

# Utilization of ICT Based on Learning Media to Improve Creativity and Early Children's Age

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**Abstract**---Basically, each child has different creativity and talent. children's creativity and talent emerge through; starting from birth, studying, and education. The elements contained in creativity and giftedness include; knowledge, imagination and evaluation. Media has various roles in learning activities. To improve learning outcomes by increasing children's creativity and talent, it is necessary to use media in learning. The article was written with the aim of exchanging ideas and at the same time contributing ideas to the world of early childhood education, with the hope that it will be an enlightenment in educating children and developing creativity and giftedness of early childhood through the use of learning media.

**Keywords:** *use of ICT learning media, creativity and giftedness, early childhood*

## I. INTRODUCTION

Creativity is very important to develop from an early age. Creativity that allows humans to improve their quality of life (Munandar, 1999). In this era of development, it cannot be denied that the prosperity and glory of the people and the state depend on creative contributions, in the form of new ideas, new inventions, and new technologies from the members of their communities. To achieve this, creative attitudes and behaviors need to be fostered early on, so that students will not only become consumers of new knowledge and job seekers, but be able to create entrepreneurs.

Talent is an interaction between general and / or specific abilities, a high level of responsibility for tasks and a high level of creativity. RI Law Number 20 of 2003 concerning the Indonesian Education System, 2003, that gifted children are those who by psychologists and / or teachers are identified as students who have achieved satisfactory achievements, and have general intellectual abilities that function at an intelligent, creative level. adequate, and attachment to good work.

Utilization of ICT in teaching and learning activities turns out that there are still many schools that do not optimize and only prioritize cognitive aspects, and do not look at the issue of student motivation. The factor of lack of student motivation to learn is due to the teacher's lack of creativity in

teaching. In addition, the lack of learning media is also one of the factors that makes student motivation low. Considering the importance of the media in facilitating students to carry out their learning activities, the use of media in learning activities must be adjusted to the stated learning objectives. The presence of media in the learning process really helps students better understand the subject matter being studied. But in the field there are still many teachers who do not understand the concept of media, media selection criteria, procedures and processes for media selection, and utilize the media in an integrated and appropriate manner in learning activities. Even though teachers are required to be able to understand and utilize media in learning, so that the desired learning objectives can be more easily achieved. In the end, the use of media will support the effectiveness and efficiency and attractiveness of organizing learning activities.

Its position in the context of learning, the media as an integral part of learning, this component needs to get the attention of teachers. The importance of the media in facilitating students, the presentation is adjusted to the learning objectives set. The presence of media in the learning process really helps students better understand what is learned. Therefore, the selection and use of media must be absolutely right so that the desired goals can be achieved easily. Finally, the use and use of media support effectiveness, efficiency, and attractiveness in learning.

The lack of teacher sensitivity and the dexterity of educational institutions with the presence of ICT innovations in the world of learning, appears in planning carefully when preparing plans for implementing learning. With a lack of awareness of the importance of the potential and role of the media in the learning process, resulting in less than optimal learning outcomes.

The teacher's knowledge and ability to choose media that is in line with the learning objectives to be achieved is one of the important considerations in the learning process. However, there are still teachers who are not careful and precise in choosing media that is suitable with the learning content for the teaching and learning activities they support. In

fact, there is also the learning media chosen which is completely irrelevant.

Based on the problems above, it is important that there are effective solutions in efforts to increase creativity and giftedness of young children. Successful learning is accompanied by a process of teaching and learning activities that are fun and optimal. For this reason, the researcher raised the title of research on the use of tick-based learning media to increase creativity and giftedness of early childhood.

## II. THEORY STUDY

### 2.1 Understanding of Early Childhood Creativity and Gift

Creativity is the result of the process of interaction between individuals and their environment. Early childhood creativity is corrupted by the uniqueness of ideas and the growth of imagination and fantasy. Early childhood creativity is also characterized by the ability to form a mental imagination, the concept of various things that are not present before it. Early childhood also has fantasy, imagination to form concepts that are similar to the real world.

