

## **Development of Portfolio Assessment Instrument Based On Writing Works to Measure Communication Capabilities Students in Class Fifth Elementary School**

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**Abstract:** *This study aims to develop portfolio assessment instruments based writing that can measure the communication skills of class fifth students at two Way Dadi Elementary School. The research used is research and development research developed by Borg & Gall. Data collection is done by giving questionnaires to experts, students and subjects who use the product to test its effectiveness, researchers use tests. The results of this study indicate that paper based portfolio assessment instruments are theoretically and practically feasible for measuring students' communication ability. The theoretical feasibility of portfolio assessment instruments is based on the assessment of third experts who obtained an average value of 90.35 in the excellent category. The feasibility of portfolio assessment instrument practitioners based on the results of the analysis on the validity, reliability and effectiveness tests. Based on the results of the study showed that writing works based portfolio assessment instruments were effective for measuring students' communication skills. The effectiveness test is based on differences in the assessment of students' communication skills between the control class and the experimental class with an average value of 3.252.*

**Keywords:** *Portfolio Assessment Instrument, Writing Works, Communication Ability.*

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### **I. Introduction**

This 2013 curriculum refers to the abilities needed in the 21st century. According to Bailik (2015: 5) the abilities that must be possessed by students in the 21st century are Creativity, Critical Thinking, Communication, and Collaboration. One of the skills needed in the 21st century is the ability to communicate. According to Blandhol (in Hardianti et al: 2017) explained that communication is said as effective if it can fulfill someone need. That need could be reached through two ways: with or without paying attention to the needs or other interests. According to Chatab (2007: 29), communication skills are the ability to establish relationships through human communication channels or the media, so that the message or information can be understood properly. Furthermore, according to Little John (in Bungin, 2007) Communication as a social science, communication involves understanding how people behave in creating, exchanging and interpreting messages, Consequently, communication inquiry combines both scientific and humanistic methods.

In integrated learning many students have not been active in class learning, such as lack of communication with students or educators with each other, namely questions and answers, discussions, and collaboration in groups. Then the appropriate learning in improving communication is to make or compile a student's paper that is with performance tasks, and work projects such as essays or stories, investigative reports, project observation reports, complete task reports and assignments in class, or other tasks that are made by students. Therefore, the making of a paper is an activity of delivering messages (communication) using written language as a tool or medium. According to Canale and Swaim (Rofi'udin, 2001: 193) is the activity of writing or writing can be seen as one of the complex language skills. Writing activities at least involve aspects of language use and content processing, so writing is included in the communicative abilities section.

Furthermore, according to Henry Guntur Tarigan (2008: 3), the skill to make written works is one of the productive and expressive language skills used to communicate indirectly and not face to face with other parties. Meanwhile according to According to Gutiérrez, et al (2015: 49), "... writing skill is a cognitive process. Nofal (2011: 6) states that: "Sentence structure and phrase structure in the language is different from those of any literal genre and is similar to those of spoken code. Poets permit yourself considerable freedom in word orders for certain purposes, e.g. emphasis, front focus, end focus, end weight

or rhyme ... etc, for syntax is similar to that of the spoken language. However, students in the activity of making a paper or writing some students do not understand how to make a correct paper such as making essays and partly, because educators after giving written assignments to students, some educators do not provide direction on how the procedures for making the paper. Many students do not yet understand how to make good and correct written works and the preparation of written works that are still not in accordance with the guidelines given.

In writing works can also improve students' skills in communication such as pouring a discussion, giving opinions and so on. Then the results of written works or assignments of the work are given an assessment (assessment) or evaluation. Appropriate assessment instruments in assessing a paper is portfolio assessment because portfolio assessment does not only assess the results but the learning process of students is given an assessment or monitors the activities of students. According to Delgoshaei, Kharrai, & Talkhabi (2012) A portfolio is composed of a set of tasks performed by students which provides a clear picture of each student's capabilities, without facing the anxiety of being compared with other or taking tests.

