

## AN EMOTION ASSESSMENT MODEL FOR ELEMENTARY SCHOOL STUDENTS

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### Abstract

This study aims to produce an emotion assessment model for elementary school students, identify the characteristics of the quality of the emotion assessment instrument, and obtain information about the results of emotion assessment. The study employed the design and development (D&D) approach. The study was conducted at 9 elementary schools. The data were collected through questionnaires, observations, and interviews. The data analysis techniques were Cohen's Kappa Inter-Rater analysis and Goodness of Fit analysis using Mokken Scalability Analysis. The results of the study show that the emotion assessment model for students consists of six aspects of emotion, i.e.: fear, anger, sadness, boredom, joy, and curiosity. The model consists of 16 indicators and 60 observed items. The emotion assessment model consists of instrument grids, a user's guide, a scoring rubric, and a guide for result interpretation. The emotion assessment model is valid and reliable based on the in inter-rater testing through Cohen's Kappa statistics with an average Kappa coefficient of 0.82 (almost perfect). The results of emotion assessment by teachers are: the fear of elementary school students ranging from high, medium and low category. The anger of students ranges from high, medium and low. The sadness of students ranges from moderate to low category. Boredom of students ranges from medium to low category. The joy of the students is in the high category. The curiosity of students ranges from high and medium category.

**Keywords:** *assessment model, emotion, elementary school students*

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## Introduction

Pedagogic competence requires that teachers have the ability to understand the emotions of learners and the ability to conduct assessment and evaluation. Tottenham, Hare, & Casey (2011, p. 6) explains that emotion is a very important aspect in the process of child development in general. But the phenomenon that occurred in Soppeng District seems still not in line with expectations. Evaluation activities by teachers so far in Soppeng District tend to focus only on aspects of learning achievement alone. The implementation of judgments on other aspects such as emotions that characterize learners seem rare and even less likely to be applied.

The main problem faced by teachers in Soppeng district in doing emotion assessment of learners is that teachers do not know the instruments that can be used to conduct emotion assessment of learners when the emotions of learners is an aspect that is very important to be understood by the teacher.

Based on the background description of the problem, the formulation of this research problem is (1) How is the model of emotion assessment of learners in elementary school?, (2) What are the characteristics of the quality of the emotion assessment instrument of elementary school students ?, (3) How is the result of the participant's emotion assessment Educated elementary school based on the application of teachers?

This study aims to derive an emotion assessment model of elementary school students, identify the characteristics of the quality of the emotion assessment instruments of elementary school learners and obtain information on the results of emotion assessment of elementary school students based on teacher application.

This research is expected to be useful as a supporting pedagogic competence of teachers in understanding the psychological characteristics of learners. In addition, the results of this study are also expected as a developmental method of assessing the development of elementary school students.

## Research Method

This study uses *Design and Development* (D&D). The development procedure consists of six phases: problem identification, goal setting, design and model development, model testing, evaluation of model test results and model deployment. This research was conducted in 9 elementary schools in Soppeng Regency, South Sulawesi Province. The data were collected through questionnaires, observations, and interviews. Data analysis techniques used were Inter-Rater Kappa Cohen analysis and Goodness of Fit analysis using Mokken Scalability Analysis (MSA).

## Finding and Discussion

### Design Model

The first emotion aspect to be developed is fear. Conceptually, the fear referred to in this study is the emotion state that arises in the learner because of the threat or perceived risk perceived as measured by the indicators of dodging and being quiet. In the initial design the aspect of fear was measured by 2 indicators and 8 observation items. The avoidance indicator is measured by 4 observation items. The items are: Item 1, Item 2, Item 3, and Item 4. The second indicator on the emotion aspect of fear is to be quiet. The indicator of being reticent was measured by four observational items. The items are: Item 5, Item 6, Item 7 and Item 8.

The second aspect of emotion developed is anger. Conceptually, the anger referred to in this study is the emotion state that arises because of the pressure that affects the actions affecting others to follow, obey, and act in accordance with what is desired through threats measured through indicators of scolding, Desire to hit and alienate. In the initial design the aspect of anger was measured by 3 indicators and 10 observation items. The indictment indicator (berated) is measured by 3 observation items. The items are: Item 9, Item 10, and Item 11. The second indicator on the emotion aspect of anger is showing the desire to

hit. The indicator is measured by 4 items of observation. The items are: Item 12, Item 13, Item 14 and Item 15. The third indicator on the emotion aspect of anger is seclusion. The alienation indicator is measured by three observational items. The items are: Item 16, Item 17 and Item 18.

The third emotion aspect to be developed is sadness. Conceptually, the sadness referred to in this study is the emotion state of learners that arise when experiencing a loss of importance in the learner as measured by an indicator of silence and crying. In the initial design the aspect of sadness was measured by 2 indicators and 9 observation items. The silence indicator is measured by 5 observation items. The items are: Item 19, Item 20, Item 21, Item 22 and Item 23. The second indicator on the emotion aspect of grief is crying. The indicator of crying is measured by 4 items of observation. The items are: Item 24, Item 25, Item 26 and Item 27.

