International Journal of Applied Environmental Sciences
ISSN 0973-6077 Volume 11, Number 4 (2016), pp. 891-902

http://www.ripublication.com

Application of EDS-AV Scripts on Environmental Education in Increasing Attractivenessand Motivating Behavior Particularly Motoric Students Kindergarten

Edy Sabara, Hamsu A. Gani, Darlan Sidik, Muis Mappalotteng and Gufran Darma Dirawan

Makassar State University

Abstract

This research aims to determine the application of environmental education learning model-based audio-visual technology or EDS-AV that can increase the attractivenessof learning device and motivate kindergarten students to improve environment. Behaviours this research was using experimental study. The population of this preliminary research are kindergarten students much as 27 students. Quantitative data includes data about the quality of the Environmental Education learning model based EDS-AV.Qualitative data consists of identification data competence and learning needs of Environmental Education (EE) in schools. Based on field tests against EE Learning model based EDS-AV is obtained that the behavior of the attractiveness/child satisfaction in seeing the video is based on responses by 58.02% higher when compared with children who just did not say anything that is 41.98%. Use of Audio Visual also can improve the learning experience. The analysis showed that the increased motivation of behavior, especially motoric kindergarten for the environment is very high. Based on observations obtained 67.20% higher. Increasing student motivation motoric behavior reported by observation due to the models developed in the form of Audio

Visual in the form of video serving and visualizes abstract concepts and easily understood by children age kindergarten.

Keywords: Environmental Education, Motivating Behavior, Student Motoric.

Introduction

Environmental education in schools is expected to be implemented either by using different kinds of learning proces and learning materials to foster students knowledge and theirs awareness about the environment. The in implementation of the learning environment materials which applicable today is through integrative approaches and monolithic both at school and at primary school level. In early childhood education, particularly at the Kindergarten integrated enviromental education is possessed into physical activity at weekly session motoric.

Education Learning Environment is now more widely applied in schools, it does not mean hiring students as workers at the school, but building the spirit of love to their environment.

Early Childhood Education (ECD) is critical in the level the growth of a child's, brain structure andit'sfunction, of children because it give effect to settle on the development of children's behavior and personality in the future. Moreover, growth-oriented education allows educators to plan a variety of experiences that can foster interest in early childhood and stimulate their curiosity.Thus ECD is a very big investment for the family and the nation (Suyanto, 2003: 2). ECD learning has been more emphasis on growth and development of children physically and mentally in order to have the readiness to enter further education, which was held in formal, non-formal and informal.

Davis (2008: 18-24) explains that over the last decade, great changes have taken place, because the interest of continuing education for the children have grown, practitioners and researchers began to think, develop and implement programs with a focus on environmentally sustainable in children aged early. It is recognized that the early days of children very significant growth with the growth of the surrounding environment. Further explained early childhood in Australia has sought for the implementation of sustainability education through management, curriculum and relationship with the community.Thus has provided many opportunities for children to act as agents of change. Then Didonet (2008: 25-30) explains that the starting point is the importance of an early age to a human being in establishing the basis of personality, values and attitudes that will guide your thoughts, feelings and behavior of humans during their lives. Later, he found children are very sensitive, interested and curious about the elements of nature, and confirms that early childhood education, from the beginning, should be incorporated in the work experience program of

creative and exploratory with elements such as plants, flowers, seeds, water, trees and wind.

Haryadi (2003;30) Stated mental structure, which includes the nervous system and sensory organs, set limits to the intellectual functioning of a certain age. He also explained that the operational lifetime of concrete have children have characteristics that stand out in the development of early childhood, the term used is the age group, the age exploring, age asked, age emulate, and the age of creative

The introduction of the child on the environment need to be packaged through repeated visualization, it is intended that the child can imitate what they see and hear through impressions are repeated. This can only be done if it is done with an approach based learning audio-visual packaged in the form video or movies.

