A META-ANALYSIS: USE OF STUDENT WORKSHEETS BASED ON LOCAL WISDOM FROM 2013-2022

Munjiatun\textsuperscript{1}, Otang Kurniaman\textsuperscript{2}, Guslinda\textsuperscript{3}, Zufriady\textsuperscript{4}, Siti Kurnia Rahayu\textsuperscript{5}, Yuyun Santika\textsuperscript{6}

\textsuperscript{1,2,3,4,5,6}Elementary School Teacher Education Study Program, Universitas Riau, Indonesia

\textsuperscript{1}munjiatun@lecturer.unri.ac.id, \textsuperscript{2}otang.kurniaman@lecturer.unri.ac.id, \textsuperscript{3}guslinda@lecturer.unri.ac.id, \textsuperscript{4}zufriady@lecturer.unri.ac.id, \textsuperscript{5}siti.kurnia1115@student.unri.ac.id, \textsuperscript{6}yuyun.santika1174@student.unri.ac.id

ABSTRACT

Abstract: Research that was conducted by researchers from 2013-2022 has mostly been about teaching materials combined with local wisdom in learning in elementary and junior high schools (SMP). However, there is still certain research on students’ worksheets related to local wisdom based on the content of social science learning subjects in elementary schools. This article provides an overview of the percentage of use of student worksheets, the use of research methods, and the results or positive impacts or contributions of the research on the motivation of an educator to create or modify teaching materials based on local wisdom. Meta-analysis was carried out by searching for articles from web journals through Google Scholar and obtaining 50 articles that were saved in the research data documents. After the analysis, it was obtained that 30 articles matched the criteria. The meta-analysis that was carried out produced an overview that the most dominant percentage of students' worksheets was 27% in 2020 and the research method used was the R&D method with a percentage of 64%. And the results of the research were getting good responses from validators, teachers, and students with the average category being very good.

Keywords: a meta-analysis, students' worksheet, local wisdom

<table>
<thead>
<tr>
<th>ARTICLE HISTORY</th>
<th>ABSTRACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepted: 20 Juli 2022</td>
<td>Kata Kunci: metaanalisis, lembar kerja siswa, kearifan local</td>
</tr>
<tr>
<td>Published: 25 Agustus 2022</td>
<td>CITATION</td>
</tr>
</tbody>
</table>
INTRODUCTION

The nature of education is a process to influence and shape students so that they can adapt well to their environment. Education is one of the means for the formation of humanity so that the position of humans as subjects of culture can be maintained and developed (Kristin & Artikel, 2018). The changing times that are increasingly sophisticated like today have made the nation's culture slowly eroded and abandoned. Therefore, awareness of culture is needed for the next generation, one of which is education (Fauzi, 2022). Integrating subjects with local culture in teaching materials is one solution to introduce local wisdom to students. Utilization of culture which is an element of local wisdom can foster self-awareness in preserving nature. Teaching materials used such as student worksheets (LKPD) that are good and appropriate will help students in groups or independently in doing assignments, understanding lessons and improving students' knowledge and skills. Student worksheets prepared by educators can be designed and developed according to the circumstances and situations of learning activities that will be faced (Mursalim & Rumbarak, 2021).

The meta-analysis of this article is important because it can provide an overview of LKPD based on local wisdom that is able to solve the problem of the erosion of national culture in the current era. Based on research that has been done by researchers, teaching materials based on local wisdom can improve students' academic abilities and understanding of local culture. However, the values held by the community which are full of local wisdom values are ignored in various lessons, including social studies in elementary schools (Zuhdan, 2013). Whereas social studies is a subject that is very closely related to social life which when combined with local wisdom can improve the quality of learning and learning will be more meaningful for students. Therefore, local wisdom-based LKPD is needed in social studies learning in elementary schools.

Social studies learning in elementary schools has a goal that emphasizes the skills of students in solving problems experienced by themselves and other individuals related to everyday life. Social studies subjects are arranged systematically, and integrated in the process of maturation and successful adaptation in social life (Krismona Arsana & Sujana, 2021). Thus, it is important to integrate social studies learning with local wisdom that contains values, norms, beliefs and practices that are shared, created and passed down from generation to generation accompanied by local technology. This is in line with Law Number 23 of 2003 concerning the National Education System which states that national education is education based on Pancasila and the 1945 Constitution which is rooted in religious values, Indonesian national culture and is responsive to the demands of changing times (Undang-Undang No.23 Tahun 2003 Tentang Sistem Pendidikan Nasional, n.d.). The meta-analysis of this article aims to provide an overview of the use of appropriate local wisdom-based teaching materials to increase students' understanding of local culture and form a generation that loves and participates in maintaining and preserving local culture.