Furthermore, the opinion of previous research according to Tillema H. Harm (2013) that the reflective portfolio is an effective assessment tool used to bring about changes in performance and learning. In line with the opinion of previous research According to Charanjit, Kaur.et.all. (2015), the results of the study showed that the portfolio instrument developed by educators had given the opportunity for students to document the growth of each student, improve learning, and assist students in achieving learning outcomes. According to Awang et.al (2013), the results of the study indicate that the portfolio is better for students. While the average high achiever of learning is better at having a portfolio, low-achieving students do not learn by using portfolios.

Based on that, this study aims to (1) develop a portfolio-based instrument assessment based on theoretical and practitioner that is feasible to measure the communication skills of grade V students in elementary schools. (2) developing an effective paper-based portfolio assessment instrument to measure the communication skills of fifth grade elementary school students. This is to improve the quality of assessment instruments, the writing quality of students and the communication skills of fifth grade students at SDN 2 Way Dadi based on the 2013 curriculum.

## **II. Methods**

This research is a Research and Development study, R&D, which was adopted from the Borg and Gall model. According to them, R&D is a development model in which research is used to design new products and procedures that are tested in the field, evaluated, and refined to meet certain criteria. Conceptually, the research and development approach includes 10 general steps, as explained by Borg & Gall, in Figs.

The subjects of this study were divided into two, namely product trial subjects and subject use trials. Subject of the expert validation product trial. The subject of the usage test was the fifth grade educator at two Way Dadi Elementary School. This research was conducted in 1 experimental class and the control class. The object of research in this research development is a work-based portfolio assessment instrument to measure students' communication skills. Data analysis uses validity , reliability and effectiveness.

## **III. Result and Discussion**

Based on the results of the development of paper-based portfolio assessment instruments to measure the communication skills of Class Fifth students of Primary Schools in Sukarame District, Way Dadi Subdistrict, Bandar Lampung City, this is done by applying instruments ranging from observation, testing and improvement of instruments and implementation of instruments on a small scale. The results of the research from the stages of this research development are as follows:

Research and Information; Initial research and information collection was carried out with field studies and literature studies at two Way Dadi Elementary School to obtain preliminary data as a reference for instrument development. The field study was carried out by conducting curriculum analysis, namely the curriculum used at two Way Dadi Elementary School is the 2013 curriculum, the analysis of learning conditions has used seats per group in accordance with thematic learning, and needs analysis such as how to apply portfolio assessment instruments and writing and observing at two Way Dadi Elementary School. While the literature study is conducted by reviewing books and sources that are relevant to the research to be conducted.

Planning; at this stage, preparing materials and making product designs. This planning phase begins with determining the theme, reviewing Core Competencies, Basic Competencies, Indicators, formulating material and determining portfolio assignments and writing. After completion, the design of the assessment instrument framework and the contents of the assessment instruments will be developed.

Develop preliminary from of; product development is realized in the parts that have been planned arranged and designed so that it becomes an initial product draft covering the initial stages of the preparation of the assessment instrument draft there are 6 steps according to Subali, namely as follows: (a) instrument mapping, (b) compiling the grid, (c) arranging instruments, (d) analyzing to assess the quality of instruments qualitatively, (e) testing of measuring instruments. (f) carrying out measurements. The instrument mapping plan was modified by Nurgiyanto's opinion (2013: 30), namely (1) determination of standards, (2) determination of authentic tasks, (3) making criteria, and (4) making rubrics. The prototype design results are then validated by experts. Design validation is carried out by experts namely material expert lecturers, evaluation experts, linguists, and practitioners.