The habit of early childhood in carrying out creative activities after previously had heard and seen examples by means of electronic communication, such as radio and television. Audio-visual media have a very important role in shaping the character of early childhood for the information provided in accordance with the psychological development of a child. The combination of computer and video (Rosch, 1996) consisted of a combination of three elements: sounds, pictures, and text (McComick, 1996). The combination of at least two media input or output. This media can be either audio (voice, music), animations, video, text, graphics and images (Turban et al, 2002).Tools that can create dynamic and interactive presentation that combines text, graphics, animation, audio and video (Robin and Linda, 2001). Multimedia in the context of a computer according Hofstetter 2001 is: the use of computers to create and combine text, graphics, audio, video, using a tool that allows users to interact, create, and communicate. According to research by Computer Technology Research (CTR), which states that: 1) be able to retain 20% of the visits; 2) the person is able to remember 30% of which is heard; 3) the person is able to remember 50% of what is heard and seen; 4) the person is able to remember 80% of what to hear, see, and do.

The process of change in a child would be quicker if he remembers something by combining the ability to hear and see and put it into practice. The combination hear and see the need of the media to provide information simultaneously and only if processed electronically which will produce audio-visual media. Kozma (1991) states that the media can be distinguished from the technology (mechanics, electronics, physical form), symbolic systems (alpha-numeric characters, objects, images, sound) as well as the means used (radio, video, computers, books).Expectations and desires based on several theories that support to a breakthrough in learning by combining audio and visual in transferring knowledge about environmental education to someone in order to influence behavior in a positive direction. Furthermore Arsyad, A. (2013) explains that the visual-based media holds a very important role in the learning process. Visual can facilitate understanding and strengthen memory, can also cultivate students' interest and can provide the relationship between the content of the subject matter with the real world.

Based on some of the information and assumptions which have been mentioned above, then designed a learning model that can be easily and quickly understood by

younger children in this case students Kindergarten (TK) is a learning model for environmental education based scripts Education, Develop, Society, Audio-Visual (EDS-AV). Based on the exposure of the background, and the issue of the importance of environmental education learning model to students in school, this research aims to design a learning model based audio-visual technology. Through this model, the students' knowledge of the environment is expected to increase the attractiveness and motivate behavior, especially motoric kindergarten for the environment.

Research Methods

This research is experimental research of development that results in an instructional model for environmental education based EDS-AV scripts are considered to Improve Particularly Attractiveness And Motivating Students Motoric Behavior. Goals were students in Kindergarten (TK) in Makassar. The reason that kindergarten students being targeted because of the tendency of this model changes the characters in this case the child's attitude towards the environment, particularly concerning environmental hygiene, personal hygiene, and environmental insights

The population for this researchisstudents kindergarten as many as 27 students. The data in this study consisted of quantitative and qualitative data, obtained using two kinds of instruments, namely instrument validation of models and research data collection instruments. Data quantitative include data on the quality of learning models EEbased EDS-AV. Qualitative data consists of identification data of competence and learning needs EE in the schools.

The design of a video or a good movie should be done in a standard format, one of them with models Design Frame by Frame (DFF). DFF is intended to assist in designing a story that previously made in the form of scripts. The script is a story idea that created the scripts, in this case a story idea comes from researchers who have consulted with experts. Scripts in this study design is bundled with the Education, Develop, Social, Audio-Visual (EDS-AV) scripts.The research activity is mostly in the form of observations on the implementation of the model and the interview, the data collected in the form of qualitative data, but some of the quantitative data obtained from instruments that are used to make inferences in decision making in support of the implementation of learning model EE-based EDS-AV scripts.This research starts from the phenomenological paradigm of objectivity is built into the formulation of the particular situation.

The steps were performed in the data analysis, as follows: a) Collecting all data on observations and interviews in the form of field notes, interview notes, and notes the discussion; b) Conduct analysis of the data, in particular the improvement of the model; c) Perform the synthesis process, the whole process of data to formulate the final model; d) Preparation of final conclusions.

Research Results

Effectiveness Analysis Products

Effectiveness analysis is used to see the response of children to education learning environment based EDS-AV scripts in kindergarten. The instrument was given to a kindergarten teacher who will assess the activity of the child's response after viewing video footage. Each class selected a few students were based on recommendations from teachers respectively.

