

# The Developing of Interactive Learning Media in Improving The Learning Creativity of 4-6 Year-Old Playgroup Students in PAUD Kenanga Raya Medan

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**Abstract**—Based on the previous observation on Kenanga Raya Paud (PG) students learning activity on ‘animal’, both teachers and students stated that they are unfamiliar and have not applied interactive learning media, whereas, in reality, teachers nowadays are in great needs of interactive learning media for they have adequate computer facilities. The product trial was conducted in several stages: (1) Validation by learning design expert (2) Validation by subject material expert on ‘animal’, (3) Validation by Learning media expert, (4) Analyzing the validation’s outcome of the three experts, (5) Revision 1, (6) Individual evaluation, (7) Analyzing the outcome of the individual evaluation, (8) Revision II, (9) Small group evaluation, (10) Analyzing the outcome of the small group evaluation, (11) revision III, (12) On-field experiment, (13) Analyzing the on-field experiment, (14) Revision IV, (15) Final product. The result of the validator’s research shows that the appropriateness is 91.4% according to media expert, 90.6% from material expert and 87.9% from learning design expert. The individual student’s learning creativity resulted in 82.8% (Very Good) and 90.6% (Very Good) on small group, whereas, the on-field experiment (large group) is 94.0% (Very Good). The Normality test result is  $L_{count} 0.10 < L 0.140$  on the significant stage of 5 % which means the students whose learning process involving the use of power-point learning media shows normal distribution concerning the students learning creativity result. Meanwhile, the homogeneity test is resulted in  $F_{table count} 0.41 < F 1.69$  within 5% significant range which means the result on the students creativity having applied interactive learning media on ‘animal’ topic and those applying the power-point interactive learning media on ‘animal’ topic is homogenous. The Hypothesis testing using t test is resulted in  $t_{count} 2.01 > t 1.69$  which means there is a significant difference and it also means that the 4-6 year-old student’s learning activity taught by using interactive learning media on ‘animal’ topic and the average results of those using power-point learning media is acceptable and trustworthy. Referring to the research outcome, it is concluded that the developing product is appropriate and effective to be applied as the learning media on teaching ‘animal’ for Playgroup students.

**Keywords**— *Interactive learning media; creative*

## I. INTRODUCTION

PAUD (Playgroup) is an effective age for developing various children’s potential. One of the early age potential worth developed is creativity. Creativity is one of the child’s potential that needs to be developed since early age. Each child owns creative talent seeing from education perspective. Children’s creative talent can be developed, therefore, it needs to be nurtured since early age. If such creative talents are not nurtured, those talents shall be undeveloped and even become unrealized hidden talents. Through the learning process with fun activities for children, such as, it is expected to stimulate and foster children’s creativity in accordance with their potential for their self-development since early age.

This is in line with what was put forward by Mulyasa (2005: 164) that the learning process is essentially meant to develop the activities and creativity of students, through various interactions and learning experiences. Munandar (2002: 33); creativity is the ability of making new combinations based on data, information or elements existed. Creativity is also defined as an ability based on data or information which finds numbers of possible answers to a problem, of which, the approach is on the quantity and diversity of answers. According to Jawwad (Ministry of Education and Culture, 2011: 28) creativity is the ability to think of achieving new and varied outcomes and allows it to be applied, both in the fields of science, sports, literature, and other abundant fields of life. Lawrence (Suratno, 2003: 24) states that creativity is an innovative, effective and understandable human ideas or thought, therefore, a child’s new ideas is a form of individual creativity. Yuliani (2005: 134) believes that the creativity shown by children is a form of original creativity in which the frequency of its appearance seems uncontrollable. Adi Supriyenti (2013: 16-17) that early childhood creativity is a natural creativity from birth and is the

ability to produce thoughts which are original, unusual, and very flexible in responding and developing thoughts and activities. Based on the theories above, an early child's natural creativity is seen through his great curiosity with genuine, unusual and very flexible thoughts which require controls from the teacher to direct the development of his/her creativity. Based on the identified problems, this research is limited into analyzing:

- Student's creativity on drawing during the drawing lesson with the theme 'animal' showing the student's low creativity in appreciating the idea into drawing.
- The available and frequently used in learning media in PAUD (PG) PAUD Kenanga Raya are drawing book, APE Block and fairytale story telling which is one-way learning.
- There are adequate facilities and infrastructure for PG learning such as computers and LCD but their use is not maximal.

Utami Munandar (1992: 51) states that the indicator of a successful research is the increasing of child's creativity through drawing activity marked by the child's capability of showing fluency, flexibility, originality and elaboration. The success of this study if 75% of the total children studied scores with high creativity criteria.

Forcier (2008), states that the use of computer as learning media assists the student in learning, teachers in teaching and administrators in managing the learning process efficiently and effectively which made computers seen as a productive media equipment. Applying interactive media into the computer requires an application named Flash, according to (Wahana Komputer, 2012 : 2) *Adobe Flash CS6* is the latest version of the previous version *adobe flash CS5*. This program has numerous functions such as creating animation object, making presentation, commercial animation, game, web-page animation support and it may also use make animation movie.

