INTRODUCING ELECTRICITY CONCEPTION PLANTING IN EARLY CHILDHOOD THROUGH AUDIO VISUAL MEDIA

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ABSTRACT

The purpose ofthis article is to introduce electricityconceptionplanting in earlychildhood through audiovisualmedia. Electricity is very close to human life. Almost all life activities are related to electricity. Electricity has many benefits for life, as we have felt, from morning till night we need electricity. Not only houses that need electricity, public facilities such as offices, factories, markets, roads are also in dire need of electricity. One of the public facilities that is also in need of electricity is kindergarten (TK). Electricity is needed to support teaching and learning activities and administrative activities of the school. Electrical installation will be easy to meet in every room in kindergarten. In addition to having many benefits, electricity can be a source of danger. The hazards caused by electricity can be felt by all the citizens of the school, especially children. Lack of understanding of electrical concepts and lack of supervision of children can be the cause of electrical accidents in children.

Keywords: electricity conception planting, early childhood, audio visual.

INTRODUCTION

A child has a high curiosity that triggers them to take action to find out something. The adventurous spirit of the child increases the curiosity of something. Encouraged by his great curiosity, sometimes he does not think about the consequences of what he does. Knowledge of electrical concepts in children can be given according to the stage of his age. Early childhood development stage has the ability to think through real objects. The thinking process begins with what is seen around the environment. Early childhood absorbs a variety of information provided, so proper planting of the concept must be taught from an early age. Children learn thoroughly include physical aspects, social emotional, moral, language, art and cognitive.The cognitive aspect consists of two areas of development, namely science and mathematics. Science has many branches of science, among others, is the science of physics. The concept of electricity is included in the study of physics. Early child learns through seeing, listening and doing or kinesthetic actions. The above is related to the selection of methods and the use of media in delivering learning materials. In previous research, the development of science in early childhood is done through games which isdifferent from this article. In this article the development of science in early childhood is done through audio visual media. Selection of visual audio media related to the purpose of learning can be achieved. Electrical concept planting in early childhood can not be done through playing and games, as it is related to electrical appliances, electrical outlets, irons, fans, electric stoves, and lamps.

LITERATURE REVIEW

Principles of child development : (1) Children develop holistically: aesthetic, affective, cognitive, language, physical and social development are all interrelated (2) child development occurs in an orderly sequence (3) child development proceeds at varying rates within and among children (4) new development is based on previous development (5) development has both cumulative and delayed effects[1]. Science content is more than isolated fact. Scientifict facts are important, but how they are put together into meaning ideas is more significant. Preschool children learn science by exploring the world around them. They try out to see how they work, they experiment, they manipulate, they are curious, and they ask questions. As they seek answers to their questions, they learn to enjoy and appreciate their surroundings. To decide which concepts children should learn, observe children's scientific interests and what they see and do every day.[2] Scientific processes for young children are: (1)observing: using the senses to learn about the characteristics of the environment; (2)comparing: measuring, counting, quantifying, and or examining, objects and events in terms of similarities and differences; (3) classifying: grouping and sorting according to properties, such as size, shape, colour, and use quantitative descriptions made either directly, through observation, or indirectly as a unit of measure (4) communicating: naming, recording, and sharing observations and findings, orally or written from e.g.picture, maps, graphs or journals, so others can understand what was learned[3].Integrated curriculum is a term that is often interchanged with or associatedwith the term thematic curriculum. Integrated curriculum is used asa framework for organizing all the organized learning that will take place in the classroom.Integrated curriculum is thematic by nature because thetheme that is chosen as the focus of study is what integrateslearning opportunities in the classroom. Integrated curriculum allows the teacherto relate the major content areas of language arts, math, science, and socialstudies as well as the arts to the theme being studied[4]. Teaching science through games not only includes children's active participation in several hands-on activities related to a concept or a phenomenon, but also includes children's participation in variations of the same activity toexplore different aspects of the concept/phenomena. The result of the study indicated that children taught science through play had greater understanding of science concepts than children

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[1].Kostelnik,J.M.,Soderman,K.A.,Whiren.P.A.(1999).*Developmentally Appropriate Curriculum*.2,Michign State University:Macmillan Publishing Company,hlm.50-55.

[2]Dodge,T.D.,Colker,J.L.,Heroman,C.(2015).*The Creative Curriculum for Preschool*.4,Washington,DC:Quality Books Inc.hlm.142.

[3]Wortham,C.S.(2006).*Earlychildhood Curriculum*.4,New Jersey Columbus Ohio:Kevin M Davis,hlm.365.

