Labelling Basic Emotion Developing Emotions in Early Childhood

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Abstract—The purpose of this study was to determine the effect of basic emotional labelling through drawing on children's emotional development. This research method is qualitative research, with causal associative research. Data was collected using observation sheets using a Likert scale. Quantitative data were analyzed using descriptive analysis and quantitative data were analyzed using a simple linear regression test. The results of this study are that there is an effect of basic emotional labelling through drawing on children's basic emotional development. This is shown by the results of SPSS 20 simple linear regression test namely the coefficient of determination ($R^2$) of 0.468 which implies that there is an effect of basic emotional labelling through drawing on the basic emotional development of children by 46.8% that basic emotional labelling activities through drawing have the results are good and can develop emotional development of elementary children.

Keywords—early childhood, basic emotions, labelling emotions, emotional development.

I. INTRODUCTION

The context of early childhood learning that is still found in some kindergarten / RA schools in Indonesia uses many conventional learning models. Director of Early Childhood Education Development as well as curriculum expert, Ella Yulaelawati stated that "learning in early childhood education classes so far has more often used conventional learning strategies, wherein this strategy of learning is more focused on aspects of results, individually, and is competitive, which is very inappropriate to be developed in early childhood education "PAUD [1]. The conventional learning model is a traditional learning model where the teacher gives many lectures, assignments, and exercises to children. Child classes have been arranged so that children learn by sitting facing the teacher in front of the class. The child will sit down, hear the teacher's words, and make the child follow the plans that have been made by the teacher. Learning with the setting of learning positions facing forward (the teacher) is less suitable to be applied in kindergarten / RA schools because it makes children less active. Early childhood is in a period of very rapid growth and development in various aspects. All aspects of development are interrelated with each other. Emotional development for example can affect social development, cognitive development, and children's language development Denham in [2] Emotions can affect interpersonal interactions and children's thinking abilities [2]. Good emotional settings can make a person who can achieve social or academic goals. Emotional knowledge in children contributes to verbal abilities. Through labelling emotions exercise language skills [2]. The magnitude of the influence of emotional development on other developments makes early childhood must develop in terms of emotions.

Both parents and teachers play a role in helping develop children's emotions. Child's emotional development can be influenced by many things, one of which is experience. In Indonesia, early childhood spend more time at home than at school. Parents' contribution to emotional socialization in children is very large. Emotions that often appear in parents influence how children learn to express their emotions. If children often see their parents emit negative emotions, the child will also imitate the way of expressing negative emotions that are shown by parents because the child's experience of emotions is still small. Conversely, if parents' emotions that appear in children are positive emotions, then the child will also express positive emotions. For example when a child does something that according to his parents is wrong, then the child's parents immediately scold the child. this emotion will be stuck in the child's brain. If one day there is another child who behaves the same as him and makes the child angry, he will react exactly like the reaction that his parents once showed to the child.

Therefore, the teacher's socialization of emotional competence is quite important. Early childhood time playing in school can be used by teachers to socialize emotional competence in children. Previous research has discussed children's emotional competencies, regulation of emotional expressions and experiences when needed, and knowledge of emotions [2]. However, this study has not been discussed about basic emotional labelling in early childhood. Emotional knowledge is the achievement of early development which is very important for appropriate emotional response and social interaction,[3], [4], [5], [6]. Labelling basic emotions through emoji images in children as a result of paying attention to the emotional expressions of the face, then completing facial images that have been drawn with facial expressions that match the emotional target.

The purpose of this study was to determine the effect of basic emotional labelling through drawing on children's emotional development and evaluating...
children's understanding of basic emotions by examining children's capacity to label basic emotions through facial images in accordance with basic emotions. Then the teacher can give understanding to parents about information about their children's emotional development.

The rest of this paper is organized as follow: Section II describes the theoretical background. Section III presents related works. Section IV describes the material and proposed methodology. Section V presents the obtained result and following by discussion. Section VI concludes this work and highlights future work.