Creativity is a demand of education and life that is very important at this time. Creativity will produce various innovations and new developments in life. Creative individuals and organizations will always be needed by their environment because they can be able to meet the needs of a changing environment and be able to survive in a dynamic and tight global competition. Fakhriyani (2016) explained that creativity is very important to be developed, because creativity has a big influence and is enough to contribute to one's life, for example in academic achievement. Creativity is an ability that is not brought from birth, but can be learned and developed, so that this ability should be developed early.

According to Judarwanto (2015), giftedness is an intellectual ability or intelligence including intellectual abilities of music, mathematics, physics, chemistry, electronics, information technology, language, sports and various levels of intelligence in various other fields whose abilities are far above the average of his age. According to Cortés et al. (2002), giftedness is an extraordinary natural ability, obtained from a combination of traits that include intellectual capacity, strong will, and performance. According to Hardianto (2005), giftedness is an interaction between general and / or specific abilities, a high level of responsibility for tasks and a high level of creativity. In the process of teaching and learning environment needs to be designed or designed to be an educational medium to help learning so that the learning process runs effectively. A learning environment that is designed with fun will be able to make learning take place effectively.

According to Clark (2003), giftedness is a special and extraordinary universal characteristic, which is carried from birth and is the result of interaction of environmental influences. Giftedness is also determined by the needs and cultural inclinations where a talented person lives.

Ulfah (2014) suggests that children's intellectual development occurs very rapidly in the early years of a child's life. Adult intelligence already occurs when a child is 4 years old, the next 30% increase occurs at the age of 8 years and the remaining 20% in the middle or end of the second decade. This means that the development that occurs at the age of 0-4 years is as great as the development that occurs at the age of 4 years to 15-20 years. Development that occurs at age 4-8 years is greater than development that occurs at age 8 years to 15-20 years. In this connection, Bloom said that the first 4 years are a very sensitive time period for the rich and poor environment that will be stimulated.

### 2.2 Utilization of Learning Media for Early Childhood

Utilization is one of the regions or domains in Learning Technology. Utilization is the activity of using processes and resources for learning (AECT, 1994). They, the teachers or learners, who are involved in these utilization activities have the responsibility to: 1) adjust between students (students) with specific materials and activities, 2) prepare students to be able to interact with selected materials, 3) provide guidance during activities, provide an assessment of the learning outcomes achieved, and 4) incorporate in organizational procedures that are sustainable.

The use of media in learning activities is the systematic use of resources for learning. The process of utilizing instructional media is a decision taken by learners based on the design or learning design. Therefore, the principle of utilization needs to be linked to the characteristics or special characteristics of students. These characteristics relate to the visual style, auditorial, and kinesthetic learners. There are students who prefer learning through visual assistance, there are also those who prefer to choose auditory assistance, and also some who want to go through activities or actions.

When designing learning, the teacher lists the media or technology that will be used in teaching. There is a variety of media available in the field or on the market. The teacher does not need to be busy making media that will be used, but rather simply choose the available media. Learning media that can be utilized in the classroom can be in the form of media ranging from the simplest and just use what is in our environment to the most sophisticated (hightech). The media we use in class can be in the form of media that only needs to be utilized and available on the market. For example, books, maps, pictures, frames, and so on. In addition, the media in

the form of the environment around schools, homes, markets, museums, temples and so on.

In addition, the media are also specifically designed for the benefit of learning. The teacher designs their own media or technology that will be used in teaching. The advantages of media that are designed by the teacher include: 1) adjusted to the level or characteristics of students, 2) in accordance with the objectives to be achieved, 3) in accordance with the material presented, 4) in accordance with existing environmental conditions, and so on. This specially designed media is carried out by the learner in accordance with the learning objectives to be achieved.

The use of media in learning activities is the systematic use of resources for learning. The process of utilizing instructional media is a decision taken by learners based on design or lesson plans. Therefore, the principle of using instructional media needs to be linked to the characteristics or special characteristics of students. Mulyani Sumantri (2001) underlines the principles of selecting appropriate learning media, namely: (1) media must be based on learning objectives and learning material to be delivered, (2) media must be adjusted to the level of student development, (3) media must adapted to the ability of teachers, both from the procurement and use, and (4) the media must be adapted to the situation and conditions or at the right time, place and situation. In this regard, Azhar Arsyad (2006) suggests the principles of using instructional media, which include: (1) the learning process becomes fun, (2) the learning process becomes more interactive, and (3) feedback is available.