The fourth emotion aspect developed is boredom. Conceptually, the boredom referred to in this study is the emotion state of learners arising from lack of passion, or encouragement of activities in schools that affect the tendency to not be interested, stop and do not do any more activities that are considered boring as measured through indicators indicate the attitude of not interested and showing the desire to quit. In the initial design the aspect of boredom was measured by 2 indicators and 8 observation items. The indicator shows the uninterested attitude measured by the 4 items observed. The items are: Item 28, Item 29, Item 30 and Item 31. The second indicator on the emotion aspect of boredom is showing the desire to stop. The indicator is measured by 4 items of observation. The items are: Item 32, Item 33, Item 34 and Item 35.

The fifth aspect of emotion developed is joy. Conceptually, the excitement referred to in this study is the emotion state of learners arising from the achievement of the goal or the existence of something good is happening or experienced as measured through indicator showing a smile or laugh-

ter, saying words cheerful words (eg: yes, ok, wah , Hurray, etc.) and shows cheerful behavior (eg jumping, screaming, hugging, etc.). In the initial design the aspect of excitement was measured by 3 indicators and 12 observation items. The indicator shows a smile or laughter measured by 4 observation items. The items are: Item 36, Item 37, Item 38 and Item 39. The second indicator on the aspect of emotion excitement is saying cheerful words of exclamation. The indicator is measured by 4 items of observation. The items are: Item 40, Item 41, Item 42 and Item 43. The third indicator on the aspect of emotion excitement is showing cheerful behavior. The indicator shows that the cheerful behavior is measured by four observational items. The items are: Item 44, Item 45, Item 46 and Item 47.

The sixth aspect of emotion developed is curiosity. Conceptually, the curiosity referred to in this study is the desire of learners to find new information through their activities and experiences in schools as measured by indicators: taking note, taking notes, asking/asking, comparing. In the initial design the aspect of excitement was measured by 4 indicators and 16 observation items. The attention indicator is measured by 4 observation items. The items are: Item 48, Item 49, Item 50 and Item 51. The second indicator on the emotion aspect of curiosity is recorded. The record indicator is measured by 4 observational items. The items are: Item 52, Item 53, Item 54 and Item 55. The third indicator on the emotion aspect of curiosity is asking. The indicator in question is measured by 4 items of observation. The items are: Item 56, Item 57, Item 58 and Item 59. The fourth indicator on the emotion aspect of curiosity is compare. The compare indicator is measured by 4 observational items. The items are: Item 60, Item 61, Item 62 and Item 63.

### Model Testing

The first stage of testing is the expert judgment stage. This stage is intended to obtain relevant information relevansi or compatibility between aspects of emotions, indica-

tors and observation items that have been developed in the initial design model. In this research, purposively based on the consideration of expertise, three experts were awarded trust to give an assessment of the initial design model that has been developed.

Expert assessment results are grouped into three groups. The first group is a group of items received without repairs. The second group is a group of items received with improvement. The last group or third group is the item group suggested by the expert to be aborted or excluded. The result of expert assessment related to the grouping is presented in Table 1 as follows.

Table 1. Expert Assessment Results on Emotion Rating Instrument

Expert Judge	Items	Tot
Accepted without repairs	1,4,5,6,7,8,9,10,11,19,20,21,22,23,24,25,26,27,28,29,30,31,33,35,37,38,39,40,41,42,43,44,45,46,47,48,49,50,52,53,54,55,56,57,58,59,60,61,62,63	50
Accepted with repairs	2,12,13,14,15,16,17,18,32,34,36	11
Rejected	3,51	2

Source: Expert Rating Results

Based on the data presented in Table 1 it can be explained that the expert assessment results concluded that 50 items assessed by experts can be accepted without improvement, 11 items assessed must be improved and as many as 2 items to be rejected. The items declared acceptable without direct improvement are included in the Revision 1 Model group which will continue on further model testing.

The second model testing stage is a field trial. Field trials were conducted to test the quality of the empirical assessment model. The model of assessment in question is Revision I Model which has been assessed feasible by experts. Instruments judged worthy by the experts is as much as 61 items. The field trial procedure in this phase

is to provide a model of assessment to the teacher to be piloted on the schools that have been selected as the study sites. The teacher referred to in this case becomes an assessor or in this research is termed as rater. The results of empirical testing through inter-rater analysis with Kappa Cohen Statistics show the results of the analysis in Table 2 as follows.