II. RUDIMENTARY

A. Emotional Knowledge

Emotional knowledge is the third key emotional competence skill. Pre-schoolers in many cultures are able to distinguish their own emotional state and others, talk about them rather smoothly, empathize with others' emotions, and understand disagreements [7], [8]. Self-knowledge of emotions and others allows preschoolers to react appropriately (e.g. sympathetic or calm), thereby strengthening their relationships, and contributing to a positive environment to concentrate on learning. A large amount of literature is now available to connect emotional knowledge and social success of young people [9], [10], [11], [4]. Conversely, the difficulties of pre-schoolers with emotional knowledge are related to problems with anger and aggression [2], [12].

B. Understanding Basic Emotions

The development of basic emotional understanding is knowing and understanding various kinds of emotions such as happiness, sadness, anger, surprise, fear and disgust [13],[14]. The task of developing understanding basic emotions generally involves identifying emotions from photographs of facial expressions, or from emotional scenarios that display character [15], [14]. Tasks that require facial images or all human figures that express basic emotions that have been used in children Picard et al., in [16]. Brechet, et al, in [14] The relevance of the task of drawing a human figure to evaluate early childhood understanding of basic emotions.

C. Emotional Settings

The ability to control emotions is very important from an emotional development. The ability of children to channel their emotions is very diverse. If the child crying howls baby is considered normal, because the baby does not have control of his emotions. As time goes by, children will learn to express their emotions, control their emotions according to their experience and age maturity.

Emotional regulation (emotional regulation) is the ability to regulate emotions to be able to adapt and achieve a goal effectively [2]. Early childhood children tend to experience difficulties in regulating their emotions. Setting emotions and observing positive emotions in early childhood effectiveness of early childhood socializing in school [17]. Pre-schooling skills to remain emotionally regulated and engage positively are also related to teacher evaluations of children's school success through kindergarten [2].

Some trends related to emotional regulation during childhood are: a. comes from external to internal power. For example, the child will depend entirely on parents for regulating their emotions. The more children get older, the children regulate their emotions independently, b. cognitive strategies for emotional regulation. Like thinking positively about a situation, c. emotional stimulation. Affected by age maturity. The more mature it is, the more it can control its emotions, d. choose and manage the context of the relationship. As the child ages, the child can choose which one makes the situation and social relations comfortable for him so that it can reduce negative emotions, e. coping with stress.

Good emotional regulation in children is predicted to affect children's success in the future. Through emotional flexibility, balance, the suitability of their emotional expressions. When children can build positive emotional relationships in people around children emotional regulation Head Start pupils - including emotional flexibility, balance, and contextual suitability of their emotional expressions - predict future school success (pre-academic progress, class collaboration / involvement, positive relationships with staff, and school enjoyment), even with the effects of age, verbal ability, emotional ability, and emotional understanding remain constant.

D. Emotional Labelling with Emoticon Images

Emoticon are small picture images used in cellular and web communication. Among the most widely used emoticon are face emoticon, which convey various emotions. The use of emoticon is so prevalent that emoticon face with Tears of Joy, named the Oxford Word of the Year Dictionary in 2015 (Oxford University Press 2015). In general, emoticon are familiar in the lives of children who grow up with digital communication. Graphic depiction of basic emotions among children and the child's ability to label emotions begins with an emotional scenario. Labelling is well known to assess emotional understanding [14].

In the drawing task, proceed to the correct image analysis according to the cue categories used to describe emotions (facial expression, posture, and context). To understand how children progressively combine various sign categories used to convey emotions according to age, and in accordance with the emotions depicted in the picture. Analyze expressive images by referring to baseline images [14].

E. Stage of Child Emotional Development

According to Piaget, children who are in the preoperative cognitive development stage (2-7 years) are characterized by strong egocentrism, imaginative ideas, acting on intuitive thinking or not based on rational thinking. Emotions of children aged 4-5 years are in a period of shock or commonly referred to as a trot period. During this time the child is active and active in children, where children show resistance to the will of parents, sometimes using harsh words, deliberately violating prohibited things and so on.
At this age, children also sometimes experience temper tantrums, namely angry outbursts such as crying, screaming, throwing things, making their bodies stiff, hitting, rolling or not going to move to another place. Temper is a style, attitude or behavior that shows anger. Tantrum is a strong emotional explosion, accompanied by anger, aggressive attacks, crying, screaming, throwing, rolling, or stomping.