**Table 1. The validation test result of 3 expert**

No	Validator	Score
1	Material expert	88,50
2	Evaluation expert	88,33
3	Linguist	94,23
Average		90,35

**Table 2. Result validation practitioners.**

No	Validator	Score
1	Ernani AR, S.Pd	100,00%
2	Dra. Nurlela	100,00%
Average		100,00%

Based on the table 1 and 2. The validation test results of 3 experts namely (1) the material expert test obtained an average score of 88.50, (2) the evaluation expert test obtained an average score of 88.33 and (3) the linguist validation test received an average score of 94.23 in the validation test 3 experts are categorized as very feasible to use. Then the validation test practitioners 'use of educators obtained a score of 100% in the "very feasible" category.

Preliminary Field Testing; Initial preliminary trials were conducted after expert validation, initial preliminary trials were conducted by small groups to assess the feasibility of the product being developed in the form of paper-based portfolio assessment instruments to measure students' communication skills based on the responses of educators and students in class fifth at two Way Dadi Elementary School. The number of respondents was two educators, namely one fifth A class educator and one fifth B class educator. While students numbered six people consisting of students in the high category, medium category and low category. The aspects assessed by the students are the appropriateness of the content and the appropriateness of the language, while those assessed by the educator are the appropriateness of construction, the appropriateness of the language, and the appropriateness of the writing conventions.

Main Product Revision; after the initial product design is carried out to find whether there are still mismatches or errors in the product design to be corrected and as a refinement of the product to be developed. At this stage the researcher further refines or revises the validated assessment instrument based on suggestions for improvement from design validation.

Main Field Testing; after the assessment design has been validated and improved, the assessment instrument is tested in the fifth grade of at two Way Dadi Elementary School in 2019/2020 Academic Year. Testing is done by submitting a portfolio-based paper assessment and assessment questionnaire to 2 educators and 22 students. In addition to looking for students' responses, at this stage also looking for educator responses collected using a questionnaire. Then in the experimental class the students were given treatment then after learning 1-6 ended assessed using an assessment sheet communication skills of students viewed from the results of written assignments. In the control class students are not given treatment after learning in measuring the assessment of students' communication skills.

**Table 3. The questionnaire result score educator responses the small group**

No	Rated Aspect	Educator 1	Educator 2
1	Construction	29	28
2	Language	15	13
3	Writing conventions	20	20
Total Score		64	61
Maximum Score		76	76
Percentage Score		84,2%	80,2%
Average Percentage		82,2%	
Criteria		very feasible	

Based on tabel 3, of the showed that result the usability test by educators obtained a score average from two educator of presentase 82,2% with the "very feasible" category.

**Table 4. The questionnaire result score students' responses the small group**

No	Rated aspect	Students'					
		1	2	3	4	5	6
1	Instrumen Contents	32	31	28	27	25	24
2	Language	20	19	18	18	15	15
Total score		50	52	50	46	45	40
Skor Maksimal		50	52	52	52	52	52
Percentage Skor		100 %	100 %	96%	88%	86%	76%
Average Percentage		86,8%					
Criteria		very feasible					

Based on table 4, of the showed that result the students' readability test from 6 students high, medium and low ability was presentase 86,8% with the "very feasible" category.

Operational Product Revision; based on the results of the trial of paper-based portfolio assessment instruments, it is found that there is a difference in the improvement of students' communication skills between the experimental class that is being treated and the control class that is not being treated, so it has a difference in improvement. Then the results of testing the usability by educators who are the subject of trials and main field trials, then the product portfolio-based portfolio assessment instrument developed is not revised and is feasible to be implemented.

Then the educator observes the paperwork done using the observation sheet observing the process and product of students' writing. The results of the writing process score of 84.8 with the criteria of "very good" and the product score of making the paper of 85.6 with the criteria of "very good". The following is the recapitulation of the process and product results of the written work.

