

Developing Instrument for Speaking Ability of Children in the Age Group of 5-6 (Group B)

Ni Made Widnyani Dwisaputri^{1*}, Putu Aditya Antara¹, Putu Rahayu Ujianti¹

¹ Early Childhood Education Teacher Education Study Program, Universitas Pendidikan Ganesha, Singaraja, Indonesia

*Corresponding author. Email: dek.wi40@gmail.com

ABSTRACT

Nowadays, the problems faced related with the assessment quality is the use of doubtful instrument of speaking ability assessment. Therefore, the current study is carried out to find out the appropriateness of the instrument used in assessing the group B students' speaking ability through the validity and reliability. The study is development research which is used RDR model. The data collection technique is by using validity questionnaire. Two experts are used to assess the appropriateness of the instrument. The research subject is the instrument for assessing the speaking ability of group B children which consisted of grid and questionnaire in form of 12 items. The data validity is analyzed by using Gregory and the data reliability is tested using Kuder Richardson-20 formula. The result shows that the valid questions are 10 items. Those are tested using the instrument for assessing children of group B. The validity score is 0.83 which categorized as very high criteria. Furthermore, the reliability of the instrument is 0.81 which means that the reliability is placed as very high criteria. Thus, it can be concluded that the developing instrument on the current research has high validity and reliability which means that the instrument is appropriate to use in assessing the children of group B speaking ability.

Keywords: *Speaking Ability, Instrument for Assessment, Children in the Age Group of 5-6*

1. INTRODUCTION

Language is one of aspects that need to be developed optimally. It is supported by the Ministry of Education and Culture regulation, number 137 in 2004, about National Standard of Early Childhood Education. All aspects of early childhood are expected to be developed optimally through this effort. Those aspects included physical motor, language, cognitive, social emotional, religious, and art. One of those aspects which developed in kindergarten is the language.

One of language development that essential to be acquired by the children is speaking ability. Through speaking, the children are freely express their thought and emotion towards the particular condition while they are speaking. Speaking is an ability to communicate orally with others. In speaking, the focus is not only on the words use but also the way they are speaking, intonation, facial expression, attitude, and gesture. The children are needed to teach speaking continuously because it can assist them in developing the speaking ability to be able to communicate optimally.

Speaking is an ability to communicate with others in oral form. Speaking is considered as the most effective way to communicate because of its widest and most important use. According to Hurlock in [1], speaking is a language form that use articulation to deliver the purpose. One of activities that can be used to stimulate the speaking ability is by having conversation. The conversation is defined as the activity to communicate thought, emotions, and needs orally to create receptive and expressive language toward others [2]. The qualified assessment is needed to assess the children speaking ability. As added by [3]. Assessment is defined as a systematic and continues process to obtain information about learning process and result of the children which will be used to make a decision toward the criteria of a specific consideration.

In fact, several studies find that most of the assessment instrument are only using an observation sheet which is considered inappropriate because it is used without taking validity and reliability test [4][5]. Besides the unfulfilled criteria of the validity and the reliability, the use of observations shows several weaknesses. In line

with [6], the major weakness of using observation sheet is the subjective assessment. It is supported by the interview result which is conducted with teachers in kindergarten of cluster II in Bebandem sub-district. The problem occurred is the assessment instrument which is not taking validity and reliability test, so that the appropriateness is less trusted. The use of an appropriate instrument will bring a subjectivity which ruin the quality of the assessment.

In addition, the bad effect will occur when the problems are unsolved. For instance, the assessment instrument that use to assess the speaking ability by the teachers will be less trusted. The use of an inappropriate instrument will ruin the quality of the assessment. According to Mulyasa the teachers' mistake is by conducting inappropriate evaluation process.

One of solutions to overcome that problem is by developing assessment instrument through validity and reliability test. The assessment quality will affect the teachers' decision toward the result. The accuracy of the assessment instrument is an important part of the whole assessment process. A good instrument must valid and reliable. The quality of the instrument affects the data. The developing instrument must be made and developed according to the requirement in order to create a normative and qualified instrument. A good instrument must follow the important requirements, that are: valid and reliable. Azwar in [7] defined validity as the accuracy and precision of the instrument. The instrument that has a high validity is the instrument that can accurately measure or pointed the purpose of the assessment. Meanwhile the reliable instrument is the instrument that always give a same result if it used in a same group and a same time even in the different occasion.