The research problem is 'Is the developing of interactive learning media on 'animal' theme for 4-6 year-old PG students at PAUD Kenanga Raya appropriate and effective to be used as a learning media?' The aim of the study is to develop Interactive Learning Media in improving student's learning creativity to be appropriate and effective.

## II. METHOD

The study takes place in PAUD Kenanga Raya Medan. This research consists of two learning design experts, two material experts, two software experts, and the product users which are students of PAUD Kenanga Raya mentored by three teachers. Three students are participated for individual test, nine students for small-group test and forty student for large group test. This research applies the research procedure of Borg & Call's research and development model combines with ASSURE learning model. The development procedure

that will be taken to produce e-learning of learning media products is divided into 6 stages, which are : (1) conducting preliminary research; (2) making software design; (3) collecting material; (4) making and producing e-learning of learning media ; (5) reviewing or on-field testing with the purpose of product evaluation and revision, the formative evaluation is continuously conducted during the developing process, beginning from the analysis stage, design, product as well as implementation until the result achieved in accordance to the targeted aim; and (6) product effectiveness testing. The research instrument are (1) questioners for material experts, (2) questioners for learning design experts, and (3) questioners for media experts (software), (4) questioners observing assessment of learning creativity for teachers to student. The research analysis is quantitative research technique. Prior to the hypothesis testing is the requirement testing which are normality testing and homogeneity testing. Normality testing is carried out to acknowledge if the variable score of the object studied comes from the normal distributed population by using liliefors testing, whereas, for the testing of data homogeneity, the technique used is two variables similarity testing with Fisher testing design. To see the appropriateness of the interactive learning design for the purpose of improving PG students learning creativity, the hypothesis testing using t testing is conducted.

## III. OUTCOMES AND DISCUSSION

The research outcomes is in accordance to the research stages and developing starting from collecting information as the researcher's guideline to do the requirement analysis on learning activities and to make the learning media concept by recognizing the Competency Standard and Basic Competency Standard for the achieving one learning material on 'animal'. The second stage is planning stage which consists of determining the aim of making the interactive learning media on 'animal' theme for 4-6 year-old PG students. The third stage is arrangement which covers making story board, material design and instrument overview. The fourth stage is developing product draft consists of making animation, video and pictures, and next are making media and writing the subject content in the learning media that will be used.

Referring to the requirement analysis' questioners result which spread to teachers and students, it can be concluded that 100 % of teachers and students claim that they are not familiar to the interactive learning media of 'animal' theme for 4-6 year-old PG students and 0% teachers and students claim that they are familiar with the media. 100% teachers and students state that they do not use interactive learning media on 'animal' theme on 4-6 year-old PG students and 0% deny this. Besides that, 100% teachers and students admit that they require interactive learning media on 'animal' theme for 4-6 year-old PG students and 0% say otherwise. Next stage is designing and developing the interactive learning media on 'animal' theme for 4-6 year-old PG students using Adobe Flash. The initial product of the developed interactive learning

media for 4-6 yearold PG students is in learning FILE. After the initial product arranged, the next stage is product validation by series of trials and conducted revision, therefore, the interactive learning media for 4-6 year-old PG students of 'animal' theme considered valid. The trial has gone through several steps of product trial which are: (1) validation by learning design experts, (2) validation by material experts on 'animal' theme, (3) validation by learning media experts, (4) analyzing the validation outcomes of material experts, learning design experts and learning media experts, (5) revision I, (6) individual evaluation, (7) individual evaluation analysis, (8) revision II, (9) small group evaluation, (10) analysis on small group evaluation, (11) revision III, (12) on-field trial (testing), (13) analysis on on-field trial outcome, (14) revision IV, (15) final product. Having had the research outcomes, the validator states that in the appropriateness category, the rate shows 91.4% from media experts, 90.6% from material experts and 87.9% from material design experts. On the evaluation stage of the PG students learning creativity outcomes, the number shows 81.7% on individual trial, 91.0% on small group trial and 89.2% on large group. The normality testing outcome is  $L_{count} 0.10 < L 0.140$  on the significant rate of 5% which means the result of the students learning creativity using power-point learning media shows normal distribution. Whereas the homogeneity testing result is  $F_{count} 0.41 < F 1.69$  on the significant rate of 5% which means the result of student learning creativity using interactive learning media of 'animal' theme and the result of learning creativity of students using power-point learning media of 'animal' theme is homogenous. The hypothesis testing result value using t test is  $t_{table} 2.01 > t 1.69$  which means there is significant difference, which also means that between the result of students learning creativity using interactive learning media of 'animal' theme for 4-6 year-old PG students and the average result of students learning creativity using power-point learning media of 'animal' theme is acceptable and trustworthy. Based on the result, the conclusion drawn is the product developed is appropriate and effective to be used as learning media with the theme of 'animal' for PG students.

#### IV. CONCLUSION

In reference to the research outcome, there some conclusions drawn: (1) the interactive learning media developed in this research is appropriate to be used as learning media of 'animal' theme for PG students. This is due to the reason that interactive learning media can improve the early age student creativity to learn independently in comprehending the learning material on 'animal' theme. (2) The interactive learning media used is effective in improving PG students learning creativity of 'animal' theme. The result is seen from the student's achievement in the class using higher interactive learning model compare to the learning achievement using powerpoint learning model.

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