The Influence of Engklek (Computer-based games) on The Ability of Recognizing The Emotion’s Expression of Children In Kindergarten

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Abstract

This research aims to examine the influence of Computer-based game of engklek on the ability to recognize the emotions of children in the TK Tirioi II Bolaang Mongondow. The research method used in this research is experimental with Pre-experimental design (one group pre-test post-test design) by having a performance test as the technique of data collection. Research findings confirm that there is the influence of computer-based game of engklek to the ability to recognize the emotion of children. Therefore, it is recommended that this traditional computer-based game activity can be one of the learning methods that are especially intense in terms of recognizing emotions in children, so the ability to recognize the child's emotions evolves over time. Adapted to the theme of this activity can be used as a variation of opening and core activities in the class.

Keywords: computer based, engklek, kindergarten, the abillity of recognizing, the emotion’s expressions

1 INTRODUCTION

Based on existing laws in Indonesia, early childhood is a child aged 0 to 6 years, whereas according to NAEYC (National Association for the Education of Young Children) early childhood is a child aged 0 to 8 years, wherein the range the age of the child's brain develops faster so that at that age is often called the golden age. Early age children is a human who has a variety of uniqueness. They have a variety of capabilities that require stimulation or stimulation appropriate for the ability to develop in accordance with the level of achievement of child development (Li, 2016: 3-5).

Children's ability can be developed as early as possible. Early Childhood Education in the Law of the Republic of Indonesia Number 20 of 2003 on National Education System in Article 1 paragraph 14 which states "Early Childhood Education is education that is intended for children from birth to age 6 years". Early Childhood Education is essentially an education that is organized with the aim of facilitating the growth and development of children as a whole or emphasizes the development of all aspects of personality in the child.

Early Childhood Education provides opportunities for children to grow and develop. Therefore, every institution of Early Childhood Education needs to facilitate various activities that can develop various intelligence in children, one of them the development of ability to recognize emotions. Emotion can mean a state of psychological as well as physiological reactions such as joy, sadness, novelty, love, and including anger. Simply, emotionally speaking means the feeling that surrounds a person at a time. There are feelings of pleasure, likes, hate, anger, sadness, joy, disappointment, fear, anxiety, and so on, which is very necessary to be developed as early as possible so that children can position their emotions in accordance with the circumstances (Understanding Emotional Intelligence, www.free-management.e-books.com, 2014:24).

One way to introduce emotional expression to children is through play. The play is one approach to education for early childhood, the principle of early childhood education is to learn while playing and
playing while learning. Through fun play activities can stimulate aspects of development in children. Every child mostly fills his life by playing, therefore play is an activity that is done and always done by every child. Freud, states that play as a method of catharsis to overcome the emotional tensions experienced by a child. Therefore play has therapeutic benefits and for the development of the child's personality. Negative feelings (anger, anxiety, anxiety, fear) can be reduced through play activities, by playing will gain feelings of pleasure (Crain, 2007: 388).

Based on the results of preliminary observations conducted in kindergarten in Bolaang Mongondow District, 75% of students who have the ability to recognize emotions are still lacking. Children in kindergarten still need stimulation or stimulation in developing their emotional ability, wherein learning activities there are still many children who can not express what their children feel, such as when children feel sad, happy and angry. This is what makes children very need stimulation and appropriate stimulation so that children are able to express what the child feels through the form of emotional expression.

Engklek is one of the traditional games in Indonesia. Engklek is a game that can develop various aspects of children's intelligence. One ability that can develop is to recognize emotions. The child is able to express what the child feels and what the other person feels. With the activity of the game indirectly the children themselves who can control himself so that children can put themselves in every atmosphere that makes the child has the ability to recognize emotions in accordance with the level of achievement of child development. In this research, the game is designed using a windows program. So the teacher is easy to design the game without having to be a programmer. The game is guided by the teacher. Games can be played together with friends.

Playing is an active form of fun learning, providing information, developing the child's imagination by uniting the mind, body and spirit of the child to explore his world. Play has several characteristics (Hughes, 2003: 21) including: "self directed, self-selected, open ended, voluntary, enjoyable, flexible, motivating, individual or group". According to Piaget, Erikson, Smilansky and Wolfgang In Phelps "The play of children can be divided into the following four categories: 1) sensory motor play, 2) dramatic play, 3) construction play, 4) games with rules" (Phelps, 2012 : 12-13). In this research, teacher guide the children to learn how to play games with rules. According to the stage of cognitive development of pra-operational concrete, the rules used in the game are made very simple.