Table 2. Summary of Coefficient Analysis Results Kappa

Schools	Object	Koef. Kappa	Category
SDN 4 Kalenrunge	PD 1	0.84	<i>Almost Perfect</i>
	PD 2	0.80	<i>Substantial</i>
SDN 2 Masewali	PD 1	0.77	<i>Substantial</i>
	PD 2	0.83	<i>Almost Perfect</i>
SDN 168 Kessing	PD 1	0.84	<i>Almost Perfect</i>
	PD 2	0.82	<i>Almost Perfect</i>
SDN 250 Bulu	PD 1	0.87	<i>Almost Perfect</i>
	PD 2	0.85	<i>Almost Perfect</i>
MIS Asadiyah	PD 1	0.83	<i>Almost Perfect</i>
	PD 2	0.89	<i>Almost Perfect</i>
SDN 100 Dare Bunga	PD 1	0.79	<i>Substantial</i>
	PD 2	0.85	<i>Almost Perfect</i>
SDN 276 Latappere	PD 1	0.75	<i>Substantial</i>
	PD 2	0.81	<i>Almost Perfect</i>
SDN 97 Ungae	PD 1	0.74	<i>Substantial</i>
	PD 2	0.78	<i>Substantial</i>
SDN 256 Benteng Jati	PD 1	0.88	<i>Almost Perfect</i>
	PD 2	0.84	<i>Almost Perfect</i>

Based on the results presented in Table 2, it can be explained that the result of instrument testing in the form of Kappa coefficients revolves around the substantial and almost perfect categories. The coefficient has shown a good agreement index for an instrument to be declared eligible to use. In addition, all Kappa coefficients obtained from the instrument test results have been categorized as reliably. So that the tested instrument has fulfilled the element of reliability.

Emotion scoring models have met the criteria of reliability through empirical testing and testing, but at the stage of empirical trials there are findings that need to

be given attention to the refinement of the assessment model being designed. The findings stem from teacher or rater responses when applying the model. At the time of the trial there were items that the teacher found difficult to observe. The item in question is Item 16. The item reads “Learners are silent / unfriendly when lied to by their friends”. According to some rater it is very difficult to observe the situation of learners lied to by his friend. Although this happens, it is difficult to observe by the teacher.

Upon the findings, the researchers conducted an evaluation to consider the Item 16. Based on the evaluation result through consideration of suggestion from several rater then Item 16 items are decided to be removed from the instrument. Another consideration on which the item is based is that in some cases in the test this item has a very small situation occurring and the item often experiences different views of the rater. In addition, the issue of Item 16 also does not invalidate the observation indicator that would be measured, since the observer indicator still has other observation items other than Item 16.

Based on the evaluation results of model testing, it is obtained that there are 60 items of observation that are considered feasible to be included in the standard instrument of trial result. 60 items are divided into 6 aspects of emotions and 16 indicators. These results are labeled in this study as the Revision II Emotion Assessment Model. The revised Emotion Appraisal II model has basically been standardized through theoretical testing process based on expert analysis or empirically through field trials.

The tests of Goodness of Fit Model using Mokken Scalability Analysis classify the results of the analysis into three groups: scalability testing of pair between items ( $H_{ij}$ ), item sakalability testing ( $H_j$ ), and scalability testing of all items ( $H$ ). The following table 3 summarizes the results of scalability testing of pairs between items.

Table 3 concludes that the result of scalability testing of pairs between items in-

dicating the result of all pairs of items ( $H_{ij}$ ) has been tested measuring one indicator of the same. The result is seen after the whole pair coefficient between items in each indicator shows  $H_{ij} > 0.3$ . Another thing that is tested is the sakalabilitas item ( $H_j$ ). Table 4 below summarizes the results of scalability test items ( $H_j$ ).

Table 3. Summary of Scalability Tests Pairs Antar Item ( $H_{ij}$ )

Indicators	Items	$H_{ij}$
Eschew	1,2,3	> 0.3
Being introverted	4,5,6,7	> 0.3
Hurl insults (berate)	8,9,10	> 0.3
Hit	11,12,13, 14	> 0.3
Not friendly at the target rage	15,16	> 0.3
Silence	17,18,19, 20, 21	> 0.3
Crying	22,23,24, 25	> 0.3
Attitude shows no interest	26,27,28, 29	> 0.3
Indicated a desire to stop	30,31,32, 33	> 0.3
Show smile or laugh	34,35,36, 37	> 0.3
Cheerful cry uttered	38,39,40, 41	> 0.3
Shows cheerful behavior	42,43,44, 45	> 0.3
Pay attention	46,47,48	> 0.3
Record	49,50,51, 52	> 0.3
Ask	53,54,55, 56	> 0.3
Compare	57,58,59, 60	> 0.3

Table 4. Summary of Scalability Tests Item ( $H_j$ )

$H_j$	Items
$\geq 0.3$	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15, 16,17,18,19,20,21,22,23,24,25,26,27, 28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51, 52,53,54,55,56,57,58,59,60

Table 4 presents the scalability test items ( $H_j$ ). The results show that all items (60 items) have good and acceptable power. It is seen after the item sakalabilitas coefficient ( $H_j$ ) > 0.3. Another test result is the scalability of all items ( $H$ ). Table 5 below summarizes the results of scalability testing of all items ( $H$ ).

Table 5. Summary of Scalability Tests All Items (H)

Emotion Aspect	Indicators	H
Fear	Eschew	> 0.3
	Being introverted	> 0.3
Anger	Hurl insults (berate)	> 0.3
	Hit	> 0.3
	Not friendly at the target rage	> 0.3
Sadness	Silence	> 0.3
	Crying	> 0.3
Boredom	Attitude shows no interest	> 0.3
	Indicated a desire to stop	> 0.3
Joy	Show smile or laugh	> 0.3
	Cheerful cry uttered	> 0.3
	Shows cheerful behavior	> 0.3
Curiosity	Pay attention	> 0.3
	Record	> 0.3
	Ask	> 0.3
	Compare	> 0.3

Table 5 presents the results of scalability testing of all items. These results indicate that all observed indicators have been fit with the data. For that the model has been tested or has fulfilled the element of Goodness of Fit.