**Table 5. Recapitulation of Process Results and Writing Products**

No	Writing Works	Learning						Score	Average
		1	2	3	4	5	6		
1	Writing Proses	76,0	81,6	82,6	86,7	90,1	91,6	<b>508,6</b>	<b>84,8</b>
2	Results of Writing Products	78,9	82,5	83,6	87,0	90,0	91,8	<b>513,8</b>	<b>85,6</b>

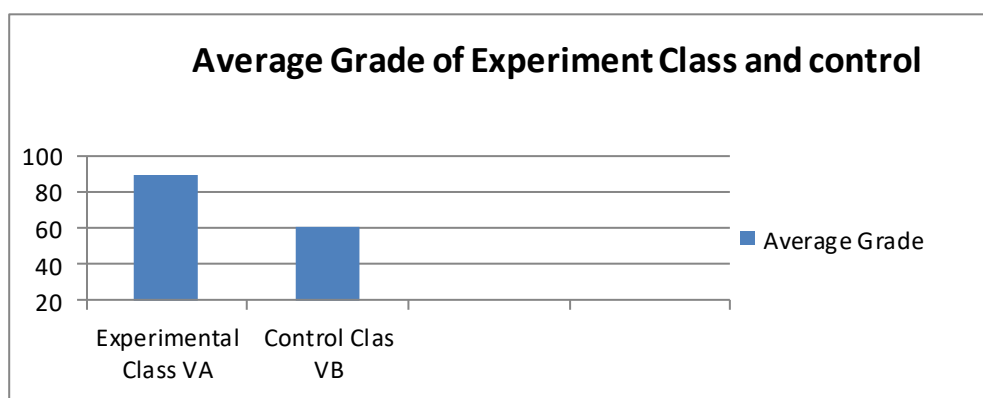
Based on Table 5. Shows that in each learning 1-6 students have an increase in the process of making written and written product results. Next, the researcher conducted a questionnaire about communication skills for the control and experimental class at the end of learning 6, consisting of 20 questions that had been tested for validity and reliability so that 15 items were valid and reliable

questionnaires with alternative answers 1) Always, 2) Often, 3 ) Sometimes and 4) Never. The communication skills questionnaire test refers to theoretical opinions in order to obtain an indicator of communication ability that is presenting, including re-showing (translating) an idea or problem in a new form. Listening, students must learn to listen carefully to comments and other questions. Careful listening can construct systematic knowledge. Reading, in this case more emphasis on reading the literature of students and gradually improving using textbooks. Discuss, aim to develop class discussion and help students practice oral communication skills. communication in writing rewrites the discussion results. Writing, more emphasis on expressing ideas in written form, writing arranged systematically. The following is the recapitulation results of the average value of effectiveness test in Table 6

**Table 6. Result t-test**

Aspect	Control class	Experimental class	t- arithmetic	t-table
Average	60,02	89,47	3,252	2,018

Based on the results of the study, obtained an average value of communication skills of experimental class students (IV A) that is 89.47 higher than the average value of learning outcomes of students in the control class (IV B) that is 60.02. Here is a histogram of the experimental and control class average values:



**Figure 1**

**Figure 1. Histogram of Experimental and Control Class Average Value**

Based on data analysis, the instrument developed in this study obtained the effectiveness test results obtained by the value of  $t_{\text{arithmetic}} > t_{\text{table}}$  ( $3,252 > 2,018$ ) and a significance level of 5%, then  $H_0$  was rejected and  $H_a$  was accepted, for the experimental class obtained results of 89,47 and the class the control obtained a result of 60,02, it can be seen that there are differences in measuring students' communication skills between the experimental class that is given treatment and the control class that is not given treatment. Based on observations made by teachers and researchers about the development of portfolio assessment instruments in writing activities, it can be seen about the learning process of making writing, so that parts that are still weak can be enriched. At the time of the implementation of the instrument about the paper, students had no difficulty in understanding and completing the writing.