By overcoming the problem on the instrument quality, the teachers are expected to be able to implement it optimally. According to [8], instrument is defined as a tool that use to measure an object to collect the data. Validity and reliability are the criteria that should must be have by the instrument of assessment [9]. The validity measures on how far the conclusion that can be collected through the accurate and meaningful test as related to the purposes. In line with [10], validity is a measurement that show on how far it can measure the object, while the reliability is limited on the consistency of the measurement result of a variable. According to [11], reliability is purposing on how far the measurement can be consistent in measuring and gaining a relatively same result. The result of validity and reliability criteria will give a view about the instrument appropriateness before it ready to use.

Several previous studies show positive results. [12], reveals that the developing instrument has a good quality without any revisions. Based on the try out, all developing instruments have a good validity, reliability,

and model suitability. [13] stated that developing assessment is appropriate to use and able to use in assessing the characters education which already taught in kindergarten. The study conducted by [14] revealed that a set of evaluation development on children speaking ability are categorized as valid from all aspects.

As aforementioned, the developing instrument is expected to be able to help the teacher in order to make the instrument become more appropriate to use because of the validity and reliability. The novelty of the current research is the assessment instrument which focus on language aspect especially the speaking ability. The study aims to analyze the appropriateness of the speaking ability instrument of children in group B as viewed from the validity and reliability used.

2. METHOD

The study is development research or Research and Development (R&D). The development model used is RDR (Research, Development, Research) model by Borg Gall in [15]. This model is simple model which consisted of three phases, those are: (1) Research or preliminary study that is conducted to obtain preliminary data of the needs or problems found in the real situation, (2) Development which is conducted by determining and planning the speaking ability instrument of children in the group B, and (3) Research or product effectivity test is conducted by using experts to assess the appropriateness of the children speaking ability.

Instrument for assessing the speaking ability is already tested in form of grid and questionnaire. The experts' validation sheet is formed by two assessments that can be given for each item, those are relevant and irrelevant. The instrument that is used in this current research is the questionnaire which consisted of 10 items. The scoring of each item is using Likert scale; Very good developing is given score 4, As expected developing is given score 3, Start developing is given score 2, and Undeveloped is given score 1.

The effectivity test of the instrument is using two experts to assess the appropriateness of the instrument. The experts are those who have knowledge or ability in particular subjects. The content validity is conducted by the experts through assessing the instrument relevancy with the studied variable. The result will be revised in accordance with the score and input that is given by the experts. After the instrument is assessed, the step is continued by analyzing the validity and the reliability to determine the quality of the developing instrument. The data analysis technique are content validity and reliability analysis. According to [16], the content validity is related with the content accuracy and instrument format. The content validity is tested by two experts and the result will be formulated as displayed in the following cross tabulation table.

Table 1. Cross Tabulation

		Expert 1	
		Irrelevant	Relevant
Expert	Irrelevant	A	B
	Relevant	C	D

(Source: Gregory in [16])

The validity results of two experts as formulated in the cross table will be analyzed using the following Gregory formula.

$$V = D / (A + B + C + D)$$

Notes:

V = Content validity

A = Disagreement between two experts

B & C = Different opinions between two experts

D = Valid agreement between two expert

The calculation result is compared with coefficient criteria of the content validity. The detail of the content validity is presented in the following table.

Table 2. Criteria of the Content Validity

Coefficient of the Content Validity	Criteria
0,80 – 1,00	Very High
0,60 – 0,79	High
0,40 – 0,59	Middle
0,20 – 0,39	Low
0,00 – 0,19	Very Low

(Source: [16])

The reliability of the instrument is related with the consistency result of the instrument measurement result. Reliable means that the instrument is able to give a constant result even it used in numerous times [17]. The coefficient of the instrument reliability is calculated using Kuder Richardson 20 (KR-20).

$$r_{1.1} = \left[\frac{n}{n-1} \right] \left[\frac{S_t^2 - \sum pq}{S_t^2} \right] \quad (1)$$

Notes:

r_{1.1} = Coefficient reliability

S_t = Deviation standard of total score

P = Correct answer of each item (relevant)

q = Incorrect answer of each item (irrelevant)

n = numbers of items

The calculation result is compared with the criteria of the instrument reliability grade. The detail of the instrument reliability grade is formulated in the following table.