So, the teacher should understand the general principles in choosing and using learning media, which include: (1) there is no one type of media, procedure, and experience that is best for all learning activities, (2) the use of the media must be in accordance with specific learning objectives, (3) it must be thoroughly known whether the use of media is already in accordance with the specific objectives of the program, (4) it must be considered whether there is a match between the use of the media with the chosen learning method, (5) do not depend on the selection and use of certain media alone, (6) it must be realized that even the best media if not utilized properly will have an adverse impact or that the media is used in an unfavorable environment, (7) it must be realized that the experiences, likes, interests and abilities of individuals and learning styles may influence the results of media use, and (8) it must also be realized We realize that the source learning resources and experiences are not things related to good or bad but these learning resources and experiences are related to concrete or abstract things.

### III. RESEARCH METHOD

The research approach used is a qualitative approach, because the contents of this study observe humans in their environment, how they interact, try and how it interprets the world of work in naturalistic conditions, while the researcher as the research instrument itself. While the research method used is descriptive method. Understanding the descriptive method according to Nazir (2000: 63) is "A method in examining the status of humans, an object, a set of conditions, a system of thought or a class of events in the present."

The author's understanding of the Nazarite is that descriptive research is carried out by examining conditions that can be seen clearly or empirical research, carried out at the time of the study, supported by observations that are direct, describing the actual situation of the object under study to obtain information that can be justified, which is supported by theory in the discussion.

Based on the description, the writer in this study uses a descriptive method, this is based on the object of research that requires a solution at the present time. As stated by Surakhmad (1983: 36) that research that discusses some possibilities to solve actual problems by collecting data, testing and analyzing.

Data collection techniques needed in this study are as follows: 1). Observation is a tool used to collect data by directly observing research objects. 2). Interviews were conducted by holding a question and answer session directly with the school principal and PAUD tutors. 3). Literature study is a theoretical foundation or understanding of the problem as a starting point of research and also to enrich the results of research. 4). Interview guidelines are intended to obtain data theoretically by studying documents that are related to the problem to be examined. In addition, it is also to obtain complementary data for this research. 5). Documentation technique is looking for data about things or variables, transcripts, books, newspapers, magazines.

The research sample consisted of twenty PAUD students. Sample selection is based on real conditions in the field. The author conducted in-depth interviews to obtain data by observing, and interviewing data sources. In research, instruments for data collection in the field are needed. For qualitative research, the research instrument or tool is the researcher himself. The procedures carried out by researchers include; planner, executor of data collection, analyst, interpreter of data, and in the end, he reports on the results of his research. The data analysis technique that will be used in this study is descriptive, that is by describing the whole data and information qualitatively.

#### IV. DISCUSSION

##### **4.1 Factors that can increase the creativity and giftedness of Early Childhood**

Factors that can determine the success of a learning to develop early childhood creativity, the authors found several problems in the field such as: 1) Community needs for early childhood education (PAUD) have not been fulfilled because not all villages in the district of Cilamaya Kulon have educational institutions that have organizing early childhood education (PAUD). 2) The need for early childhood education institutions (PAUD) is also not matched by the quality and quantity of PAUD teachers. Many early childhood education institutions (PAUD) in the culon cilamaya the teaching staff do not match the educational qualifications that should be, and not a few educational institutions also the number of teaching staff is not balanced with the number of students, so the learning process is not optimal. 3) The still low level of innovative learning processes in developing early childhood creativity. 4) There has been no impact from the application of innovative learning strategies in increasing the creativity of young children. 5) The use of learning methods in creating cubits products that are implemented in the PAUD program is inadequate, therefore there is a need for special training for PAUD tutors in developing children's creativity through creating products

