Developing the Instrument of Pre-Writing Skill to the First Grade Students of Elementary School

Fahrurrozi¹, Sehati Kaban², Ratna Sari Dewi³, Reza Rachmadullah⁴, Prayuningtyas Angger Wardhani ², Uswatun Hasanah⁶

¹,²,⁵,⁶Department of Elementary School Teacher Education at Universitas Negeri Jakarta, Indonesia. Email: fahrurrozi@unj.ac.id
³Department of School Teacher Education at Universitas Islam Negeri Syarif Hidayatullah, Indonesia.
⁴Department of Elementary School Teacher Education at Universitas PGRI Adi Buana, Indonesia. Email: reza@unipasby.ac.id

Abstract

This research aimed to develop the instrument of pre-writing skill to the first grade of Elementary School. In specific, this research propose to resolve teachers’ problem such as (1) most of students’ writing assignment is not well-structured and only given the example of writing on the white board., (2) writing assessment from the teachers still have not met the criteria of assessment standard, (3) teachers’ ability in developing the instrument that measure students’ pre-writing skill is still low. Research and Development (RnD) is used as the method of the research by using the procedural instrument development research design. 150 students from the first grade of elementary school in South Jakarta is chosen as the respondent of the research. The sampling technique that is used in this research is purposive sampling. Based on the assessment of the expert validator, the result of the research prove that pre-writing instrument results good validity and reliability. Besides, pre-writing instrument that consists of 12 items shows 9 valid items and 3 invalid items. Based on the result of questionnaire that is address to the teachers, it describes the structure and the difficulty level of writing assignments from low difficulties to high difficulties by using assessment rubric. Thus, the result of the research can be one of the consideration to elementary school teachers especially for the first grade to identify students’ pre-writing skill.

Keywords: Instrument, pre-writing skill, first grade students, elementary school

INTRODUCTION

Pre-writing is basic writing process that taught first by the teachers to the students. Pre-writing process is usually coupled with pre-reading process that called as pre-reading and writing activity [1]. Pre-writing process generally intend to teach young students to write correctly [2]. Nonetheless, pre-writing activity usually done after or parallel with pre-reading activity in first grade of elementary school. The underlying reason is when the students able to read, they will easier to write [3], [4].

Writing skill is the ability to express the idea, argument or feeling through written language. Students’ accuracy in expressing idea have to be supported by the accuracy of language use, vocabulary, grammatical, and punctuation. Teaching activity in the first grade students of elementary school, the basic learning is reading and writing skill. Those things are the basic knowledge for further level. In pre-writing process, teachers’ skill is more focus with full attention to the students. Besides, teachers also need authentic measurement in assessing pre-writing assignment to the first grade students [2].
Authentic assessment is the information collecting process that is done by teachers in term of the development and the learning achievement of the students. In this case, students are involved actively in implementing their skill. Authentic assessment is one of right choice as it enables students to show their competencies. By using authentic assessment, students can enhance their high order thinking while analyzing, synthesizing, identifying the problem, create solution, and engage the relation of cause and effect [5], [6].

The assessment can be applied in many aspects of language skills such as speaking, reading, writing and listening. From those four language skills, the most difficult skill for most of the students is writing. This skill involves high order thinking because it requires students to express their idea and creativity in written form. Writing is tool of communication that consist of symbolizing skill in graphic and express self-feeling [7], [8]. Cognitive ability in children’s mind that combined with fine psychomotor ability which is activated while writing and will result good and interesting writing. Writing also can be media to communicate what they know about something [8]–[10]. It is one of factors that improve reading skill [11]. The lack of writing skill can affect seriously to the job and life success [12].

Moreover, writing is one of indirect communication that describes mind, feeling, and idea which is expressed in written language [13]. This skill need more reading practice [14]. Pre-writing has three components that are procedural knowledge, conceptual knowledge, and generative knowledge [13], [15], [16]. Children’s writing skill is important to develop their overall literacy [17]. Literacy ability is affected by pre-writing skill [18], [19]. In writing, there are three stages that are pre-writing writing, and rewriting [9], [10], [15]. Pre-writing stage is the beginning step in writing to consider important and interesting idea. The idea can come from many reading resources or through the experience from the writer. Then, the idea will be developed in outline from the general to the specific.

In first grade of elementary school, students are assumed already have basic writing skill and can write correctly. Writing in first grade level needs strong base in hand writing, spelling, and punctuation [20], [21]. The result of writing from first grade students usually can be read clearly although the hand writing is not really good [18], [20]. Hand writing is complex assignment for first grade students that make them form the letters, numbers, and other characters which require the combination cognitive function and fine and gross motor [23], [25]. Writing is viewed as difficult skill for the first grade students. Based on the result in previous research, most of the first grade students have not yet master writing skill where the difficulties are around 5% to 33% (Karlsdottir, 2002; Smits-Engelsman et al., 2001). This result rise the arguments from many researchers to conduct further research relate to this topic.