Table 3. Criteria of the Coefficient Reliability

Coefficient Reliability	Criteria
0,80 < r ₁₁ ≤ 1,00	Very High
0,60 < r ₁₁ ≤ 0,80	High
0,40 < r ₁₁ ≤ 0,60	Middle
0,20 < r ₁₁ ≤ 0,40	Low
r ₁₁ ≤ 0,20	Very Low

(Source: [16])

3. FINDING AND DISCUSSION

The study is carried out to examine the appropriateness of the speaking ability instrument in group B as viewed from the validity and reliability. The

study result is in form of valid and reliable questionnaire of the speaking ability instrument in group B. The result is obtained through preliminary study, development, and validation of the product by the experts. Those results are analyzed by using relevancy of each item. The result of the experts' judges is presented in the following table.

Table 4. The result of Experts' Judges

Expert 1		Expert 2	
Relevant	Irrelevant	Relevant	Irrelevant
1, 2, 3, 4, 5, 6, 7 8, 9, 10, 11, 12	-	2, 3, 4, 5, 6, 7, 8, 9, 10, 12	1, 11

Based on the Table 4, it was revealed that 10 from 12 items are considered as relevant and the rest are irrelevant. The result validity is analyzed using Gregory formula. The validity analysis result is 0.83 and categorized as very high validity. Furthermore, the reliability analysis is conducted to examine the quality level of the speaking ability instrument of children in group B.

The data of the experts' judges that the validity is already tested is analyzed through reliability test which is conducted toward the instrument of the speaking ability of group B children. The reliability test of the instrument is conducted using Microsoft Excel 2016. The recapitulation toward the items of the speaking ability instrument is presented as the following table.

Table 5. The Recapitulation of Experts' Judges Score toward the Instrument Items

Numbers of Items	Experts		Score	P	q	pq
	01	02				
1	1	1	2	1	0	0
2	1	1	2	1	0	0
3	1	1	2	1	0	0
4	1	1	2	1	0	0
5	1	0	1	0.5	0.5	0.25
6	1	1	1	1	0	0
7	1	1	1	1	0	0
8	1	1	2	1	0	0
9	1	1	2	1	0	0
10	1	1	2	1	0	0
11	1	0	1	0.5	0.5	0.25
12	1	1	2	1	0	0
Total Score (X)	12	10	22			
X²	144	100	484			

Based on the reliability analysis above, the coefficient reliability of the speaking ability instrument is 0.81 which categorized as very high reliability.

Table 6. The Result of Content Validity Analysis and Reliability of the Instrument

Analysis/Test	Result	Criteria
Content Validity	0.83	Very High
Reliability	0.81	Very High

Based on the Table 6, the result of the content validity analysis of the speaking ability instrument using Gregory formula is 0.83 and categorized as very high validity level. Further, the result of the instrument reliability test using Kuder Richardson 20 (KR-20) is 0,81 and categorized as very high reliability criteria.

According to the description of the research result, the development of the speaking ability instrument is conducted using RDR model by Borg and Gall through research, development, dan research phase. In research phase, the preliminary study is conducted to analyze the needs and the real situation, so that the data is collected to design the assessment instrument based on the problems faced. Needs analysis through preliminary study is a starting step in conducting the research with RDR model by Borg and Gall [18].

The preliminary study is conducted in kindergarten before pandemic. From the interview result and the classroom observation, it is found that the speaking ability instrument on the children of group B is never composed yet. Based on that analysis, the researcher designs an instrument for assessing the speaking ability of group B children. The variable that is measured in the research is the speaking ability. According to Brennan

[19], conversation is an activity where two or more people use linguistic form or nonverbal signal to communicate in interactive way.