Every child basically has different intelligence. The results showed that human intelligence does not only include intellectual intelligence. Children's intelligence may be included in Multiple Intelligence. Take a look, certainly at least one of the 9 types of intelligence, as follows; 1). Verbal Linguistics. The intelligence that is usually used by educational institutions to measure a child's IQ, usually revolves around the ability to use words effectively. 2). Numeric. Intelligence related to numbers or mathematics, including the ability to use logic. 3). Spatial. Image intelligence and visualization related to creativity such as art and design. 4). Kinesthetic. Intelligence related to physical abilities such as sports and dancers. This includes people who are quick to learn by seeing, touching and doing things directly. 5). Naturalist. Intelligence possessed by people who are able to relate to nature such as plants and animals. For example animal trainers. 6). Interpersonal. Intelligence where he is able to understand and communicate easily with others. 7). Intrapersonal. The ability to know the strengths and weaknesses including controlling and regulating himself. This intelligence is also often referred to as emotional intelligence or emotional intelligence (EQ). 8). Musical. The ability to sing a song, be sensitive to the rhythm or just enjoy music. 9). Moral. The ability to have values and norms that exist in society and apply them well in everyday life.

High children's creativity encourages children

to learn and work more so that one day they can create new things beyond our expectations. Early childhood creativity is characterized by having freedom and flexibility in activities. Early childhood creativity is also characterized by its imagination in various ways, and has a great sense of curiosity. Games are fun activities that are carried out for the benefit of the activity itself. Activities that can be done to develop children's creativity include music, role playing, watching puppet shows, storytelling and others.

Gifted children are those who have the following potential: ability or high intelligence, adequate creativity, which is able to find, create new things that are useful, able to apply, and able to solve problems, and able to carry out or complete tasks and have high motivation and ability see the plan through various conclusions that he made.

Basically every person has a tendency to be talented in creativity and have the ability to express themselves creatively, even though each of these people in different fields and levels according to their potential. As stated by Devito in Supriadi (2001: 16), that creativity is an ability possessed by everyone with different levels, everyone is born with creative potential, and this potential can be developed and nurtured.

So it is clear, that actually there is no one who does not have a creative talent, but if it is not fostered or developed, this talent will not develop optimally. In terms of education, this creative talent can be improved, so it needs to be nurtured from an early age, what is needed now is how to increase creativity.

##### **4.2 The use of media to increase creativity and giftedness for Early Childhood**

In general, education is always associated with the teaching and learning process, which includes abilities; cognitive (knowledge), affective (values / norms), and psychomotor (skills) of students. In its practical form, educational outcomes should be able to give birth to people who are able to apply the knowledge learned and utilize the skills possessed in real life. In the context of early childhood, education needs to be seen as a process that continues to develop along with the development of the individual in the child who is learning what is in the surrounding environment with the knowledge or skills possessed, he will apply it in the context of real life (everyday ) or their future lives (Department of Education and Science, 1990).

Early childhood education in the era of globalization and the information that should be done is to shape the next generation without leaving the EQ (aspects of children's values / emotions). In the current information age, human development and generation development need to emphasize responsibility for the progress of the times. This is because children are an important asset for a nation.

They are the next generation who will be the heirs of the nation's future.

As parents, we need to realize if the child is emotionally intelligent enough, then the possibility of him to live happily and successfully will continue to increase. We want to share several ways to develop the emotional intelligence of our beloved children. Children will certainly imitate everything that their parents do. They imitate the way we deal with and solve problems in life. Teach our children to be responsible from an early age. Children who are accustomed to carrying out household tasks early on will tend to be happier and more successful as adults. This is because he has been accustomed to being aware of his very important existence and role in the family. And don't let our children be raised and regulated by the media. Let him play freely, and don't let him spend more time in front of the television screen or computer. Instead of playing freely outside with friends - friends, he will develop his skills, solve problems and creativity well.