*Results of Emotion Assessment*

Emotion scoring models that have been tested both theoretically and empirically are given back to the teacher for implementation. This step is called model deployment. This is done to obtain information related to the results of emotion assessment. The results of the emotion assessment in question is the emotion picture of elementary school students. Based on the results of emotion assessment by the teacher obtained the result that the general emotions of elementary school students in Soppeng District vary. The results of the assessment for the emotion aspects of fear are presented in Figure 1 below.

The results of the assessment on the aspect of these fears indicate that the emotions of the students' fears vary from low, medium, and high. In general, the emotions of fear of learners tend to be more dominant in the low category. If it is reviewed based on the gender of the learners then it

is informed that female learners tend to have greater fear than male learners. Furthermore, the results of the assessment on anger aspects of emotion are presented in Figure 2 as follows.

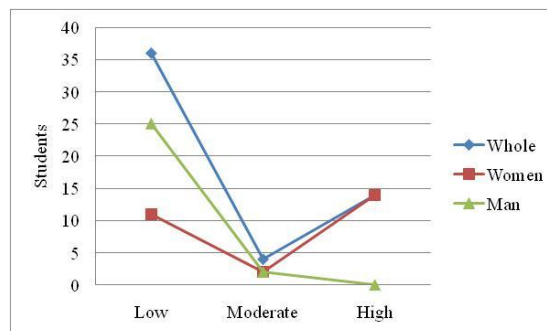


Figure 1. Emotion Aspect Appraisal Results Fear

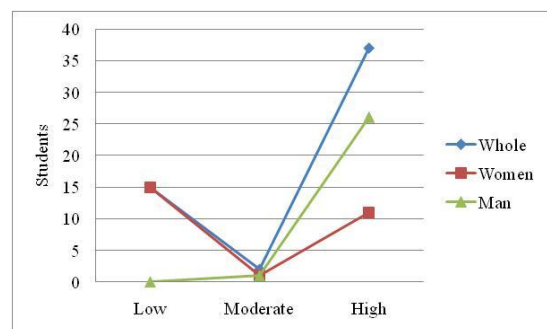


Figure 2. Result of Aspect Emotion Aspect Assessment Angry

The result of the assessment on the anger aspect shows that the anger emotions of learners vary from low, medium, and high. In general, the emotions of anger learners tend to be more dominant in the high category. When viewed on the basis of the gender of learners, it is found that male learners tend to have a greater sense of anger than female learners. Furthermore, the assessment results on the emotion aspects of sadness are presented in Figure 3 below.

The results of the assessment on the aspect of the sadness indicate that the emotions of learners' sadness vary from low, medium, and high. In general, the emotions of student sadness tend to be more dominant in the low category. When viewed based on the gender of learners, it is found that women learners tend to have greater sadness than male learners. The next emo-

tion is boredom. The results of the assessment on the emotion aspects of boredom are presented in Figure 4.

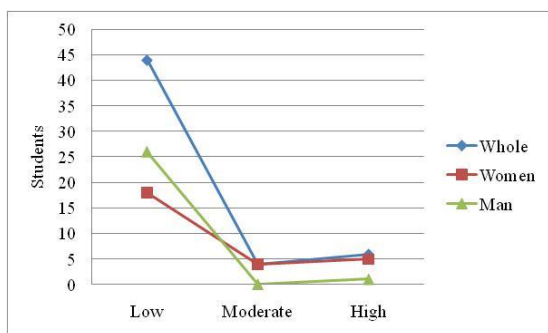


Figure 3. Emotion Aspect Appraisal Results Sadness

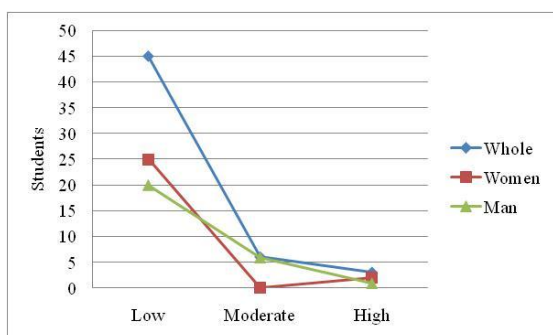


Figure 4. Emotion Aspect Evaluation Results Boredom

The results of the assessment on the aspect of boredom shows that the emotions of boredom learners vary from low, medium, and high. In general, the emotions of boredom learners tend to be more dominant in the low category. When viewed on the basis of the sex of learners then obtained information that male learners tend to have more boredom higher than the female students, but the difference is not so great. The next emotion is excitement. The results of the assessment on the emotion aspects of excitement are presented in Figure 5 below.