Development phase is conducted according to the preliminary study analysis result. The needs analysis result is used to decide the next step, especially the determination and the production of the product. The development is conducted by determining the product in form of speaking ability instrument of group B children. The major activity in this step is designing the speaking ability instrument of group B children including the scoring grid and scoring non-test in form of questionnaire. Those aspects of children speaking ability. In the grid is developed to be more specific through the design of scoring indicators. After composing the grid, the scoring non-test in form of questionnaire is composed and will be used to assess the children by the teachers. The questions type in this questionnaire is arranged in form of statements which will be given score using Linkert scale, specifically: Very good developing is given score 4, As expected developing is given score 3, Start developing is given score 2, and Undeveloped is given score 1.

The research is the last phase that must be done after designing the speaking ability instrument of group B children. The product testing aims to obtain an effectivity, efficiency, and benefits of the developing [18]. The effectivity test is conducted through experts' judges. However, the tryout of the instrument is impossible to be conducted due to the present circumstance. The experts' judge is carried out by using two experts to fulfill the validation sheet which consisted of two answers, those are relevant and irrelevant. The result of product validation is revised. It is conducted by taking account into the comments and suggestions that is received from the experts to perfect the instrument.

Based on the result of the instrument validation, the validity and reliability analysis are conducted. The instrument is categorized in very high validity level with score 0.83. Further, the score of the instrument reliability analysis is 0.81 which categorized as very high level of reliability. Those results prove that the instrument is valid and reliable. The good quality of the instrument prove that it is appropriate to be use in assessing the speaking ability of group B children. It is supported by [20], that the validity and reliability is a major requirement of an appropriate instrument. The use of an appropriate instrument must gain more attention. The good instrument will present a good assessment quality and bring it to reach the expected goal.

The benefit of this instrument is to asses all aspects of speaking ability in order to find out the success rating of the children. The success in learning can be reached when the children are able to be active in physical, mental, and social context [21]. The children speaking ability is strongly needed because through speaking the children can express their ideas and emotions to others. It is supported with [2] which stated that the conversation can

be defined as communicating thought, feeling, and needs in oral form as a symbol of receptive and expressive language. The speaking ability is considered as important since it is essential to be acquired by the children to spent their daily life activities [22].

This research result is supported by another study that is conducted by [12] which reveals that the developing instrument has a good quality and can be used without any revisions. Based on the tryout, all instruments have a good validity, reliability, a and model suitability. In addition, [13] stated that the developing assessment can be used in assessing characters education which is taught in kindergarten. [14] reveals that developing an instrument evaluation of children speaking ability as viewed in all aspects is categorized as valid.

This development study outcome an instrument for assessing the speaking ability of group B children. The instrument is composed in form of questionnaire that latterly fulfilled by the teachers according to the children ability. Besides that, this instrument is developed based on the needs analysis, so that it is expected to be a solution for the current issue especially for the instrument which used to assess the children of group B.

The implementation of this research is by the existence of the assessment instrument of the speaking ability in form of valid and reliable grid and questionnaire sheet. It proves that the speaking ability instrument has a good quality. This instrument can be used by the teachers in assessing the children. The use of qualified instrument will support the success of the learning process.

4. CONCLUSION

Based on the finding and discussion, it can be concluded that the instrument for assessing the children of group B children's speaking ability is in form of grid and questionnaire. The result of instrument validity from two experts revealed that 10 from 12 questions is considered as relevant while other two questions are considered as irrelevant. In addition, the result of the instrument validity is 0.83 which categorized as very high level of validity as same as the reliability result that is also categorized as very high level of reliability with score 0.81. Those results prove that the instrument is valid and reliable. It means that the instrument is appropriate to be used in assessing the group B children's speaking ability. The researcher suggests several things, specifically (1) the teacher to follow the course about the teaching management especially in developing the good quality of instrument/evaluation tool. On the other words, the instrument must be valid and reliable so that the teachers can assess the teachers accurately, (2) the future researcher can use this research as a guidance to develop the instrument more deeply especially about the speaking ability of group B children in order to enhance the education quality.

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