Table 1: Assessment Instrument Response Effectiveness

No.	Questions	Average Score RESPONSE affective ratings by 3 teachers	Category
1.	Do children have been taking out the trash?	**3**	Answering Good
2.	Where waste must be disposed of?	**3**	Answering Good
3.	What is waste food wrappers?	**3**	Answering Good
4.	Is it true that maintaining cleanliness is a smart kid behavior?	**2,67**	Answering Good
5.	Trash it clean or dirty?	**3**	Answering Good
6.	Is the rest of the food is wet waste?	**2,67**	Answering Good
7.	Is dry waste and wet waste should be separated?	**3**	Answering Good
8.	Is it waste can made of fertilizer?	**2**	Doubtful
9.	What is the use fertilizers?	**3**	Answering Good

10.	Are the kids are washing your hands dirty?	**3**	Answering Good
11.	What used to wash hands until clean?	**3**	Answering Good
12.	What used to dry hands washed?	**3**	Answering Good

Response Analysis Expression of Emotion Child

Response Analysis Expression of Emotion child used to see the expression of positive emotions after watching audio-visual child (short film) "Disposing of Trash". Observers are each classroom teacher comprising 3 classes. Selected 9 students per class.

Table 2: Assessment Instrument of Expression of Emotion Child Response

NO	Behavior of Child	Class-1				Class-2				Class-3			
		Happy	Percentage (%)	Silent	Percentage (%)	Happy	Percentage (%)	Silent	Percentage (%)	Happy	Percentage (%)	Silent	Percentage (%)
Excitement		5,57	61,90	3,43	38,10	6,14	68,25	2,86	31,75	6,43	71,43	2,57	28,57
1.	Smile	6	66,67	3	33,33	9	100,00	0	0,00	9	100,00	0	0,00
2.	Laugh	6	66,67	3	33,33	9	100,00	0	0,00	9	100,00	0	0,00
3.	Applause	6	66,67	3	33,33	4	44,44	5	55,56	4	44,44	5	55,56
4.	Soaring carefree	5	55,56	4	44,44	3	33,33	6	66,67	4	44,44	5	55,56
5.	Dance	5	55,56	4	44,44	4	44,44	5	55,56	5	55,56	4	44,44
6.	Sing	6	66,67	3	33,33	5	55,56	4	44,44	6	66,67	3	33,33
7.	Shout for joy	5	55,56	4	44,44	9	100,00	0	0,00	8	88,89	1	11,11
Satisfaction		3,67	40,74	5,33	59,26	6,00	66,67	3,00	33,33	6,00	66,67	3,00	33,33
1.	Say the words "thank God" "yeah/ yes".	6	66,67	3	33,3	9	100,00	0	0,00	9	100,00	0	0,00

2.	A thumbs up	1	11,11	8	88,89	4	44,44	5	55,56	3	33,33	6	66,67
3.	Lifted hands up	4	44,44	5	55,56	5	55,56	4	44,44	6	66,67	3	33,33

Only the first class that provides emotional response rather low. Furthermore, an overall assessment of the child as many as 27 children can be seen in the following table.

Table 3: Behavior Response overall Kindergarten

NO	**Child Behavior**	**Overall Score (27 Childs)**			
		Happy ☺	**percentage (%)**	**Silent ☹**	**Percentage (%)**
Excitement			**67,20**		**32,80**
1.	Smile	24	88,89	3	11,11
2.	Laugh	24	88,89	3	11,11
3.	Applause	14	51,85	13	48,15
4.	Soaring carefree	12	44,44	15	55,56
5.	Dance	14	51,85	13	48,15
6.	Sing	17	62,96	10	37,04
7.	Shout for joy	22	81,48	5	18,52
Satisfaction			**58,02**		**41,98**
1.	Say the words "thankGod" "yeah/yes".	24	88,89	3	11,11
2.	A thumbs up	8	29,63	19	70,37
3.	Lifted hands up	15	55,56	12	44,44

From Table 3 above shows the percentage of students behavioral excitement in seeing the video is based on responses by 67.20% higher when compared with children who just did not say anything that is by 32.80%. As for the behavior of a child's heart satisfaction in seeing the video is based on responses by 58.02% higher when compared with children who just did not say anything that is 41.98%. It is somewhat

low on the fear of children in a thumbs-up, most children are still shy to a thumbs-up. Although keeping the student is given a question about what the meaning of thumb, they do not understand giving a thumbs up.