RQ1: What is the percentage of students' use of worksheets from 2013-2022?
RQ2: How is the use of research methods and student worksheet research results?

RESEARCH METHODS
Meta-analysis is done by searching for articles from web journals through Google Scholar which is widely used to find trusted sources of literature at the Google Scholar information center. Which, there are many articles from various web ejournals available at public and private universities in Indonesia. The author searches for articles by writing the keywords "student worksheets based on local wisdom". With these keywords, the authors found many articles on student worksheets as well as other teaching materials such as modules and student worksheets (LKPD). The articles found were 50 articles as research data documents, however, only 30 articles matched the criteria sought by the author. The analytical techniques used in conducting this meta-analysis are 1) to record articles that match Microsoft Excel as a place to store and analyze research data. 2) analyze articles and create presentation charts according to the research statement category. 3) describe the graphic data for each category. The article meta-analysis process carried out is as follows.

Search for articles through Google Scholar: https://scholar.google.com

The documents obtained are 50 articles.

Conducted article selection by meta-analysis of titles, research methods, analytical techniques, and research results and obtained 30 suitable articles.

Conduct analysis to determine the presentation of the dominance of the use of research methods, analytical techniques and results of research as well as the year of research.

Provide code by mapping meta-analysis criteria in Microsoft excel.

Create a presentation table in Excel and describe the results of article meta-analysis.

**Figure 1. Article Meta-analysis Process**

**RESULTS AND DISCUSSION**

Based on the meta-analysis of 30 articles, the percentage of students' use of worksheets is quite high. But the use of student worksheets each year is different. In 2013 the percentage of student worksheet usage was 3%, in 2016 it was 14%, in 2017 it was 7%, in 2018 it was 3%, in 2019 it was 10%, in 2020 it was 13%, in 2021 it was 23%, and 2022 is 27%. In 2013 the use of student worksheets was low, only 3% because this year the use of teaching materials in the form of comics was more dominant. Because students who study using comics oriented to local Balinese wisdom are
superior to students who learn without using comics oriented to local wisdom (Pramadi et al., 2013). In 2016 the use of student worksheets was not much but it was more than 2013. Because in that year, researchers tended to use student worksheets (LKS). In 2017 and 2018 the use of student worksheets was very little. Because in 2017 researchers focused on strengthening character education. Character education which consists of developing a positive attitude, essential mindset, normative commitment, and ability components based on IESQ (Rachmadyanti, 2017). In 2018 it is more likely to use ethnopedagogy to regulate behavior that is beneficial for the common interest of the community if it is associated with local wisdom (Oktavianti & Ratnasari, 2018). Meanwhile, in 2019 and 2020 the use of student worksheets began to increase from the previous year and was more likely to use models, rhyme-based student worksheets, animated videos, audio-visual media, and training on making student worksheets for educators in a training or upgrading.

![Figure 2. Mapping Data for Years of Use of Student Worksheets](image)

Judging from the graph, there has been an increase in the use of student worksheets in the last 2 years. It can be seen in table 1 that in 2022 the use of student worksheets was more than in the previous year with a value of 27%. Because the results of research conducted by researchers show that student worksheets have a positive impact on learning and can be associated with various fields of science or subjects. Student worksheets based on local wisdom design the learning process not only in the classroom, but also through the students' immediate environment (Arianty et al., 2021). This is one of the references that the student worksheets have a good impact on the learning process and learning outcomes. In 2020 and above, the use of student worksheets has increased with the development of student worksheets carried out by researchers, especially students at both public and private universities.
In the 2013-2022 period, the teaching materials used by researchers in addition to student worksheets were modules, student worksheets, models, thematic teaching materials, animated videos, comics, ethnopedagogy, and audio-visual media. Curriculum changes that occur make little influence in the selection of teaching materials used, with differences in the use of teaching materials in research by researchers will provide a wider perspective in solving problems in the world of education. Thus, students feel different simulations from the use of different teaching materials.