The initial emotional division is divided into 2 classifications Santrock in [18], namely: a. Primary emotion, the surprise (surprise), interest (interest), pleasure (joy), anger (anger), sad (sadness), fear (fear), and disgust (disgust). All of these emotions appear in the first 6 months. b. Conscious emotions (self-consciously emoticons), which require cognition, especially self-awareness. Which include the type of emotions is empathy, jealousy (Jealousy), and confusion (embarrassment) that appear on the first 1.5 years (after the onset of self-consciousness), but it is also proud of (pride), shame (shame), and guilt (guilt) that begin to appear in the first 2.5 years. Stages of emotional development according to standards of developmental attainment of children aged 5-6 years according to the Ministry of Education Regulation No. 137 of 2014, namely: knowing their own feelings and managing them naturally (controlling themselves naturally), knowing their feelings and responding naturally, expressing emotions according to existing conditions (happy-sad-enthusiasm etc.).

The development of basic emotional understanding (happiness, sadness, anger, surprise, fear, and disgust). Ekman, et al. in [13], generally involves identifying emotions from photographs of facial expressions, or from emotional scenarios that display character [15]. Tools for evaluating emotional understanding have never been assessed directly. In this article, researchers will assess the relevance of basic emotional melting through drawing a human figure.

F. Learning Methods That Support the Development of Emotions

Learning method is a way or effort that is done so that the learning process can be in accordance with the learning objectives. Learning methods commonly used to support the emotional development of early childhood are: a. learn by trial and error, learn by imitating, learning by likening themselves, learning through conditioning, learning through training [19].

In this study, in providing treatments for basic emotional labelling, educators use conditioning methods. Conditioning is done by creating a happy atmosphere, fear of dangerous animals, through stories, through videos. Then the child will be treated with basic emotional melting through drawing a human figure and calling basic emotions according to the picture to evaluate children's understanding of basic emotional labelling and comparing which is more effective between the two in basic emotional labelling.

Test emotional understanding through stories or scenarios that describe situations designed to generate target emotions in characters. Emotional scenario matching with various stimuli: photo facial expressions [20], [21], [22], [23]. The second type of task requires production, ranging from emotional scenarios, facial expression [24] or emotional labels [23]. Experiments using emotional scenarios are generally related to scenarios with other stimuli, such as photos of faces, images, or emotional labels [23], [21], [22], [25]. Emotional labelling is very important to contribute to the development of language and social aspects in Figure 1.

Fig. 1. example of a picture of basic emotional labelling

III. RELATED WORKS

Previous research on emotional labelling for early childhood emotional development has been carried out by Harden, et al., [5] emotional labelling skills to examine emotional knowledge in children who have been persecuted and in host families. The results revealed that children's verbal abilities contributed greatly to their ability to accurately label emotions. In this study data collection was carried out by direct interviews and assessments. Children are given a Peabody Vocabulary Test and Affect Knowledge Task while their adoptive mothers complete a questionnaire regarding child background and care. Whereas research from Brechet, et al. in [14] this study compares the ability of children aged 6 to 11 years to freely produce emotional labels based on detailed scenarios (labelling assignments), and their ability to describe basic emotions in human figures or in subsequent drawing assignments. The results of the study show that drawing tasks can be used to assess children in understanding basic emotions, in accordance with the development of perceptual skills and the development of emotional conceptualization.

IV. MATERIAL & METHODOLOGY

This section presents the data used and the proposed methodology.