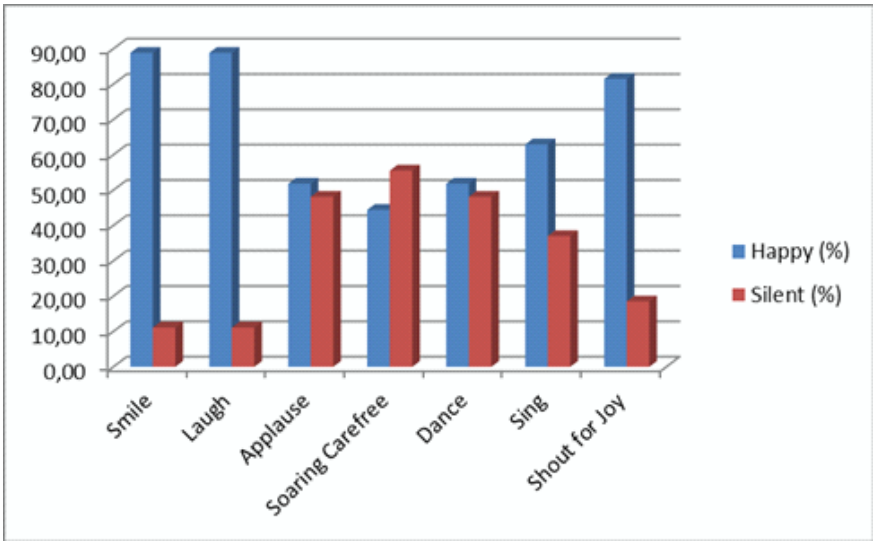

Figure 1: Graph of behavioral responses of child Excitement

From the graph above shows that a category of soaring carefree, the kindergarten is still much to be silent, they are shy to express themselves.

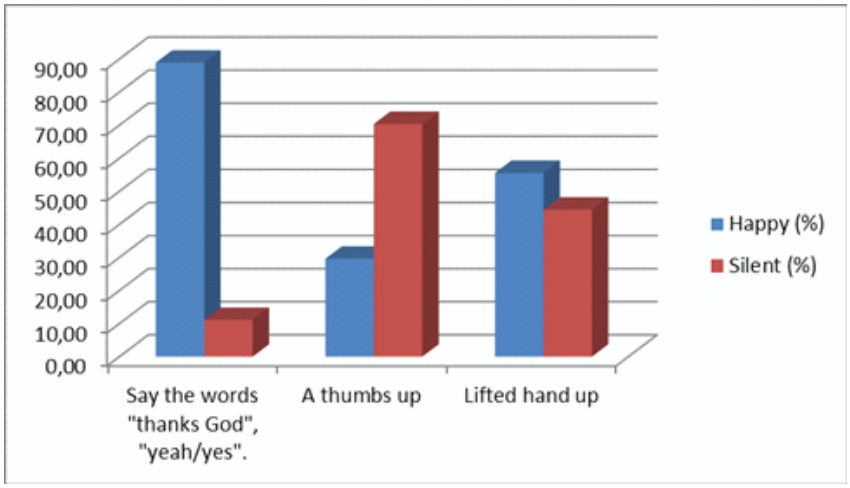

Figure 2: Graph of Satisfaction behavior Response

From the graph above shows that most students do not thumbs-up. According to an analysis by researchers interview to one of the students, that the reason for silence is because they do not understand what is in the thumbs up, besides meaning a thumbs up to the age of kindergarten students can not be fully interpreted properly, then the reason some of the other students is due to shame.

Discussion

Research on environmental education is still a bit to do, especially for the research on the manufacture of learning or media products that can support the implementation of environmental education. More research leading to effective implementation of environmental education in schools.