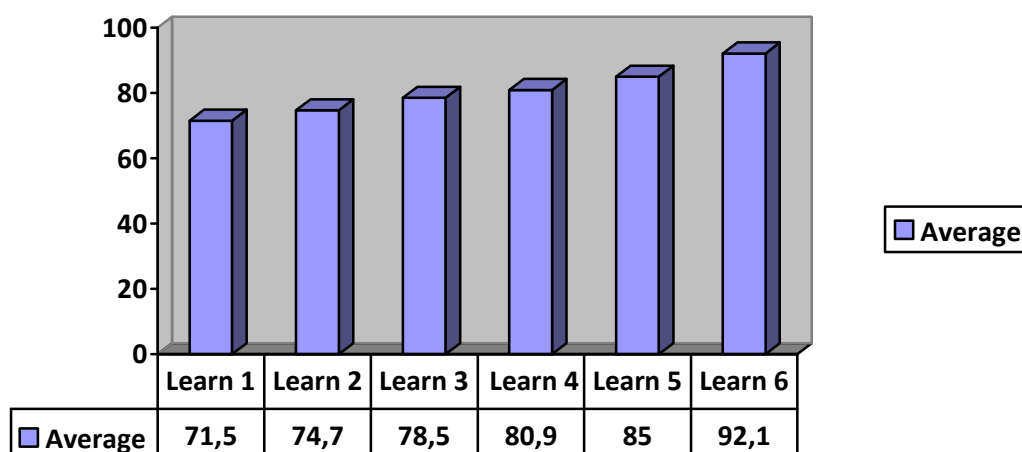
Achievement of students in communication skills in class at two Way Dadi Elementary School can also be seen by using the observation sheet of students' communication skills. The observation sheet of students' communication skills is used to determine the level of achievement of students' communication skills in the experimental class with 22 students and the control class with 22 students. This observation sheet of communication skills of students uses assessment scores, with 4 (four) alternative answers, namely: (1) very well scored 4, (2) good given a score of 3, (3) sufficiently given a score of 2 (4) less scored a score of 1 and using the rubric on the observation sheet. Students get the value of the communication skills criteria of 90,2%. The following is a recapitulation of observations of observations of communication skills.

**Table 7. Observation Results Observation of Communication Capabilities**

No	Indicator	Score					
		Pemb. 1	Pemb. 2	Pemb. 3	Pemb. 4	Pemb. 5	Pemb. 6
1	Discuss	69,3	79,5	81,8	84,1	87,5	93,2
2	Write	73,8	73,8	80,7	84,1	85,2	92
3	Read	75	73,8	79,5	81,8	82,9	93,2
4	Presenting	67	72,7	75	77,2	85,2	90,1
5	Listen	71,6	73,8	75	77,2	84,1	92
<b>Overall Score</b>		<b>49</b>	<b>356,7</b>	<b>373,6</b>	<b>392</b>	<b>404,4</b>	<b>424,9</b>
<b>Score Percentage</b>		<b>81,6%</b>	<b>71,5</b>	<b>74,7</b>	<b>78,5</b>	<b>80,9</b>	<b>85,0</b>
<b>Average Percentage</b>		<b>81,0%</b>					
<b>Criteria</b>		<b>Very Good</b>					

The results of observations observing students' communication skills in learning 1 to 6 are described in the histogram as follows.

**The Average Value of Observation**



**Figure 2. Observation Value Histogram**

Based on Table 7 and figure 2, shows that the results of observations of students' communication skills in 7 lessons, obtained an average value of 22 students with a percentage of 81,0% in the "very good" category. So it can be concluded that "The realization of an effective portfolio-based paper portfolio assessment instrument to measure students' communication skills.