Based on research, playing as a medium of socialization, there are several forms of interaction between children when playing. Each child performs a different type of play (Parten in Tedjasaputra, 2001: 21-23). Some of these types are Unoccupied play, Solitary play, Onlooker play, parallel play, Associative play, and cooperative play.

The unoccupied play is your own type of play. The child does not seek contact with others and does so for no particular purpose, the child is interested in playing his hand or his limbs. Solitary play is usually seen during infancy (Infant). Baby playing alone totally does not pay attention to the surrounding. Children will move calmly and quickly. Onlooker Play can occur in many stages of development. Evidence of this play interaction when the child is near another group of children who are playing. Children often imitate play activities, although, in fact, the child does not want to participate in the group. This parallel play usually occurs in toddlers. Children play with other children with play activities and the same game tools but no interaction with each other. The associate play saw during pre-school age, children start playing and talking in role-playing situations. But it does not happen during play activities. There is no agreement on the role played by Cooperative play at the end of the pre-school age. Children are able to make rules and divide roles during role-play activities. Children make collective agreements on rules and goals when playing together.

The game is "Systems in which players engage in various ways towards a common goal or win state" (Daul, 2014: 1-4). The game is a system where players are bound in one goal of victory. In the game, there are several elements that accompany and is a unity in which players are bound in the rules. The game makes students gain experience, improve their skills, and also explore a content knowledge.

Another definition of the game is "The actions that the player is permitted to take addresses those challenges" (Adams, 2010: 11). The game is an activity where the players solve the challenge. Players must face the challenges that exist in the game and must solve them.

According to Saun and Zimmermen, the game is "a rule-based system with a variable and quantifiable outcome". The game is a rule-based system with variations and measurable results. Each result achieved has different values and consequences for
each of the game activities are optional and negotiable.

Thus the game is an activity consisting of various elements which are a unity in which players are bound in rules to gain experience, improve skills, and deepen knowledge.

There are three types of games (Daul, 2014: 4): traditional and story-based games, paper-based versus e-games, and skill taught by games. Traditional and story-based games are traditional games that have traditionally been played since ancient times and have the origin story of the game happen. For examples engklek, congklak, or jalangkung. Paper-based games are games performed on paper, in Indonesia such as A, B, C 5 dasar and X O X O games, E-games are electronic games using electronic devices such as computers or play stations. Skill taught by games is a game that improves the thinking ability of the player for example like Tetris.

The traditional game is one of the genres or folklore forms of child play, which is spoken orally, traditionally shaped, and inherited from generation to generation and has many variations. Because of the nature or characteristics of the traditional game is very old age, unknown origin. sometimes experiencing a change in name or form though essentially the same. (Dananjaja in Nadjamuddin, 2016: 77)

Traditional game is a result of the culture of society, which originates from a very old age, which has grown and lived up until now (Mulyani, 2016: 46), anyone can play it parents or young men, men or women, the rich or poor, commoners or nobles. Traditional game is not just an entertainment, refreshment of mind, or means of exercise. Moreover, traditional games have various competitive, pedagogical, magical, and religious backgrounds. Traditional games also make people become skilled, tenacious, and agile.

Engklek has another name namely Sundanese manda. Engklek is one of the famous traditional games in Indonesia, especially for rural communities. Engklek can be encountered in various regions in Indonesia, such as in Sumatra, Java, Bali, Kalimantan and Sulawesi. Engklek has different names in each region. Especially in Java, this game is called Engklek, and in general, this game is mostly played by women. In some places also called the name of the tablecloth, divided into tablecloths and mountain tablecloths. There is a suspicion that this game comes from "Zondag-Mandag" background on the story of the struggle of rice fields from the land of the windmills of the Netherlands, their version of Zondag mandag was defined as Sunday Monday, which has spread to the archipelago in the Dutch colonial era. But there is a historian who describes that the game of Engklek is not from the Netherlands, according to Dr. Smupuck Hur Gronje, (in Mulyani,2016: 112) Engklek is a game that comes from Hindustan. This game causes the Dutch colonial era against the background of the story of grabbing rice fields.

Engklek game is very popular by the children. The player is two to five people. This game provides an educational value in terms of building "home" it. Or can be interpreted as a person's struggle in reaching his territory. The contested area is not achieved by attacking each other while in the arena of the game, but there is a rule of his own game. And the rule is a deal of each player to get a foothold.