Education in schools is something that involves learning programs both inside and outside the classroom, the process of teaching and learning activities, equipment, design, schedule of lessons, material learned and also the assessment process. However, the curriculum when associated with early childhood education is not only based on something that is associated with learning experiences at school, but the children's education curriculum includes all experiences in daily life as well as time at school / in the care, at home or outside the house. In more detail the authors argue that, early childhood education curriculum (5 years) at least includes problems, as follows: (1) provide opportunities for children to develop, (2) all activities, attitudes and behavior of children receive educational treatment / contains elements of learning, (3) provides supervision of the child's social environment, (4) the role of parents for discipline, educating, directing and participating in what is done by the child / accompanying the child's activities, (5) the involvement of the child's parents in the problem faced by children, (6) curriculum that can help foster children's learning interest, (7) educators are able to provide learning experiences that can motivate and help develop the potential that exists in children, and (8) curriculum that contains attitudes, values and character character shown by teachers, adults, families and surrounding communities.

In educating young children, it is better to prioritize children's potential and compassion. In order for education to be implemented well, an approach and concept of children's education is needed. The concept of education for early childhood is based on an integrative approach, which includes: (1) fostering character / character and forming the character / character of children, (2) playing is the main task of children, (3) children are unique individuals and differ between one each

other, (4) motivation / stimulation through active participation in every activity, (5) giving freedom and space for children, to get to know more about what they want and are able to do, (6) maintaining and maintaining spiritual balance, physiology, psychology and child development, (7) maintaining conditions conducive, cheerful, healthy and full of enthusiasm, (8) making a healthy and clean diet, and (9) fostering a respectful attitude towards diversity and tolerance.

All parents hope in their children towards the development of noble character and high personality and be able to deal with the current of globalization in all aspects of life. All parents want to have a generation that is thinking steadily, critically and creatively in every aspect of life. For this reason, parents must be aware of the fundamental character of child educators, that is, they cannot be separated from play patterns, meaning to educate children through learning as a curriculum approach that is most relevant to children, because educating children refers to the characteristics of children, which is like playing.

The main aspects in educating children that according to the writer need attention, namely; 1) Role model, 2) Observation and imitation, 3) habits, 4) Reward and punishment, and 5) advice. Finally, an emphasis is needed on the importance of parent involvement and educators need to be a role model or a good example, because the attitude or behavior shown by parents is actually the curriculum in a child's education. This is an example of applying techniques to educate young children based on integrative curriculum in assessing and solving problems dealing with problems experienced in a child's life. The integrative approach also provides an understanding of the continuity of theory and practice, the proof of beliefs and deeds as well as the combination of beliefs and practices that need to be proven.

## V. CONCLUSIONS AND SUGGESTIONS

Creativity is the ability to create something new that is different from before, either in the form of ideas or real work by combining elements that already exist. The characteristics of creativity are (3) types namely Fluency, Flexibility of Novelty. While giftedness is an interaction between general and / or specific abilities, a high level of responsibility for tasks and a high level of creativity. Characteristics of giftedness are intellectual / learning, creativity, motivation, alert and careful observation, language, motor skills, reading, memory, curiosity and tenacity, passion, friendship. Relationship.

This learning media has a huge impact on the organizational structure of educational institutions both at the macro and micro level. This impact can be felt in three ways, namely: 1) changing decision making, 2) creating new learning patterns, and 3)

enabling new alternative forms of educational institutions. The conception of the use of media in learning activities is no longer just a visual aid for teachers but rather a carrier of information / learning messages needed by students. Thus the educational interaction patterns will vary more to include the following 5 patterns: 1). The source is in the form of people (as is most common in our schools today), 2). Sources in the form of people who are assisted by / with other sources. 3). Sources in the form of people together with other sources based on a division of responsibilities. 4). Other sources without sources are people. 5). The combination of the four patterns in the form of a system.

Creativity and giftedness of the aged children are expected to be done with several approaches that are appropriate to the characteristics of the child. The approach referred to, among others; personality namely; take action approaches to maximize the child's self potential, namely processes; by giving a touch of attention and education, encouragement namely; do motivation and support / facilitation to increase children's talent and creativity, and the product / results means; make consistent plans and actions to shape the child according to the creativity and talent of the child.

Utilization of learning media in classroom learning activities, teachers should equip their academic abilities, namely the ability to master the use of ICT in learning. In addition, the school / institution manager has a commitment to support ICT infrastructure. Utilization of instructional media in teaching and learning activities correctly, it will produce quality learning outcomes and learning will be more fun, and effective.

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