[4]Miller,R.(1996).The Developmentally Appropriate Inclussive Classroom in Early Education.An International Thomson Publishing company, hlm.35.

taught science through directinstruction. The findings suggest that teaching science through playful experiences is an important approach to promote kindergarten students.[5]Science is knowledge that is scientifically divided into two namely (1) the physical sciences consisting of astronomy, chemistry, geology, minerology, meteorology and physics (2) biological sciences consisting of anatomy, physiology, zoology, culology, embryology, microbiology. Science is a product and process that can not be separated based on things - things that we see, hear, touch and refer to the science with the laws - the law is certain, generally applies whenever anywhere. Science is a knowledge of human activity which is active and dynamic non-stop and obtained through certain methods that are organized, systematic, object, method and apply universally. The nature of science is (1) attitude; (2) process; (3) application; and (4) product.[6] Electrical energy is energy derived from an electrical charge, so it can create a static electric field and produce electron movements in a conductor or ion in a liquid or gas. Dynamic electrical energy can convert electrical energy into other energy. If there is no source then the electricity can not be turned on or changed into another form of energy. In the electric groove there are 2 types of particles, namely proton and electron particles. Protons are positive and electrons are negative. The electrical benefits include (1) the light source; (2) the energy source; (3) the entertainment medium; and (4) the heat generating producer. The hazards posed by electricity are (1) electric shock current; (2) thermal/thermal effects; and (3) electric field and magnetic field effects. The process of the occurrence of electric shock current, namely through direct and indirect touch. Factor - a determinant factor due to electric shock current (1) large electric current; (2) current flow path in the body; and (3) duration of electric shock. The effects of electric current on the human body are: (1) heart failure; (2) respiratory failure; (3) cell damage; and (4) burns. Causes of fire and electric explosion are: (1) overload; (2) imperfect connections; (3) non standard equipment; (4) insulation leakage; (5) an inappropriate current limiting and (6) lightning strike. The principles of electrical hazard protection are: (1) prevents the flow of electric current through the human body; (2) limits the value of electric current under electric shock; and (3) decides the supply automatically in the event of interference[7]. Audiovisual media is a combination of audio and visual media combined with visible cassettes and images, such as video recordings, slide slides and so on. Audiovisual media is divided into two categories: (1) silent audiovisual, a medium that displays sound and still images like movies sound frames, sounds and voice-printing films; (2) audiovisual motion, a media that can display sound elements and moving images such as sound movies, video cassettes, TV, OHP and computers.[8]

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[5]Bulunuz,M.(2013).*Teaching Science through Play in Kindergarten*.21(2),hlm.226-249.

[6]Suyoso,A.(1998).*PengembanganPendidikan IPA SD,Jakarta:Dikti,Depdiknas*.

[7]Kemenaker RI. (2015).MateriPembinaanTeknisiKeselamatandanKesehatanKerja(K3) Listrik.Jakarta: Kemenaker RI.

[8]Kemenaker RI. (2015).MateriPembinaanTeknisiKeselamatandanKesehatanKerja(K3) Listrik.Jakarta: Kemenaker RI.

The advantages of audiovisual media are: (1) learning videos can be utilized by the public at large by accessing them in social media; (2) videos can be used for long periods of time and whenever the material contained in this video is still relevant to the material; (3)) simple and fun learning media; and (4) assist students in understanding the subject matter and assist the teacher in the learning process. The disadvantages of audiovisual media are (1) can only be used with the help of computer media and require projector/speaker assistance when used in the learning process in the classroom; (2) require considerable cost for video learning needs; and (3) the making requires a lot of time.[9]There are several research journals on the application of audiovisual media to improve student learning outcomes, especially in the field of cognitive. The use of media in the learning process make the attention and focus of students are givento the media so that the motivation to learn is increasing. Increased motivation to learn and focus on learning, especially media used impact on understanding the material absorbed by students. Students get more understanding about the materials delivered.

CONCLUSION

Based on the literature review above, it can be concluded that audiovisual media can be used as an early childhood learning media. Audiovisual media can be applied to instill a child's understanding of electrical concepts. Early childhood characteristics of high curiosity can be met through the application of audiovisual media in the learning process. The concept of electricity can not be applied through the play method, because it contains an element of danger for the earlychildhood. Through the audiovisual media the child develops thinking knowledge, finds cause and effect, connects knowledge through what is seen and heard, then communicates it through conversation and questions which can then generates an understanding of the concept. The scientific process in children is done repeatedly and requires the teacher as a facilitator. The use of audiovisual media also has disadvantages, among others, can only be used when there is electricity and teacher control over computer usage. Therefore the teacher should be able to do a good plan when she wants to apply audiovisual media in the learning process. Teachers should always improve their ability to use technology along with the development of the era and the needs of learning.

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