The game system is also simple, at first the players describe the plots of Engklek or house on the ground. Players are required to have “imat or gacuk”. The imat or gacuk is a fragment of tiles or ceramics that form lepes or can of thin stone whose surface is widened. Imat or gacuk widen is very useful so that it is not easy to run out of the plot line is described when thrown, if imat or gacuk round it will be very easy to roll out of a predetermined line. When the game starts, the imat or gacuk is thrown first into the plot that has been described, if the gacuk is thrown over the line of provision then the player who throws is considered lost once and must be replaced with the other player, and if the gacuk is right inside plot is described then the next provision of the player may continue the game, and the plot containing the imat or gacuk should not be stepped on but must be jumped one step and so on (Pupung, 2018: 52-53). A player with more chances of playing and not wrong in throwing his imat or gacuk means that he already has many areas that have been won, and he deserves to be a winner. This game is very exciting and fun because we are trained to learn to throw on target, if the gacuk or imat passing the line is not right in the box then he will not be a winner in the game.

In this research researchers modify the traditional game engklek using the program of microsoft windows power point. This program is usually used by the teacher just to display slide presentations. However, this time the researchers utilize the facility in the power point to modify the game design animation.
2. METHOD

This research was conducted in Kindergarten, Desa Tungoi II Kecamatan Lolayan, Kabupaten Bolaang Mongondow, North Sulawesi. It was done in academic year 2017/2018.

This research used experimental method. The design used in this research is one group pretest-posttest design. This study was conducted in one group only. In this group will be given the initial test or pre-test by using performance test, then given treatment as much as 8 times by using engklek (computer-based games). The number of research samples is 20 children. After that, given the last test or post-test. The research design as follows:

Table 1. one grup pretest-posttest design

<table>
<thead>
<tr>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>T</td>
<td>X2</td>
</tr>
</tbody>
</table>

X1 = Pre-test (before treatment) the ability to recognize the emotions of children before being treated

X2 = Post-test (after treatment) the ability to recognize the emotions of children after being treated

T = Engklek

3. RESULTS AND DISCUSSION

From the description of the data and hypothesis test, then obtained a result where from 8 items pretest tested on the sample obtained a total score of 327 with an average value of 16.05 wherein this pretest results have shown the ability to recognize the child's emotion is still low because of the degradation of the value of the number 1, 2, 3, and 4 new child's emotional recognition abilities are at number 2. Rating rubric 2 states that a child begins to choose a picture but with the help of a teacher. This means the child still needs stimulation in order to recognize and select images without the help of the teacher.

Table 2. Descriptive Statistics pretest per item

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Max</th>
<th>Min</th>
<th>Variance</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.75</td>
<td>2.75</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0.976</td>
<td>0.981</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2.75</td>
<td>2.75</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0.976</td>
<td>0.981</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>2.20</td>
<td>2.22</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0.314</td>
<td>0.560</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2.00</td>
<td>2.00</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0.232</td>
<td>0.483</td>
<td>2</td>
</tr>
</tbody>
</table>

(Source: SPSS version 16.0 for windows)

The following explanation from table 2:

a) In item 1 obtain the mean or average value is 2.75 and the median value is 2.75 with the value of mode 3 and the value of maximal 3 is the minimum value of 2. From the data on the item, 1 can be concluded that the degradation value in item 1 is located at number 3 which means the child can already select emoticon images provided without the help of the teacher.

b) In item 2 obtain the mean or average value is 2.75 and the median value is 2.75 with the value of mode 3 and the maximal value 3 is the minimum value of 2. From the data on item 2 can be concluded that the degradation value in item 2 is located at number 3 which means the child can already select emoticon images provided without the help of the teacher.

c) In item 3 obtain the mean or average value is 2.20 and the median value is 2.22 with the value of mode 2 and the value of maximal 3 is the minimum value 1. From the data on item 3 can be concluded that the degradation value in item 3 is located at number 2 which means the child can start selecting emoticon images provided with the teacher's rock.

d) In item 4 obtain the mean or average value is 2.00 and the median value is 2.00 with the
value of mode 2 and the maximal value 3 being the minimum value 1. From the data on item 4, it can be concluded that the degradation value in item 4 is located at number 2 which means the child can start selecting emoticon images provided with the teacher's rock.

e) In item 5 obtain the mean or average value is 1.90 and the median value is 1.88 with the value of mode 2 and the value of maximal 3 is the minimum value 1. From the data in item 5 can be concluded that the degradation value in item 5 is located at number 2 which means the child can start selecting emoticon images provided with the teacher's rock.

f) In item 6 obtain the mean or average value is 1.65 and the median value is 1.65 with the value of mode 2 and the value of maximal 2 is the minimum value 1. From the data on item 6 can be concluded that the degradation value in item 6 is located at number 2 which means the child can start selecting emoticon images provided with the teacher's rock.

g) In item 7 obtain the mean or average value is 1.25 and the median value is 1.25 with the value of mode 1 and maximal value 2 being the minimum value 1. From the data in item 7, it can be concluded that the degradation value in item 7 is located at the number 1 which means the child has not been able to choose emotional emoticons images provided even though the teacher has assisted.

h) In item 8 obtain the mean or average value of 1.55 and the median value is 1.55 with the value of mode 2 and the value of maximal 2 is the minimum value 1. From the data on the item, 8 can be concluded that the degradation value in item 8 is located at number 2 which means the child can start selecting emoticon images provided with the teacher's rock.