The results of the evaluation showed that the joy of emotion excitement of students varies from low, medium and high. In general emotion excitement learners tend to be more dominant in the high category. If reviewed by sex learners says that female students tend to have more joy than male

students, but the difference is not so great. The next emotion is curiosity. Results of votes on the emotion aspects of curiosity presented in Figure 6.

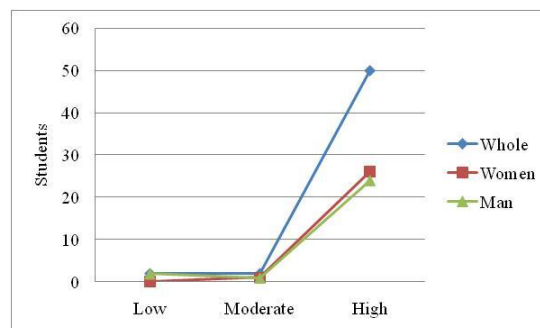


Figure 5. Assessment of Emotion Joy

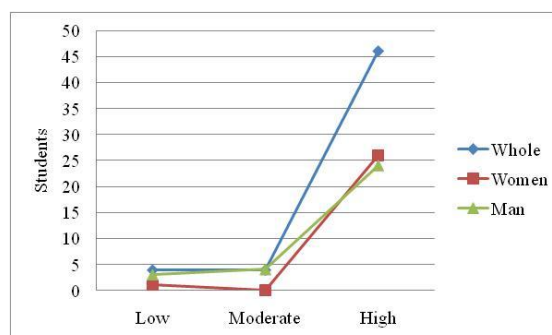


Figure 6. Emotion Aspect Appraisal Results Curiosity

The results of the assessment on the aspect of curiosity shows that the curiosity emotions of learners vary from low, medium, and high. In general, the emotions curiosity of learners tend to be more dominant in the high category. When viewed on the basis of the gender of learners, it is found that female learners tend to have more curiosity compared with male learners, but the difference is not so great.

#### Discussion of Emotion Rating Model

The model of emotion assessment of learners developed in this study consists of 6 aspects of emotion namely: fear, anger, sadness, boredom, joy, and curiosity. The emotion aspect that has been developed is supported by the results of research conducted by Boehner, DePaula, Dourish & Sengers (2007, p. 289) which states that basically emotion patterns that are generally

dominant in childhood are: joy, sadness, fear, Anger, and curiosity of the child. The results of this study indicate conformity with the results of this study or the product developed in this study.

The first emotion aspect developed in the study was fear. The attachment referred to in this assessment model is the emotion state that arises in the learner because of the threat or perceived risk. The fear aspect of this assessment model is measured by the dodge indicator and being quiet. The results of the development correspond to the view that Lerner & Keltner (2001, p. 146) explains that fear is a feeling of risk estimation of something a person will face. Fear is associated with risk aversion. Fear directs a person to avoid risk.

The results of other studies that have been compatible with this study are the results of research from Hansen & Zambo, (2007, p. 274) which explains that fear is the emotion that a person uses to "survival". When the emotion of fear arises in the child, the child becomes aware of the environment and raises a caution on the child. The results of this study support the emotion assessment model of elementary school students in this study, especially on the emotion aspects of fear that develop indicators to avoid and become quiet.

The second emotion aspect developed in this study is anger. The anger referred to in this study is the emotion state that arises because of the pressure that affects the actions affecting others to follow, obey, and act in accordance with what is desired through threats. In this study anger is measured by indicators throwing insults, hitting, and silencing/unfriendly to angry targets. The results of these developments are supported by Lee & Lang (2009, p. 153) which suggests that anger is generally described as a state of intense emotion in which the desire to attack a reproach object. The results of this study are in conformity with the results of the model of emotion assessment in this study.

This fear aspect of the emotion appraisal model is also supported by Hurlock's

(1984) assertion that the child can also show his anger by alienating or remaining silent as a form of deep disappointment in the child. In addition, the fear aspect of this research is also supported by Renshaw & Kiddie, (2012, p. 222) which explains that anger is the basic emotion that often arises when one interprets situations such as hostility. Based on this it makes the basis for researchers to develop indicators of berating, hitting, and unfriendly/silent on the emotion aspects of this study.

The third emotion aspect developed in this study is sadness. The sadness referred to in this study is the emotion state of the learner who appears when experiencing a loss of importance in himself. The aspect of sustainability developed in this study is measured by an indicator of silence and crying. The results of the development supported by Bonanno, Goorin, & Coifman (2008, p. 4) make it clear that the emotions of sadness within a person serve as a form of personal reflection of the sense of loss that can not be prevented. Soreness is generally shown by crying and silence to show sorrow.

The fourth emotion aspect that has been developed in this research is boredom. Boredom is meant in this study is the emotion state of learners that arise due to lack of passion, or encouragement of activities in schools that impact on the tendency to not interested, stop and do not do any more activities that are considered boring. The boredom in this emotion appraisal model is measured by indicators showing a disinterested attitude and showing a desire to quit the activity. The results of the development are supported by research results from Perkun, Goetz, Daniels, Stupnisky, Perry (2010, p. 532) which suggests that boredom is seen as part of an emotion consisting of feelings of unfeeling, lack of stimulation, and low one's passion for something. People who experience boredom have a tendency to run away, get out or not participate from situations that cause boredom. These findings support the outcome of developing an emotion assessment model in this study



which concludes that boredom can be measured by observational indicators indicating disinterest and showing a desire to quit the activities.