Based on observation result and interview, there are some matters that is considered difficult to be done by teachers such as (1) most of students’ writing assignment is not well-structured and only give the example of writing on the white board, (2) assessment instrument that is used have not met the criteria of standard assessment, (3) teachers have difficulties in arranging pre-writing assessment instrument. Thus, the role of assessment instrument is important not only to give feedback to teachers and students but also can be one of the material to evaluate learning method that used in writing activity.

Study relate to research and development of pre-writing instrument to the first grade of elementary school students is rarely conduct even though this is important to measure the level of students’ achievement in pre-writing. Similarly, some of researches who discuss about pre-writing skill are Kristen McMaster, Amy Kunkel, Jaehyun Shin, 2017 [29]. The research stated that instrument of pre-writing assessment should have the guideline of standard assessment so that make teachers easier to evaluate students works. Then, Larkin, 2014 [6], said that pre-writing assessment
instrument for the first grade students of elementary school give positive effect because it makes teachers easier to get the information continuously and comprehensive about the process and the result of pre-writing activity that achieved by the students. Moreover, other researchers like Dinehart, 2015 [25], Thomas et al., 2020 [18], Puranik & Lonigan, 2014 [15], Puranik et al., 2018 [16], Zhang & Quinn, 2018 [17] show the importance of pre-writing skill in elementary level. This will have implication on researchers’ interest to develop valid instrument in measuring pre-writing to the first grade students. In this research, developed instrument is adjusted with students’ characteristics in cognitive aspect and fine motor and also integrated with national curriculum. Pre-writing instrument will be developed in structured writing assignment with the difficulties level from low difficulty to high difficulty. It is also added by valid assessment rubric and reliable so it can be the consideration to the teacher in identifying students’ pre-writing skill.

**METHOD**

**Research design**

This research is aimed to develop the instrument of pre-writing skill to the first grade students of elementary school. The research used mix method research with procedural instrument development research design. According to Koskey, et al., (2018) [30] instrument development research is the research that result the product with some phases in order to result empirical instrument that can be used as the measurement. Then, the researchers explain the procedures of the instrument development research by breaking down every phase that will conduct in the research.

**Research procedure**

The research procedure is the result of synthesizing and based on the theory of pre-writing instrument development research. The developing items process to make some forms of test consist of three phases that are (1) test designing phases such as determining purpose of the test, determining tested competencies, determining of tested material, arranging blue print of test, writing test items, test validity, revising test items and assembling test, and arranging scoring guideline; (2) trial test such as determining trial subject, doing trial test, analyzing result data; and (3) test assembling. The procedures of the research is broken down in following figure:

![Figure 1. Research procedure development instrument of pre-writing skills to the first grade students of elementary schools](image)

**Respondent**

The respondent of the research is 150 first grade students who come from 15 elementary school in South Jakarta. The research uses purposive sampling technique to select the respondents. The selection is based on the distance and population that makes representative respondents.

**Research Data Analysis Techniques**

Data collection is done while the process of developing instrument by testing the worthiness of the instrument which is developed through validity from experts and practitioners. After developing the instrument, the researchers take the data of assessment result from experts in instrument validation form by using content validity ratio (CVR) and content validity index (CVI). The next step is
analyzing the data statistically to know the validity and reliability value and also KMO test and Bartlett’s Test, Variance Explained.

Validity test of instrument is done to show dependability of the developed instrument of this research. Validity test is used as the measurement that show dependability instrument of research. The development can be assumed as valid if the instrument is really appropriate to answer indicators of the instrument. The calculation of validity test used Statistical Package for the Social Science (SPSS) and Microsoft Office Excel. After gaining the data, the researchers compare the result with r-r-table.

RESULTS

This research aimed to develop pre-writing instrument in elementary school. The development of instrument is done by some phases such as pre-writing, planning, formulating idea, doing hand writing with scribbles, straight lines, spelling, and revising ideas. First phase is validity and reliability test by using SPSS 24. The instrument that is developed in this research is 12 items. Based on the data of validity test, the item is stated as valid if t-count > t-table. Based on the result of validity test, there are 9 items valid from 12 items. The next test is reliability test. Cronbach’s Alpha shows .971 and can be conclude that data reliability are categorized high.

Next test is the worthiness test of a variable which is carried out by the KMO and Bartlett's Test. The test is carried out to determine the worthiness of pre-writing variable. KMO and Bartlett's Test results can be seen in table 1 below and KMO Bartlett's Test:

Table 1. KMO and Bartlett’s Test

| KMO and Bartlett's Test |  
|-------------------------|-------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .622 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 296.686 |
| Df | 36 |
| Sig. | .000 |

Table 1 KMO and Bartlett's Test shows that the number of KMO Measure of sampling Adequacy (MSA) is 0.622. Because the value is 0.622 (> 0.5). It shows the adequacy of the sample. The KMO and Bartlet's test (at the chi-square value) is .622 with a significance value of 0.000. This shows that there is a correlation between variables and is worthiness for further process. Furthermore, Anti-image matrices below is to find out which variables can be further processed and which can be issued.