A. Data

This study uses data collection techniques in the form of nonparticipant observation through observation guidelines using a Likert scale. The measurement scale used in the observation guideline instrument also uses a Likert scale with the choice of answers "never draw face emoticons according to what is seen" with a score of 1, "rarely draw face emoticons according to what is seen" (a week in activity only appears 2x) "with a score of 2," often draws face emoticons according to what they see (3x appears) "with a score of 3," always wants to draw face emoticons according to what they see "with a score of 4. While the emotional development will be observed that is knowing the emotions of oneself and others, with indicators of assessment: (1) knowing the causes of sadness, anger, joy, disappointment, (2) Understanding the causes caused if they disturb or help
friends, (3) able to express emotions naturally, (4) get to know the feelings of others, (5) able to control emotions themselves. A measurement scale for indicators of measuring emotional development in children using a Likert scale with the choice of "never" with a score of 1, "rarely" with a score of 2, "often" with a score of 3, "always" with a score of 4.

B. Method

This research is a type of causal associative research or commonly called a causal relationship. This type of research is a causal relationship that shows influence. There are variables that are causes or independent variables and there are consequent variables or dependent variables which are also called causal associative studies of this study using simple linear regression analysis with the help of SPSS 22.

This study uses a quantitative model. The data analysis technique used in this study is to process the results of the data obtained to determine the basic emotional labelling through drawing on the emotional development of children aged 5-6 years at Al-Azhar Kindergarten Yogyakarta. The data obtained are used as a basis for testing the research hypothesis. In this study using a simple linear regression test because in this study will look for the amount of influence between two variables, namely basic emotional labelling through drawing on children's emotional development. The steps and formulas used are as follows: (1) Test Requirements Analysis, including: normality test (aims to show that the sample taken based on a population that is normally distributed), linearity test (conducted to determine whether the two variables have a linear relationship by looking for the equation of the independent variable regression (X) to the dependent variable (Y), test hypotheses (test hypotheses with simple linear regression analysis). A simple linear regression analysis uses the SPSS 22 program, the results of the data obtained are compared to the level of significance.

C. Participants

Participants were children aged 5-6 years at Al-Azhar Yogyakarta School totalling 30 children from 2 different classes, namely 15 children from class B1 and 15 children from class B2. Sampling in this study uses saturated sample techniques because all members of the population are used as research samples.

V. RESULTS AND DISCUSSION

This section presents the results obtained and following by discussion.

A. Result

This research was conducted for 2 weeks with four times meetings which were directly observed in children.

a) The first day's activity was observing basic emotional labelling through drawing

On the first day of observation, the child was still confused about what to draw about emotions, because the child had never had the experience of drawing basic emotions either in the form of images or emoticon.

b) The second day activities carried out observation of basic emotional labelling through drawing

On the second day of observation, the child has begun to understand what to do. Children draw emotion labels in the form of pictures and emoticon and provide labelling for the images that have been made.

c) The day and day four activities observed children's emotional development

On the third and fourth days, observations were made related to knowing the emotions of oneself and others, with 5 indicators to be assessed. The constraints faced by observation data on the third day were that there were several children who did not attend school, so that observation was delayed and carried out on another day.

B. Explanatory text

Based on the simple linear regression test in the Table I between basic emotional melting through drawing on emotional development using SPSS 22 program obtained correlation coefficient value of 0.684. The acquisition of the basic emotional melting percentage through drawing on the development of basic emotions is called the coefficient of determination which is the result of squares R. Based on the test results obtained the coefficient of determination (R²) value of 0.468 which implies that basic emotional melting through drawing on basic emotional development is 46.8%.

TABLE I. OUTPUT OF SIMPLE LINEAR REGRESSION TEST USING SPSS 22 PROGRAM

<table>
<thead>
<tr>
<th>Summary Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.684*</td>
<td>.468</td>
<td>.449</td>
<td>1.20056</td>
</tr>
<tr>
<td>a. Predictors: (Constant), melting basic emotions through drawing</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b. Dependent Variable: the development of basic emotional emotions</td>
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</table>

Anova's test in Table II obtained a significance value of 0.000 (p <0.05) which means that basic emotional labelling through drawing can be used to predict basic emotional development in early childhood.