The fifth emotion aspect developed in this study is excitement. The excitement referred to in this study is the emotion state of learners arising from the achievement of goals or the existence of something good that is happening or experienced. The excitement in this emotion assessment model is measured by indicators showing a smile or laughter, saying cheerful words of cheer and showing cheerful behavior. This is supported by Hurlock (1984) which explains that joy is a pleasant emotion known for joy and happiness or happiness. Each child has a different intensity of excitement and expresses it to some extent. There are various expressions of joy that range from silence, calm, complacency, to an overwhelming in great joy. At the age of school excitement in children is always accompanied by a smile and laughter. The excitement of school-aged children is largely due to the success of children in achieving the goals they expect. Hurlock's opinion indicates the relevance of the results of developing models of emotion assessment of learners in this study.

The last emotion aspect that has been developed in this research is curiosity. Curiosity referred to in this study is the desire of learners to find new information through activities and experiences in school. Emotion curiosity in this study is measured by indicators of paying attention to, taking note, comparing, comparing. The results of this study are supported by the results of research Kashdan, Rose & Fincham, (2004: p.291) that describes the tendency of someone who has a strong curiosity is actively looking for varied sources of new things and new challenges as well as indicate the liveliness of seeking depth of knowledge and experience as a stimulus In him.

Support from other research results from Litman, (2005, p. 793) which suggests that curiosity can be defined as the desire to know, see, or experience that motivates individual behavior and directs it to find

new information. It is the basis that the curiosity is a desire learners to find new information through attention activities, record, ask and compare.

The model of emotion assessment of elementary school students developed in this study was designed by Direct Observation Method. The direct observation assessment method that has been developed in this study contains observational situations outlined from the observed indicators to be measured. The selection of this method of emotion assessment is supported by Merrell (2003, p. 51) explaining that the Direct Behavioral Observation or the so-called direct observation method is an emotion assessment method in which the observer as an assessor develops an operational definition of targeted observational behavior, then conducts observations, Recording systematically based on observational subject behavior. This is the basis for researchers to develop the method of direct observation, because the method can reveal the behavior of observation subject directly and systematically.

#### Discussion of the Characteristics of the Emotion Appraisal Instrument

In this sub-chapter described the related characteristics of the students' emotion assessment instruments. Characteristics of the student's emotion assessment instrument in this case is the feasibility of the instrument in the form of validity and reliability. The validity is content validity through the assessment by experts or experts in the field, while the reliability here is a consistency between rater commonly known as inter-rater technique to assess consistency, closeness and appraisal agreement or rater in doing emotion assessment of learners.

Based on the results of this study obtained the results that the model of emotion assessment of elementary school students have been declared valid in content based on the assessment of some experts or experts who are trusted to provide an assessment. If related to theoretical review as stated by Haynes, Richard, & Kubany (1995, p. 239) which states that the validity

of the content can basically be interpreted as evidence of the extent to which elements of the valuation instrument are relevant or are representative of the targeted constructs in an assessment instrument. This view shows that the students' emotion assessment instruments developed in this study are relevant or representative of the targeted constructs of the learners' emotions.

Another point put forward by Gillespie, Watson, Emery, Lee, & Murchie (2011, p. 2) that the content validity is a description of how far the sample items included in the instrument can measure the content. If associated with the results of this study indicates that the emotion assessment instrument of elementary school learners in this study has measured its content. The intended content is an observational indicator and an emotion aspect. This means that the sample items observed in the emotion assessment instrument have measured the observed indicator and the emotion aspect to be measured.

Another result obtained in this study is reliability. Based on the results of the study showed that the students' emotion assessment instruments have been reliable. If the result is associated with the statement put forward by Ziegler & Detje (2012; p. 3) which explains that reliability describes the overall consistency of the measurements though given several times. Measurements with high reliability are said to be reliable measurements. Reliability itself has other names such as reliability, reliability, stability, stability, consistency, and so forth. However, the central idea embodied in the concept of reliability is the extent to which a measurement is reliable.

In the results of this study the instrument of emotion assessment of elementary school students has been reliably through inter-rater reliability techniques. On the other hand Graham, Milanowski, Milner, & Westat (2012, p. 4) explains that inter-rater reliability basically shows that different observers tend to provide relatively similar assessments on the same observational object so that it indicates that Instruments have

been reliable, consistent and reliable. This view shows that the emotion assessment of elementary school learners that have been developed in this study has been reliable, consistent and credible even if applied by different observers or teachers.

The next result in this study is the results of statistical tests Kappa showed the average coefficient of 0.82. If the results are compared with Landis & Koch's (1977, p. 165) view that the coefficients are in the almost perfect category. Other experts who gave explanations related to the coefficient of Kappa namely Bonagamba, Coelho and Anamaria (2010, p. 435), then the coefficient of 0.82 the results of the study has been on the category excellent. Based on some of the views of these experts it can be collected that the emotion assessment instrument of elementary school learners that have been developed in this study has been feasible to use because it already has consistency, reliability and the results obtained from such instruments can be trusted.