Development Learning based EDS-AV to increase the attractiveness of kindergarten students on the environment

Learning model proposed design is a comprehensive accumulation of various learning models that theoretically support the learning environment in general, so this model is called EDS-AV. Field tests of the models PLH based EDS-AV acquired behavioral attractiveness / satisfaction in seeing children's video is based on responses by 58.02% higher when compared with children who just did not say anything that is 41.98%. The analysis showed that the increased appeal of kindergarten students on the environment is higher. This is because the model developed in the form of Audio Visual in the form of video serving and visualize abstract concepts and easily understood by children age kindergarten. Use of Audio Visual also can improve the learning experience.

Students responses to environmental education learning based EDS-AV scripts on kindergarten analyzed through the analysis of effectiveness as in Table 1. The instrument was given to a kindergarten teacher who will assess the activity of the Students response after viewing video footage.The average student can answering good all the items pertaining to whether the children already dispose of waste, where waste must be disposed of, giving a definition that is junk food wrappers, giving information whether the right to maintain cleanliness is a smart kid behavior,garbage was clean or dirty, if the rest of the food is wet waste, whether dry waste and wet waste must be separated, whether the children are washing dirty hands, wash your hands wearing what, and drying hands washed wear what. Except on whether garbage could be made fertilizer, and what is the use fertilizer, the overall student answered doubtfully. This is because the level of knowledge the child has not reached the material. So that needs to be given a problem concerning the fertilizer material is then given a solution to get the hang of the child.

Children sitting in the classroom beginning to experience growth thinking and problem solving skills that will assist them in solving specific problems and interpret

the experience (Aunurrahman, 2009).To help realize the achievement of competence of learners in the classroom beginning, learning to focus on the formation of creativity through the provision of a number of activities in a natural atmosphere (natural) by taking into account the experience of students. Integrating a variety of subjects presenting packaging materials and instructional procedures sourced from natural conditions, as happened in the lives of young people. Facts and events do not stand alone, but is a phenomenon arising from the relationship between a fact or event with facts or other events.

Implementation of environmental education in Kindergarten child, especially at the beginning of the class is still untapped on learning. The preliminary information that is netted on numerous occasions that teachers in low grade (play group).has been implementing a theme in each lesson by referring to the themes that already exist without developing the theme. Furthermore, given that the instructional media used to support learning makeshift media also is not uncommon even implementing learning without the use of media. The lack of use of the media in support of learning because teachers still have difficulty determining that the media as a support theme-based learning, especially learning.

The importance of integrating the concept of environmental education in order to instill the values and concern for kindergarten students in the environment around student needs be, there are examples of media that can accommodate it. Moreover, the application of learning requires a media that can integrate a variety of subjects including the concept of environmental education in the shade themes and interesting for students. The effectiveness of the learning process is strongly influenced by the methods and media that are used, all of which are interrelated, where certain election will affect the type of media that will be used.

According Latuheru 1988 and Sadiman 2008, that the learning media is the role of bearer technologies (information) which can be used for learning purposes. Instructional media have various forms, namely in the form of audio, visual and audiovisual. Video as a form of audio-visual media is packaged with a abreast film editing technology. Many advantages of audio-visual media if used as a medium of learning. The first excellence is interactive in the sense of having the ability to accommodate a user response.The second advantage, to be independent in the sense of giving the ease and completeness of the content such that the user can use without the guidance of a teacher/other people. The use of technology in the development of instructional media is one form of response to the development of technology that is growing increasingly rapidly. Through the medium of learningbased-technology is expected to optimize the learning process and maximize the achievement of learning objectives.

Motivating behavior especially motoric kindergarten for the environment.