From the posttest result 8 items posttest tested on the sample obtained a total score of 552 with an average value of 27.60. The posttest results show that the ability to recognize the emotions of children increased because of the degradation of the value of the numbers 1,2,3, and 4 the ability to recognize emotions the child is at number 4, which in the assessment rubric says that item 4 indicates that the child can recognize all emotional emoticons the teacher provides which means that the treated treatment has an effect on the child's emotional recognition ability.

To better understand the value of each item then below will be described description per item of posttest value:

**Table 3. Descriptive Statistics posttest per item**

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Maximal</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Value</td>
<td>3.95</td>
<td>3.95</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.52</td>
<td>0.52</td>
<td>0.52</td>
<td>0.52</td>
<td>0.52</td>
</tr>
<tr>
<td>Sum</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Score</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Percentile 10th</td>
<td>3.25</td>
<td>3.25</td>
<td>3.25</td>
<td>3.25</td>
<td>3.25</td>
</tr>
<tr>
<td>25</td>
<td>3.75</td>
<td>3.75</td>
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</tr>
<tr>
<td>50</td>
<td>4.25</td>
<td>4.25</td>
<td>4.25</td>
<td>4.25</td>
<td>4.25</td>
</tr>
<tr>
<td>75</td>
<td>4.75</td>
<td>4.75</td>
<td>4.75</td>
<td>4.75</td>
<td>4.75</td>
</tr>
<tr>
<td>90</td>
<td>5.25</td>
<td>5.25</td>
<td>5.25</td>
<td>5.25</td>
<td>5.25</td>
</tr>
</tbody>
</table>

The following is the translation from table 3:

a) In item 1 obtain the mean or average value is 3.95 and the median value is 3.95 with the value of mode 4 and the maximal value 4 is the minimum value 3. From the data on the item, 1 can be concluded that the degradation value in item 1 is located at number 4 which means the child can get to know all emotional emoticon pictures provided by the teacher.

b) In item 2 obtain the mean or average value is 3.75 and the median value is 3.75 with the value of mode 4 and the maximal value 4 is the minimum value 3. The data on item 2 can be concluded that the degradation value in item 2 is located at number 4 which means the child can get to know all emotional emoticon pictures provided by the teacher.

c) In item 3 obtain the mean or average value is 3.60 and the median value is 3.63 with the value of mode 4 and the maximal value 4 is the minimum value 3. From the data on the item, 3 can be concluded that the degradation value in item 3 is located at number 4 which means the child can get to know all emotional emoticon pictures provided by the teacher.

d) In item 4 obtain the mean or average value is 3.50 and the median value is 3.56 with the value of mode 4 and the maximal value 4 being the minimum value 2. From the data in item 4,
it can be concluded that the degradation value in item 4 is located at number 4 which means the child can get to know all emotional emoticon pictures provided by the teacher.

e) In item 5 obtain the mean or average value is 3.30 and the median value is 3.35 with the value of mode 4 and the maximal value 4 is the minimum value of 2. From the data on the item, 5 can be concluded that the degradation value in item 5 is located at number 4 which means the child can get to know all emotional emoticon pictures provided by the teacher.

f) In item 6 obtain the mean or average value is 3.10 and the median value is 3.12 with the value of mode 3 and the maximal value 4 being the minimum value 2. From the data in item 6, it can be concluded that the degradation value in item 6 is located at number 3 which means the child can already choose emoticon images provided without the teacher's help.

g) In item 7 obtain the mean or average value of 3.20 and the median value is 3.24 with the value of mode 3 and the maximal value 4 being the minimum value 2. From the data in item 7, it can be concluded that the degradation value in item 7 is located at number 3 which means the child can already choose emoticon images provided without the teacher's help.

h) In item 8 obtain the mean or average value is 3.20 and the median value is 3.22 with the value of mode 3 and the maximal value 4 being the minimum value 2. From the data on item 8, it can be concluded that the degradation value in item 8 is located at number 3 which means the child can already choose emoticon images provided without the teacher's help.