#### Discussion on the Application of Emotion Appraisal Model

The result of applying the emotion appraisal model referred to in this research is divided into two: the results of teacher assessment and teacher perceptions on the model of emotion assessment of learners. Based on the results of emotion assessment of learners from teachers, then obtained the result that for the emotion fears of learners ranged from low, medium and high. Viewed from the aspect of gender then the results of research that for the fear aspect of female students have a tendency to fear higher than the male students. The results of this study are supported by Hurlock (1984) which states that girls show more fear than boys and the daughters fear is socially acceptable.

In the anger aspect, it is found that the emotions of learners range from low. If viewed from the aspect of gender then the results of this study indicate that male students have a tendency of a higher sense of anger compared with female learners. This is supported by the opinion of Aldrich &

Tenenbaum (2006, p. 776) explains that if viewed based on the emotion of anger, then the boy is more emotion than the girl. This means that men more easily feel angry than girls. Anger is interpreted as a masculine emotion. On the other hand Renati, Cavioni, & Zanetti, (2011, p. 49) argued that anger is an emotion that is not easy to manage especially for elementary school age learners. For elementary school children in the classroom, anger can be caused by a dispute or seizure of possession of an object, a mismatch between peers, physical stress, rejection or neglect and when a child is forced to do something he does not like.

In the emotion aspects of grief, the results obtained that the emotions of learners ranged from low to moderate. Viewed from the aspect of gender then the results of this study indicate that female students have a tendency of higher sadness compared with male learners. The results of the study were supported by Aldrich & Tenenbaum (2006, p. 776) explaining that if viewed on the basis of emotion sadness, then girls are more emotion than boys. This means that women are more easily to feel sorrow than boys. Sorrow is interpreted as a feminine emotion.

For emotion aspects of boredom assessment results obtained that the boredom of learners ranged from low to moderate. If viewed from the side of the sex then there is no difference in boredom between female learners with male students. Based on the theoretical review of Perkun et al, (2010, p. 532) suggests that boredom is seen as part of an emotion consisting of unpleasant feelings, lack of stimulation, and low one's passion for something. People who experience boredom have a tendency to run away, get out or not participate from situations that cause boredom. In addition, boredom can also be expressed with monotonous activities such as daydreaming. Perkun, et al, (2010, p. 545) concluded in his research that boredom indicates in children such as lack of concentration in learning, lack of attention to the lessons followed,

and consequently, boredom has a negative effect on academic achievement.

The results of this study did not find any high boredom in elementary school students. Indications of boredom described by various experts are not found in this study. It is a common hope that elementary school students especially in schools can learn without being haunted by boredom, because the boredom can be bad for students in school.

For the emotion aspect of the joy of elementary school students in Soppeng Regency has a uniform result that is high category. Lee & Lang (2009, p. 151) who argued that joy as a very pleasant emotion when one is in the context of progressing toward the desired goal. A sense of excitement arises when a person's goal is achieved, either the expected objective or the abrupt goal that arouses one's passion. When feelings of happiness arise then the motivation moves or increases.

If the results of this study compared to the view of Lee & Lang (2009) is then certainly obtained a positive result related to the emotions of joy in elementary school students in Soppeng district. It shows that learners are in the context of getting progress toward the desired goals. But the excitement must also continue to be controlled by the teacher, as Scherer, (2005, p. 723) explains that joy is a positive emotion dimension that requires high control for those who feel it. This suggests that teachers should continue to monitor the joy of their high-end learners. Do not let it is not controlled so it will also be less good for learners.

The emotion aspect of curiosity is the result that the curiosity of learners ranges from moderate to high. The results of this study are supported by Hurlock (1984) explaining that for the curiosity aspect of the child has a tendency to react positively to new elements they find. This suggests that the child's age is the time when a person has a tendency to react positively to new elements they find. The results of this study are in line with the theoretical concepts described by Hurlock (1984). In general, ele-

mentary school children have a strong curiosity tendency, but the strong curiosity should always be controlled by teachers at school, as well as parents at home.

### **Conclusion and Recommendation**

The results of the study show that the emotion assessment model for students consists of six aspects of emotion, i.e.: fear, anger, sadness, boredom, joy, and curiosity. The model consists of 16 indicators and 60 observed items. The emotion assessment model consists of instrument grids, a user's guide, a scoring rubric, and a guide for result interpretation. The emotion assessment model is valid and reliable based on the inter-rater testing through Cohen's Kappa statistics with an average Kappa coefficient of 0.82 (almost perfect). The results of emotion assessment by teachers are: the fear of elementary school students ranging from high, medium and low category. The anger of students ranges from high, medium and low. The sadness of students ranges from moderate to low category. Boredom of students ranges from medium to low category. The joy of the students is in the high category. The curiosity of students ranges from high and medium category.

