Developing performance assessment instrument in inquiry learning model containing digital literacy for grade V students of elementary school

Fitriani*
Een Yayah Haenillah
Rochmiyati

Faculty of Teacher Training and Education, University of Lampung, Bandar Lampung, Indonesia

ABSTRACT
The purpose of this study was to create a performance assessment instrument based on the Inquiry learning model that includes digital literacy and is theoretically and practically feasible in Elementary School Class V. Borg and Gall’s Research and Development (R&D) approach was adapted for this research. The researchers, however, only performed four steps in this research, namely: Research and Initial Information Collection, Planning, Initial product format design, and initial field trials. This study produced a product in the form of a performance assessment model based on an inquiry learning model that included digital literacy in Elementary School Class V. This development research was conducted in class V during the second semester of the 2021/2022 Academic Year on the theme 6 sub-theme 3. This study's population included all educators and students from Gedong Tataan District's class V primary schools, which included 9 public elementary schools and 22 educators. Interviews, questionnaires, observation sheets, and documents were utilized to collect data. The data analysis used in this research activity was descriptive qualitative and quantitative descriptive data analysis. According to the findings of this study, the performance assessment instrument developed for the inquiry learning model integrating digital literacy was considered feasible and practical for use by educators to evaluate or assess students' performance.

KEYWORDS
Performance assessment instrument, inquiry, digital literacy

Received: 6 August 2022
Accepted: 28 August 2022
Published: 30 August 2022

Introduction
Assessment in learning does not aim to test only cognitive ability but also covers all aspects of students' personalities, such as moral development, emotional development, social development, and other characteristics of individual personality. This is consistent with Government Regulation of the Republic of Indonesia No. 20 of 2016, which specifies that Graduate Competency Standards are standards for the qualifications of graduates' abilities, including attitudes, knowledge, and skills.

Assessment is a method of putting learning into context by stating what is known and what can be done, and vice versa. In another sense, learning assessment is a process or attempt to acquire information on individual students' development throughout learning activities as an ingredient in educators' decision-making to determine strengths and weaknesses in the learning process (Sumintono & Widhiarso, 2015: 2). Authentic assessment is a comprehensive assessment that evaluates attitudes, knowledge, and abilities. Supardi (2015: 31) defines performance assessment as "an assessment based on the results of the assessor’s observations of student actions as they occur." Educators monitor students while working or study the products created to assess the required skills. Performance evaluation is thought to be more authentic because it represents students' actual ability. Performance assessment is a type of evaluation that focuses on two key activities: examining the process of skill performance and evaluating the production or output (Yudha, 2014). The techniques and instruments for measuring student learning outcomes following the competencies to be measured must be known by the educators being evaluated. According to Permendikbud No. 23/2016, educators conduct assessments by...
developing an assessment grid matched to the skills in the curriculum, recording elements, developing learning objectives, and comparing the conditions and capacities of students in learning.

According to the Ministry of Education and Culture (2019), digital literacy is the knowledge and skills required to find, evaluate, use, create, and utilize information in a healthy, wise, intelligent, careful, precise, and law-abiding manner to foster communication and interaction in everyday life. The fourth wave of civilization is compelling us to change the entire framework and work tools in all aspects of life, including classroom management. Science and technology are evolving at such a quick pace that educators must sustainably increase their competencies. Innovation is the main key in the industrial era 4.0 which requires students to have 21st-century competencies who can think critically, creatively, collaboratively, and communicatively.

Based on observations in the needs analysis on October 25-26, 2020, it was stated that fifth-grade educators at SD Negeri Cluster 3 region 3, Gedong Tataan District conducted an objective assessment of the knowledge aspect only. One of the challenges that educators confront is that it is still difficult to create performance rating instruments in learning performance assessment in books. In this situation, educators are still analyzing globally/generally where they have not examined students' performance based on methods and results in detail. Furthermore, the instrument used to assess student performance has not been properly validated. In the lack of a complete, simple, and practical performance assessment instrument for assessment, the performance assessment instrument in the educator's book does not cover the psychomotor part. As much as 100% of instructors reported having a performance assessment item in their educator's book. However, 83.33% of respondents said they offered tools that were difficult to use. A total of 90.66% of educators reported that there were no directions for use in the existing tests, therefore they were unsure how to apply them. It was also discovered that while 90% of instructors have used the inquiry learning paradigm, 91.66% have not used inquiry learning with digital literacy. So far, no performance assessment instrument has been developed that particularly evaluates a learning model utilized by educators and innovates by utilizing digital literacy.