The theoretically feasible portfolio assessment instrument is adapted from several steps or procedures for making a portfolio. According to Surapranata and Hatta (2004: 144) the appropriate steps to make a portfolio assessment are: 1) Determining the focus of portfolio appraisal which includes the purpose of appraisal with the portfolio, the relevance of the evidence and objectives (competencies) to be assessed, determine how a lot of evidence (evidence) in the portfolio will be used as an assessment material, according to competencies (standards, basics, and indicators) what achievements are to be assessed with the portfolio; 2) Determination of aspects of the content being assessed, determine what knowledge, skills, or attitudes are the main aspects to be assessed, determine the amount of evidence that will be used as material for evaluation; 3) Determination of portfolio form, type of document contents, by providing notes / comments / values for each evidence by educators / parents, determining what should be in the portfolio

contents list, and determining the definition of each category or type of document content unit; 4) Step four: Determination of the use of portfolios, scoring guidelines and weighting based on the rubric of assessment of the portfolio which is not only based on the aspects of success or the final results but also emphasizes the aspects of the process according to the competencies listed in the curriculum used.

The development of portfolio assessment instruments consists of several parts, namely: a) cover which is the initial appearance of portfolio assessment instruments and as the identity of the contents of portfolio assessment instruments, b) foreword contains remarks from the author on the completion of the preparation of portfolio-based portfolio assessment instrument products c ) guidelines for the use of portfolio assessments globally, d) instructions for using portfolio assessments for educators and students, e) KI-KD mapping and mapping in each learning 1-6, f) examples of the results of developing portfolio assessment instruments in the form of materials, steps for their learning activities , task implementation activities, guidelines for scoring processes or products then observation sheets and process and product assessment rubrics, g) cover in the form of bibliography containing sources of product writing, h) author profile. Furthermore, the process of developing a theoretically feasible portfolio assessment instrument goes through a stage of validation by experts before the instrument is piloted. This aims to determine the quality of the appropriate instrument or not.

Then the feasibility of this practitioner can be seen when testing the validity and reliability of class sixth at two Way Dadi Elementary School after the questionnaire was declared valid and reliable then a small group trial was conducted, based on the response of two class fifth educators. Then the response was as much 6 class fifth students consisted of two high category students, two medium category students, and two low category students. A small group trial was conducted to assess the portfolio assessment instruments that were developed in the form of instruments and learning activities. The aspects assessed by students are the content and language, while those assessed by the educator are the aspects of the appropriateness of the content, the appropriateness of the language, the appropriateness of the presentation. The results of testing the usefulness of two educators and the readability of 6 students, in this test the results obtained in the category of "very feasible".

Meanwhile, to find out whether or not paper-based portfolio assessment instruments are effective by looking at the process and results of students' learning skills or communication skills, namely the high and low levels of the process and the results of communication skills obtained by students seen in the experimental class given product portfolio-based portfolio assessment instruments and control classes that have not been given paper based portfolio assessment instrument products. Classroom learning using paper based portfolio assessment instrument products can be said to be effective if the results of students' communication skills in the experimental class using paper based portfolio assessment instrument products are higher than those in the control class not using the paper based portfolio assessment instrument products . So there are differences in the communication skills of students in the experimental class and the control class. In accordance with the results of the questionnaire on students' communication skills there are significant differences at the end of learning and the results of observations of observations of communication skills in learning 1 to learning 6.

#### **IV. Conclusion**

Based on the results of research and development that have been carried out, researchers can conclude that: (1) The portfolio assessment instrument product developed is theoretically feasible and practically feasible to measure the communication skills of fifth grade elementary school students. Theoretically feasible, this is evidenced by the steps or procedures for portfolio management according to the 2013 curriculum that will be used, then validation of experts from the assessment of 3 experts namely material experts, evaluation experts, and linguists, who stated that the portfolio assessment instruments developed in the "very decent" category. Then do the usability test by educators who state that the portfolio assessment instruments developed in the category are very feasible. And it is practically feasible to test the validity and reliability which are in the "very high" criteria. Based on the results of the analysis, the portfolio assessment instrument is then used for the small group trial and large group trials in grade fifth of the elementary school. (2) Paper based portfolio assessment instrument products that are developed effectively in measuring students' communication skills. This is evidenced by the results of communication skills of students on the control class score and the experimental class with t-test t value > t table (3,252 > 2,018) and a significance level of 5%, then  $H_0$  is rejected and  $H_a$  is accepted.

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