are completely in agreement with areas of compliance with KI and KD. This is because the learning resources utilized are brand-new books created especially for the 2013 curriculum by the government. The analysis's findings indicate that they are only partially adequate in terms of factors of conformance with instructional materials and scientific methodologies. This is due to the scientific approach not having been used at the conference where the dichotomous key was discussed following the 2013 curriculum. The analysis's findings demonstrate that it is in line with the majority of the students' features in terms of conformance.

The components of the selection of learning media consist of suitability with learning objectives, suitability with learning materials and scientific approaches, and suitability with the characteristics of students. In the aspect of conformity with learning objectives, the results of the analysis show that it is partially appropriate. This can be seen in the lesson plan on the learning media used. In research conducted by Susanti (2016) and Ardianingsih (2017), it was found that the development of instructional media still could not be optimally implemented due to the incompleteness of educational teaching aids and the lack of understanding of teachers regarding the preparation of learning devices based on the 2013 curriculum so that the compatibility between learning objectives and the characteristics of participants education has not been fully implemented. This is still not following the learning objectives. For aspects of conformity with learning materials and scientific approaches, the results of the analysis show that they are partially appropriate. This can be seen in the media used which is considered less supportive of a scientific approach. For the aspect of conformity with the characteristics of the participants in 2013. The analysis's findings indicate that the curriculum implementation study, Overview of Learning Implementation Plans (RPP) in Natural Science Subjects (Haqiqi, 2019), is only partially acceptable. This is a result of the learning materials' predominant usage of cardboard, which is seen to be at odds with the traits of Special needs students.

The learning model's constituent parts include conformance to the scientific method and appropriateness with learning objectives. The analysis's findings indicate that it is only partially adequate in terms of conformance with learning objectives. The lesson plans that make use of the discovery learning approach demonstrate this. Observers claim that dichotomous key sub-topics are inappropriate for use with exploration learning. The analysis's findings indicate that it is only partially adequate in terms of conformance with the scientific method. This is demonstrated by the utilization of the discovery learning model, which is seen to be less appropriate for binary keys (Haqiqi, 2019).

The learning scenario component consists of clearly displaying the preliminary, core, and closing activities. Suitability of activities with a scientific approach, suitability of presentation with material systematics, and suitability of time allocation with material coverage. The analysis's findings reveal that they are only partially adequate in terms of presenting the introduction, core, and closing activities clearly and concisely. This is demonstrated by the fact that the activity does not classify living things into two categories. The dichotomous classification of living things has not yet been discussed in the RPP because it only deals with dichotomous keys. The analysis's findings indicate that activities are only partially appropriate

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in terms of their eligibility for a scientific approach. The lesson materials for each exercise demonstrate this by failing to instruct students to learn the dichotomous keys using a scientific method. The analysis's findings indicate that the presentation is only partially acceptable in terms of how well it fits with the material's systematic organization. The RPP clearly shows that there is no scenario for the classification of living things into two categories. The analysis's findings indicate that the element of time allocation being reasonable given the scope of the material is not true. This is because while the RPP provides three JP time allocations, the fundamental activities are not described in greater depth for each activity's time allocation.

3.6. Science education evaluation standards in the curriculum of 2013 at special school

The assessment component includes elements that adhere to real assessment methods and forms, indicators, appropriateness of answer keys with questions, and scoring criteria with questions. The analysis of the four factors reveals that they are entirely in agreement. The four aspects after being analyzed show that they are in full agreement. This can be seen from the RPP which includes an assessment of attitudes, knowledge, and skills (Haqiqi, 2019; Maryanti, 2021).

4. CONCLUSION

The study's findings demonstrate how special schools alter their science curricula for students with various types of disabilities, including blindness, deafness, hearing impairments, IQ obstacles, and motor impairments (deaf). The objectives, goals, and learning techniques are also modified to account for the various student hurdles. However, several elements of the 2013 curriculum, such as the science learning strategies for students with cognitive disabilities, do not follow the learning guidelines for students with special needs, necessitating the use of creativity on the part of teachers to conduct classroom learning. Additionally, the 2013 curriculum lacks the flexibility needed to enhance special education.

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6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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