Based on normality test results using Shapiro Wilk formula obtained normality test data that get a result with significant value in the significant column is 0.000. In this case, the significant value of the data is less than 0.05 which means that the data obtained from the research results are not normally distributed. Because the data is not normally distributed then the homogeneity testing stage cannot be done, because homogeneity test can be done if the data group is in a normal distribution, while the data in this research is not normal.

So to perform hypothesis testing then use non-parametric statistic in this case that is the test of Wilcoxon that is a test which is used to know the difference of mean data of the result of Pretest and data result of Posttest. Basic decision making on Wilcoxon test are:

1. If the value of Asymp.Sig. <0.05, then the hypothesis is accepted
2. If the value of Asymp.Sig.> 0.05, then the hypothesis is rejected

Based on the Test Statistics output, it is known Asymp.Sig. (2-tailed) is worth 0.000. Since the 0.000 value is less than 0.05 it can be concluded that the hypothesis is accepted. Thus, the research hypothesis states that there is an effect of traditional games on the ability to recognize the emotions of children.

How to play the engklek as follows, teacher prepare LCD projector in class. In addition, the teacher also prepared a large dice doll. every child is given a chance to shake dice. each side of the dice doll has an image of the same emoticons as those found in the engklek. the emerging emoticon image will be matched with the existing image in the crank. then the child attaches a "gancu" image inside the engklek square. the teacher clicked the cursor on the computer or laptop according to the emoticon picture. it will appear a photo of emotional expression. children together mention the name of the emotional expression.
and often abbreviated as ZPD. Proximal development zone is the distance between the actual stage and the potential child is in the proximal development zone (Woolfolk in Pupung, 2018: 17).

In addition to the above theory, there is also a theory related to the game can affect the ability to recognize emotions in children. Psychoanalytic theory suggests that playing is an emotional release tool and develops confidence, as well as social ability. The play also allows children to express their feelings freely without any inner pressure (Crain, 2007: 388).

Besides in line with the above theory, the end of the result is also in line with the values contained in traditional games as stated by Misbach (in Mulyani, 2016: 53) states that traditional games can stimulate various aspects of child development which may include the following: (1) Motor aspects by training durability, flexibility, sensorimotor, motorik rough, and fine motor. (2) Cognitive aspects by developing imagination, creativity, problem-solving, strategy, anticipatory ability, and contextual understanding. (3) The emotional aspect of being an emotional cathartic medium can hone empathy and self-control. (4) Aspects of language in the form of understanding the concepts of value. (5) Social aspect by conditioned the child to build relationships, cooperate, train social maturity with peers, and lay the foundation for training socialization skills by practicing roles with more mature people and society in general. (6) The spiritual aspect, the traditional game can bring the child to realize connectedness with something grand. (7) Ecological aspects by facilitating the child to be able to understand the wise use of natural elements around them. (8) Aspects of values / morals by facilitating children to be able to live the moral values passed on from previous generations to the next generation.

In addition, the increased ability to recognize the emotions of children in line with opinions about the aspects of emotional intelligence proposed Goleman, (2009: 58). According to Goleman, recognizing self-emotion is the ability of individuals who function to monitor feelings from time to time, looking at the signs that arise. The inability to observe true feelings signifies that people are in the power of emotion. The ability to recognize oneself includes self-awareness.

Managing emotions (Goleman, 2009: 58) is the ability to entertain oneself, releasing anxiety, moodiness or irritation and the consequences arising from the failure of basic emotional skills. People with poor skills in this skill will constantly shelter against feelings of depression, while those who are smart will be able to bounce back much faster. The ability to manage emotions includes self-mastery and calming ability.

Recognizing the Emotions of Others (Goleman, 2009: 58) This ability is called empathy, the ability that depends on emotional self-awareness, this ability is the basic skill in socializing. Empathic people are better able to capture hidden social signals that signal what people need or want others to.

So, from the description can be concluded that the results obtained through calculations in line with the theories put forward by experts both about the game and the ability to recognize the emotions of children.

4 CONCLUSION

Based on the results of research that has been discussed previously it can be concluded there is the influence of englek (Computer-based games) on the ability of recognizing the emotions of children in kindergarten.

The recommendation of this research are as follows: First, this research is expected to be one of the inspirations of learning method that is fun especially in the case of recognizing emotions in children, so the ability to recognize the emotions of children growing from time to time. Second, this research is expected to be an example in making the learning methods unique and fun and remain conformable with the national curriculum. In addition, this study is also expected to change the thinking of teachers about a particular game only applies to one or certain aspects of intelligence.

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