TABLE II. ANOVA USING THE SPSS 22 PROGRAM

<table>
<thead>
<tr>
<th>ANOVA</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Model</td>
<td>Sum of Squares</td>
<td>df</td>
<td>Mean Square</td>
<td>F</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------</td>
<td>----</td>
<td>-------------</td>
<td>---</td>
</tr>
<tr>
<td>1</td>
<td>Regression</td>
<td>35.509</td>
<td>1</td>
<td>35.509</td>
</tr>
<tr>
<td>2</td>
<td>Residual</td>
<td>40.358</td>
<td>28</td>
<td>1.441</td>
</tr>
<tr>
<td>3</td>
<td>Total</td>
<td>75.867</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>a. Dependent Variable: basic emotional labelling through drawing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Predictors: (Constant), basic emotional development</td>
<td></td>
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</tbody>
</table>
In Table III above, column B on Constant a obtained a value of 17.179, and column B on basic emotional labelling through drawing (b) obtained a value of 0.393, so the equation of the regression can be written:

$$\hat{Y} = a + bX$$

$$= 17.179 + 0.393X$$  \hspace{1cm} (1)$$

Constants of 17.179 which states that if basic emotional labelling through drawing has no value (0) then the basic emotional development value is 17.179 which means that each addition of 1% of the basic emotional labelling value through drawing, then the value of basic emotional development has increased by 0.393%. Based on the Coefficients sig column output. Given the significance value of 0.000 (p <0.05), it can be concluded that there is an effect of basic emotional labelling through drawing on the basic emotional development of early childhood.

### C. Discussion

Based on observations of giving basic emotional labelling through drawing on the basic emotional development of children aged 5-6 years, there are some findings that might have to be taken into consideration. Girls easy to follow the rules when compared to boys. Media will also affect the level of attention and interest of the child in the labelling of basic emotions through drawing. Sometimes also the type of media chosen will also make children too enthusiastic so it is difficult to regulate.

The results of data analysis using simple linear regression showed that there was an effect of basic emotional labelling through drawing on the basic emotional development of children aged 5-6 years at Al-Azhar Kindergarten Yogyakarta. The development of basic emotional understanding (happiness, sadness, anger, surprise, fear, and disgust, generally involves identifying emotions from photos of facial expressions, or from emotional scenarios that display character). Using this emotional scenario to measure children's ability to label basic emotions different freely. While Various studies have examined the coding of children’s emotions in images of known objects (such as flowers, trees, and bicycles) or in abstract art [26], [27] Conversely, the depiction of basic emotions in human images is only the subject of recent research [14], [28], [16]. This is in line with various studies that have been conducted related to coding children’s emotions in images of known objects (e.g. flowers, trees, and bicycles) or in abstract art [26]. Conversely, the depiction of basic emotions in human images is only the subject of recent research [14], [28], [16].

### VI. CONCLUSION AND FUTURE WORK

Based on the results of the discussion of the study it can be concluded that there is influence label basic emotions through drawing on the development of basic emotions that significant. This is based on the results of the coefficient of determination which is the result of the squares R. Based on the test results obtained the coefficient of determination (\( R^2 \)) of 0.468 which implies that there is an effect of basic emotional labelling through drawing on the basic emotional development of children by 46.8%. Use this emotional scenario to measure children's ability to label different basic emotions freely. The child will pay attention to the emotional expressions of the face, then complete the facial image that has been drawn with facial expressions that match the emotional target. In drawing assignments, the child is free to describe target emotions in the image of a human figure with the aim of evaluating children's understanding of basic emotions and examining the capacity of children to label basic emotions through facial images according to basic emotions. So that the teacher can give understanding to parents about information about their child's emotional development.

#### A. Future Work

The limitations of the study were mainly on the relatively small sample size of 30 participants who participated in one early childhood education institution. Future research can be done with larger and more diverse samples to fully understand the basic important emotional roles and the true benefits of children's understanding of basic emotions by examining the capacity of children to label basic emotions through facial images according to basic emotions. In subsequent studies, research can be conducted that examines the activities of testing emotional development against other developments using other measuring instruments.

### REFERENCES