Based on field tests of the Environmental Education Learning model based EDS-AV obtained from Table 2 above that looks percentage of children in the excitement of behavior viewed video based on responses by 67.20% higher when compared with

children who just did not say anything that is by 32.80 %. The analysis showed that the increased motivation of behavior, especially motoric kindergarten for the environment is very high. Based on observations obtained 67.20% higher. Increasing student motivation motor behavior reported by observation due to the models developed in the form of Audio Visual in the form of video serving and visualize abstract concepts and easily understood by children age kindergarten.Use of Audio Visual also can enhance the learning experience. For students, this research provides a lot of benefits in developing competence in the affective, cognitive and psychomotor. Through the video based on environmental education gives them the opportunity to learn not only related to creative content but also instills the importance of preserving the environment and familiarize students with the technology. Student experience in the use of the video based on environmental education experience to students about the values contained in the educational environment and operate media-based technology.

Implementation of Video EDS-AV based on environmental education implemented using learning approaches such innovative contextual approach and constructivist recommended that allows students to learn to understand and solve problems through

active involvement in the activities ask questions, discuss, and perform a variety of exercises and experimental well inside and outside the classroom. Learning activities like these are thought to provide the basics in the students ability to understand the issues related to the environment. Through this model, students also had the opportunity to gain knowledge and information as a whole and to occur naturally.Thus, students will be accustomed to think comprehensively taking into account various related matters, so as to resolve the problems without delay, especially on issues related to the environment. Through the application of Video EDS-AV based on environmental education, enabling growth and development of a sense of caring and high responsibility towards environmental issues ranging from small things pertaining to himself and it will affect the others. In addition, through the implementation of Video EDS-AV based on environmental education can be used to assist the learning independently so as to cultivate an attitude of responsibility on students.

Conclusion

Learning model proposed design is a comprehensive accumulation of various learning models that theoretically support the learning environment in general, so this model is called EDS-AV. Based on field tests on this model shows that the behavior of the attractiveness/child satisfaction in seeing the video is based on responses is higher when compared with children who just did not say anything. The analysis showed that the increased the attractiveness of kindergarten students on the environment is higher.Based on observations obtained improvement in traction is reported that due to the observation of the model developed in the form of Audio Visual in the form of video serving and visualize abstract concepts and easily understood by children age

kindergarten. Use of Audio Visual also can enhance the learning experience. The analysis showed that the increased motivation of behavior, especially motoric kindergarten for the environment is very high.

References

[1] Arsyad, A., 2013. *Media Pembelajaran,* Jakarta : PT. RajaGrafindo Persada.

[2] Aunurrahman. 2009. *Belajar dan Pembelajaran*. Bandung: Alfabeta

[3] Davis, J.M., 2008. A Case for Participatory, Whole-of- Settings Approaches. *Artikel,* Paris : UNESCO.

[4] Didonet, V., 2008. Early Chilhood Education for a sustainable Society, *Artikel,* Paris : UNESCO.

[5] Hariyadi, Sugeng, dkk. 2003. *Psikologi Perkembangan*. Semarang: UPT MKDK UNNES.

[6] Hofstetter, Fred T. 2001. *Multimedia Literacy*. Third Edition. New York : McGraw-Hill International Edition.

[7] Kozma, R.B. 1991, *Learning with Media*, Review of educational Research.

[8] Latuheru, Jhon D. 1988. *Media Pembelajaran dalam Proses Belajar Mengajar Masa Kini*.Jakarta : Depdikbud DIKTI P2LPTK

[9] McCormick P. 1996. *Patty McCormick's Pieces of an American Quilt: Quilts,Patterns, Photos and Behind the Scenes Stories from the Movie,* C & TPublishing.

[10] Robin, Linda. 2001, *Menguasai Pembuatan animasi dengan Macromedia Flash*. Jakarta: Elek Media Komputindo. Jakarta.

[11] Rosch. 1996. *Easy Way To Understand The Multimedia*. Bostom: Allyn and Bacom.

[12] Sadiman, dkk. 2008. *Media Pendidikan: Pengertian, Pengembangan, dan Pemanfaatannya*. Jakarta: Raja Grafindo Persada

[13] Suyanto, M., 2003. *Multimedia Alat untuk Meningkatkan Kebutuhan Bersaing*, Yogyakarta : Andi Offset.

[14] Turban. 2002. *Aplikasi Multimedia Interaktif.* Yogyakarta : Paradigma.