Because of the rapid development of information and technology, learning media, including software and hardware, have emerged. As a result, educators' roles as learning resources will gradually shift, with educators increasingly serving as facilitators. As a result, when media learning patterns begin to dominate learning in and out of the classroom, educators as facilitators are anticipated to be formed for them to construct true learning models. It is hoped that students would become more self-sufficient in understanding the educational materials offered in class and outside of class.

Methods

This research is a research and development or Research and Development (R&D). The product resulting from this research is a performance assessment model on an inquiry learning model containing digital literacy in class V of Elementary School. From the modified development (R&D) model of Borg and Gall (1983: 775), the researcher only carried out 4 steps, namely: Research and Initial Information Gathering, Planning, Design of Initial Product Format, and Initial Field Trial. This development research was carried out in the even semester of the 2021/2022 academic year in class V on theme 6 sub-theme 3. The population in this study were all educators and students of class V SD in Gedong Tataan District which consisted of 9 public elementary schools with a total of 22 educators. Detailed information is presented in the following table:

<table>
<thead>
<tr>
<th>No</th>
<th>School Name</th>
<th>Number of Teachers at Grade V</th>
<th>Number of Grade V Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SDN 1 Gedongtataan</td>
<td>2</td>
<td>A=29, B=30</td>
</tr>
<tr>
<td>2</td>
<td>SDN 3 Gedongtataan</td>
<td>2</td>
<td>A=28, B=28</td>
</tr>
<tr>
<td>3</td>
<td>SDN 6 Gedongtataan</td>
<td>2</td>
<td>A=31, B=24</td>
</tr>
<tr>
<td>4</td>
<td>SDN 12 Gedongtataan</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>SDN 37 Gedongtataan</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>SDN 20 Gedongtataan</td>
<td>2</td>
<td>A=24, B=23</td>
</tr>
<tr>
<td>7</td>
<td>SDN 23 Gedongtataan</td>
<td>2</td>
<td>A=21, B=20</td>
</tr>
<tr>
<td>8</td>
<td>SDN 46 Gedongtataan</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>9</td>
<td>SDN 47 Gedongtataan</td>
<td>2</td>
<td>A=21, B=20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>22</td>
<td>244</td>
</tr>
</tbody>
</table>

Source: KUPT Data of Gedong Tataan Sub District
Data collection techniques used in this study were interviews, questionnaires, observation, and documentation. Data were analyzed descriptively qualitatively and descriptively quantitatively.

**Findings**

**Research and information collection**

(1) The assessment is still dominated by written assessment.
(2) Educators aiming for the 2013 Curriculum are now having problems developing performance assessment instruments and evaluating them, which means that performance assessments are not being carried out optimally.
(3) Up to the present, the evaluation process has only focused on concept mastery (knowledge), which is measured via objective paper and pencil assessments.
(4) Assessment of student learning outcomes concentrating on books has not yet increased students’ digital literacy.
(5) Inquiry learning has not directed students to find and analyze data from the internet or other sources, therefore students’ digital literacy skills have not been established.
(6) The average achievement of students’ literacy skills in PIRLS and Pisa is low, falling below the international minimum average score. This means that learning innovations that improve pupils’ reading skills are required.
(7) Many educators continue to be confused about what digital literacy is and how it is used. Furthermore, instructors and primary school pupils in Indonesia are less accustomed to thematic learning with a touch of digital literacy.
(8) While 81.8% of educators already have digital devices, they are not being used properly in instructional activities.

**Planning**

The results of the product planning stage in this study are as follows:

(1) Define the objective of utilizing the performance assessment instrument.
(2) Material preparation
(3) Preparation of the framework for performance assessment instruments
(4) Preparation of assessment instruments

**Developing the preliminary form of the product**

The preparation of the initial product format consists of the following parts:

a) Initial Product Draft

![Figure 1. Initial Product Draft](image)

b) Validity of the Performance assessment Instrument in the inquiry learning model containing digital literacy

<table>
<thead>
<tr>
<th>No</th>
<th>Validator</th>
<th>Score</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Evaluation Expert</td>
<td>81.81%</td>
<td>Highly Feasible</td>
</tr>
<tr>
<td>2</td>
<td>Pedagogic Material Expert</td>
<td>94.23%</td>
<td>Highly Feasible</td>
</tr>
<tr>
<td>3</td>
<td>Language Expert</td>
<td>93%</td>
<td>Highly Feasible</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>89.68%</strong></td>
<td><strong>Highly Feasible</strong></td>
</tr>
</tbody>
</table>
Preliminary Field Testing

The results of the educator response questionnaire are as follows.