Based on the conclusions obtained in this study, it is suggested the following matters. (1) this model of emotion assessment of elementary school students is suggested to be applied by teachers to understand the characteristics of learners that make the basis for teachers both to plan the learning process in accordance with the characteristics of learners, as well as provide an approach in social interaction with students in the school; (2) prior to implementation in schools, teachers are advised to attend training in advance in order to obtain information on how to apply the model of emotion assessment properly; (3) the model of emotion assessment of elementary school students developed in this research has been tested both theoretically and empirically, so it is suggested that the model of emotion assessment can be applied continuously in Soppeng District or in other places or areas.

(4) to other researchers interested in similar topics to develop other aspects of emotion assessment, because it is very useful for teachers and learners in particular and the development of the world of education in general.

### **Limitation**

This study aims to obtain a model of emotional assessment of primary school students. Based on the consideration that emotions have a very wide scope aspect, but in this research only developed six aspects of emotion, among others: fear, anger, sadness, boredom, joy, and curiosity. This is felt to be a limitation in this study. To that end, the development and expansion of other aspects of emotion is necessary to continue both by researchers themselves and other researchers who are interested in similar topics.

This emotional appraisal model is only designed and used in high school students. Nevertheless, researchers continue to realize that developing a model of emotional assessment for low-grade primary school learners is also important. Therefore, the development of a further model of emotional assessment for primary school students in lower classes is considered necessary for future research.

### **References**

- Aldrich, N. J., & Tenenbaum, H. R. (2006). Sadness, anger, and frustration: Gendered patterns in early adolescents' and their parents' emotion talk. *Sex Roles Journal*, 55, 775-785.
- Boehner, K., DePaula, R., Dourish, P., & Sengers, P. (2007). How emotion is made and measured. *International Journal of Human Computer Studies*, 65, 275-291.
- Bonagamba, G. H., Coelho, D. M., & Anamaria, O. (2010). Inter and Intra-Rater Reliability of Scoliomi. *Rev Bras Fisioter*, 14(5).
- Bonanno, G. A., Goorin, L., Coifman, K. G. (2008). Sadness and grief. *The*

- handbook of emotion*. (3rd Ed.). New York: Guilford.
- Gillespie, H. S., Watson, T., Emery, J. D., Lee, A, J. Murchie, P. (2011). A questionnaire to measure melanoma risk, knowledge and protective behaviour: Assessing content validity in a convenience sample of Scots and Australians. *Medical Research Methodology*, 11, 1-9.
- Graham, M., Milanowski, A., Milner, J., & Westat. (2012). *Measuring and promoting inter-rater agreement of teacher and principal performance ratings*. U.S: CECR.
- Hansen, C. C., & Zambo, D. (2007). Loving and learning with wimberly and david. foresting emotional development in early childhood education. *Early Childhood Education Journal*, 178(3), 259-272.
- Haynes, S. N., Richard, D. C. S., & Kubany, E. S. (1995). Content Validity in Psychological Assessment: A Functional Approach to Concepts and Methods. *Psychological Assessment*, 7(3), 238-247.
- Hurlock, E.B. (1984). *Child development*. (6th Ed.). Singapore: McGraw-Hill International Book Company.
- Kashdan, T. B., Rose, P., & Fincham, F. D. (2004). Curiosity and exploration: Facilitating positive subjective experiences and personal growth opportunities. *Journal of Personality Assessment*, 82, 291-305.
- Landis, J. K., & Koch, G. G. (1977). The Measurement of Observer Agreement for Categorical Data. *Biometrics*, 33(1), 159-174.
- Lee, S., & Lang, A. (2009). Discrete emotion and motivation: Relative activation in the appetitive and aversive motivational systems as a function of anger, sadness, fear, and joy during televised information campaigns. *Media Psychology*, 12, 148-170.
- Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology*, 81(1), 146-159.
- Litman, J. A. (2005). Curiosity and the pleasures of learning: Waiting and linking new information. *Psychology Press*, 19(6), 193-814.
- Merrell, K. W. (2003). *Behavioral, social, and emotional assessment of children and adolescents*. New Jersey: Lawrence Erlbaum Associates.
- Perkun, R., Goetz, T., Daniels, L. M., Stupnisky, R. H., Perry, R. P. (2010). Boredom in achievement settings: Exploring control–value antecedents and performance outcomes of a neglected emotion. *Journal of Educational Psychology*, 102(3), 531-549.
- Renati, R., Carvoni, V., Zanetti, M. A. (2011). ‘Miss, i got mad today!’ the anger diary, a tool to promote emotion regulation. *The International Journal of Emotion Education*, 3(1), 48-69.
- Scherer, K. R. (2005). What are emotions? and how can they be measured?. *Sage Publications*, 44, 695-729.
- Tottenham, N., Hare, T., & Casey, B. J. (2011). Behavioral assessment of emotion discrimination, emotion regulation, and cognitive control in childhood, adolescence, and adulthood. *Frontiers in Psychology*, 2, 1-9.
- Ziegler, J & Detje, F. (2012). Application of Empirical Methodology to Evaluate Information Fusion Approaches. *International Journal Methodology*, 20, 327-337.