Table 2. Anti-image matrices

<table>
<thead>
<tr>
<th>Anti-image covariance</th>
<th>Item_1</th>
<th>Item_2</th>
<th>Item_3</th>
<th>Item_4</th>
<th>Item_5</th>
<th>Item_6</th>
<th>Item_7</th>
<th>Item_8</th>
<th>Item_9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item_1</td>
<td>.138</td>
<td>.006</td>
<td>-.004</td>
<td>-.012</td>
<td>.021</td>
<td>.022</td>
<td>.000</td>
<td>-.121</td>
<td>-.016</td>
</tr>
<tr>
<td>Item_2</td>
<td>.006</td>
<td>.810</td>
<td>-.069</td>
<td>-.250</td>
<td>.054</td>
<td>-.072</td>
<td>.057</td>
<td>-.015</td>
<td>-.111</td>
</tr>
<tr>
<td>Item_3</td>
<td>-.004</td>
<td>-.069</td>
<td>.906</td>
<td>.111</td>
<td>-.119</td>
<td>.134</td>
<td>.085</td>
<td>.002</td>
<td>.074</td>
</tr>
</tbody>
</table>
In Table 2, Anti-image Matrice above, specifically in the (anti Image Correlation) section, a number marked (a) indicates the size of MSA of a variable. Item variables 1.595, item 2.637, item 3.524, item 4.569, item 5 that is .621, item 6 that is .594, item 7 that is .615, item 8.596. Item 9.853. MSA value of each variable> 0.5 then all variables can be processed.

Table 3. Initial Eigenvalue, Variance Percentage, and Cumulative Percentage in each component
Extraction Method: Principal Component Analysis.

The Total Variance Explained table above shows that there are 10 factors contracted to 3 factors. Each eigenvalue factor > 1. Factor 1 eigenvalue is 2.663 with variance (29.592%), Factor 2 eigenvalue is 1.575 with variance (17.503%), Factor 3 eigenvalue is 1.356 with (15.335%) and Factor 4 eigenvalue is 1.142 with variance (17.503%) (11.422%). The sum of the three extracted factors is 61,164.

DISCUSSION

Drafting of instrument items in pre-writing begin with formulating the learning purpose clearly. Purpose of learning will help teacher to assess the students accurately related to the material that is taught [31]. Level of practicalities used to know how teachers and students using instrument in learning process of pre-writing. To know whether developed instrument that used is practical or not, test is conducted on 150 first grade students of elementary school who comes from 15 elementary school in South Jakarta. Analysis toward teachers’ response questionnaire shows that developed pre-writing skill instrument is practical to learning process. Most of teachers stated that developed instrument in this research is quite different with other instruments and very easy to implement in learning process.

This instrument consists of several topics including (a) do correct habit in writing such as the technique of holding a pencil and sitting position when writing (b) copying (letters, words, sentences) [13], (c) writing letters (words, and simple sentences) with loose letters, (d) write a few simple sentences (3-5 words) with joint writing, (e) write sentences dictated by the teacher correctly, and (f) write neatly sentences with joint writing [4], [18]. In addition, the instrument also includes writing learning techniques such as copying, writing in the air, composing, completing, writing smoothly, dictation, and composing. All preliminary writing assignments are structured in accordance with the cognitive and motor development of first grade elementary students [32], [24].

Pre-writing assignment provided on this instrument is structured based on the difficulty level from low difficulties to high difficulties [33], [34]. This is because pre-writing skill requires good visual, auditory, memory and eye and hand coordination so that they must be trained from an early age with correct direction [35], [36]. The task of pre-writing on the instrument is very helpful for students in practicing structured pre-writing. Based on observations, it is obtained that the description of activities that students can carry out pre-writing assignment in accordance with the steps of the existing activities on the instrument. In addition, students feel interested and enthusiastic and actively involved in doing various tasks with various levels of difficulty. This is because the assessment instruments provide more detailed and clear stages in helping students master pre-writing skills. Therefore, it can be concluded that the initial writing assessment instrument that was developed was practically used in the first grades.

In addition, pre-writing instrument also contain of assessment rubric that can be used as a reference for teachers to identify students’ pre-writing skill. The development of pre-writing instrument is based on authentic assessment which is a form of assessment of student participants’ learning outcomes based on their ability to apply the knowledge they have from the real life around
them [37], [38]. This statement shows that in authentic assessment, students are actively and realistically involved in evaluating their own abilities. With pre-writing skills instrument, students can develop their innovative and creative attitudes because they have the opportunity to develop themselves, foster a more positive attitude towards school, learning activities and themselves. This positive attitude will affect students' thinking patterns, so as to increase positive achievement [39], [40].

Thus, the instrument of pre-writing skill that developed by the researchers is categorized as very well to become the assessment instrument that is valid and reliable to be implemented in elementary school especially to the first grade students.

CONCLUSION

Based on the development and trial test of developed pre-writing instruments, it is proven that the use of assessment instrument in measuring students’ pre-writing skill is categorized as very well. Those result can be seen from the observation result that implemented the assessment by the teacher, teacher responses, and observations about the use of instruments and interviews that have been conducted. These results illustrate that the pre-writing skills instrument can be used as a reference for teachers in carrying out the process of learning and can identify students' mastery on what their achieved in writing.

ACKNOWLEDGMENT

The researcher is grateful to all those who have helped in completing this research from the preparation of the concept to the final report.

REFERENCES