<table>
<thead>
<tr>
<th>No</th>
<th>Assessed Aspect</th>
<th>Percentage Per Aspect</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Attraction</td>
<td>87.5%</td>
<td>Highly Practical</td>
</tr>
<tr>
<td>2</td>
<td>Usage Ease</td>
<td>84.7%</td>
<td>Highly Practical</td>
</tr>
<tr>
<td>3</td>
<td>Product Benefit</td>
<td>97.2%</td>
<td>Highly Practical</td>
</tr>
<tr>
<td></td>
<td><strong>Average Percentage</strong></td>
<td><strong>89.8%</strong></td>
<td><strong>Highly Practical</strong></td>
</tr>
</tbody>
</table>

Table 3. Students' Response Result in Initial Field Trial

Source: Processing Result of Primary Data

Discussion

Material expert validation received 94.23% with very good criteria, evaluation validation received 81.81% with good criteria, and language expert validation received 93% with good criteria. The expert has received the instrument, both in content and format, without any changes, which indicates that the instrument is practical (Yusuf, 2018: 18). Sunarti (2014: 135) asserted the same thing, stating that the instrument is theoretically feasible because it has met the criteria for presentation or design aspects, construction or assessment aspects, substance or material aspects, and language aspects through expert validation.

The practicality of the performance assessment instrument in the inquiry learning model contains practical digital literacy. This stage's goal is to collect data that will be utilized to determine the readability and applicability of performance evaluation instruments in the inquiry learning paradigm that includes digital literacy. The product was tested on elementary school teachers and fifth-grade students. The average teacher response rating for the performance assessment instrument was 85.1% with very attractive criteria, 87.5% with very easy criteria, and 82.6% with very useful criteria. Meanwhile, the students' practicality test score was 83.28% with very interesting criteria, 81.15% with very easy criteria, and 85.85% with very useful criteria.

The practicality of the performance evaluation instrument in the inquiry learning model includes practical digital literacy as shown in the early field trials and main field trials by educators utilizing a practical answer questionnaire consisting of attractiveness, convenience, and usefulness. This is consistent with Noviana's research (2019: 1-43), which states that the assessment tool is said to be practical by considering three factors. These factors are attractiveness, which produces interest, desire, or attraction to the instrument based on its color, image, and substance. Second, there is the issue of convenience, specifically the use or installation of basic, easy-to-use instruments. Third, the usefulness element refers to the instrument's ability to provide advantages by measuring or analyzing it following the objectives established.

A practical assessment instrument for educators should meet the criteria of practicality in terms of the attractiveness of the instrument in the form of visuals, as well as ease of use and clear instructions (Wulandari, 2021: 240). The performance evaluation instrument in the inquiry learning model that includes digital literacy is stated to be practical because it is compiled based on basic competencies and structured into inquiry learning indicators. This is consistent with Prastowo's (2013: 226) statement that practicality is an instrument that is easy to use and comes with detailed instructions.

Based on these explanations, which come in the form of the educator's response's practicality results, supported by theory and the findings of prior relevant research with aspects of attractiveness, convenience, and utility, an assessment of the instrument's practicality with very practical criteria can be made. In other words, it can be said that the performance assessment tool on the inquiry learning model contains useful digital literacy employed by educators.

Conclusion

Based on the study's findings, it can be concluded that the performance assessment instrument developed for the inquiry learning model with digital literacy is suitable for use by educators to measure or assess students' performance. Besides, the performance assessment instrument has also proven useful for use by educators to measure or evaluate students' performance.

References


Regulation of Ministry of National Education (Permendiknas) Number 22 year 2006 about The Content Standard of Indonesian Language Learning.
Permendikbud No 23 Tahun 2016 about Standard of Educational Assessment
Peraturan Pemerintah Republik Indonesia Nomor 20 Tahun 2016 tentang Standar Kompetensi Lulusan