Table 1. Overview of Meta-analysis Results Data

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Author</th>
<th>Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>2016</td>
<td>Siswani, et al.</td>
<td>Participatory Learning and Action</td>
<td>It can increase students' insight into Banyumas local wisdom and make learning interesting.</td>
</tr>
<tr>
<td>3.</td>
<td>2016</td>
<td>Pratiwi</td>
<td>R&amp;D</td>
<td>Student worksheets are valid in terms of content and material aspects with an average of 4.44 very good categories, language aspects are good, design aspects are very good and teacher responses get good categories and students are very good categories.</td>
</tr>
<tr>
<td>4.</td>
<td>2016</td>
<td>Utari, et al.</td>
<td>Descriptive Qualitative</td>
<td>Thematic learning based on local wisdom will be a connection in understanding students to act appropriately in facing the ASEAN economy.</td>
</tr>
<tr>
<td>5.</td>
<td>2016</td>
<td>Dasar</td>
<td>Descriptive Qualitative</td>
<td>Through learning art and culture in the form of dance, it can reflect an attitude of tolerance, solidarity and togetherness.</td>
</tr>
<tr>
<td>6.</td>
<td>2017</td>
<td>Rachmadyanti</td>
<td>Descriptive Qualitative</td>
<td>Strengthening character education through local wisdom makes learning more meaningful than contextual learning.</td>
</tr>
<tr>
<td>7.</td>
<td>2017</td>
<td>Sumayana</td>
<td>Qualitative</td>
<td>Literature learning in elementary schools based on local wisdom can stimulate students to be active in learning and easily understand the material being taught because it is related to everyday life.</td>
</tr>
<tr>
<td>8.</td>
<td>2018</td>
<td>Oktavianti, &amp; Ratnasar</td>
<td>Mixed methods and concurrent triangulation strategies.</td>
<td>The use of local content-based teaching materials makes it easier for students to understand the material.</td>
</tr>
<tr>
<td>9.</td>
<td>2019</td>
<td>Primayanti, et al.</td>
<td>Experiment</td>
<td>Students who learn to use PBL models based on local wisdom are superior to conventional ones.</td>
</tr>
<tr>
<td>10.</td>
<td>2019</td>
<td>Nugroho, et al.</td>
<td>R&amp;D (8 Stages)</td>
<td>Based on the analysis of the linguistic expert validation questionnaire, the design, content/material got a good category with a percentage of 75.83%. From these results, it is stated that this teaching material is valid, practical and effective.</td>
</tr>
<tr>
<td>No.</td>
<td>Year</td>
<td>Author(s)</td>
<td>Methodology</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>------</td>
<td>----------------------</td>
<td>--------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>11</td>
<td>2019</td>
<td>Lukman, et al.</td>
<td>Model DDD-E</td>
<td>The development of animation videos based on local wisdom in the fifth grade science learning was declared valid and practical as well as efficient.</td>
</tr>
<tr>
<td>12</td>
<td>2020</td>
<td>Sururuddin, et al.</td>
<td>R&amp;D</td>
<td>Audio-visual media based on Lombok's local wisdom got validation results in the &quot;good&quot; category and the student's response based on the questionnaire was very responsive.</td>
</tr>
<tr>
<td>13</td>
<td>2020</td>
<td>Soi, &amp; Aiman</td>
<td>Experiment</td>
<td>Can significantly improve students' conceptual mastery of the environmental themes of our friends.</td>
</tr>
<tr>
<td>14</td>
<td>2020</td>
<td>Prihastari, &amp; Widyaningrum</td>
<td>A participatory and awareness-raising approach.</td>
<td>After integrating local culture in making student worksheets, significant changes and improvements were found in integrating local wisdom in the form of worksheets to improve student learning outcomes.</td>
</tr>
<tr>
<td>15</td>
<td>2020</td>
<td>Rahmatih, et al.</td>
<td>Qualitative (literature study)</td>
<td>In science learning in elementary schools that utilize local wisdom, it provides opportunities for students to find knowledge independently and in accordance with the character of science learning such as products, processes and attitudes.</td>
</tr>
<tr>
<td>16</td>
<td>2021</td>
<td>Krismona &amp; Sujana</td>
<td>R&amp;d (ADDIE)</td>
<td>PBL-based student worksheets get very good qualifications and meet the eligibility for use by educators and students.</td>
</tr>
<tr>
<td>17</td>
<td>2021</td>
<td>Mareta</td>
<td>R&amp;D (4D)</td>
<td>The learning modules resulting from this development are valid, practical and effective.</td>
</tr>
<tr>
<td>18</td>
<td>2021</td>
<td>Sulistyani &amp; Deviana</td>
<td>R&amp;D (Dick &amp; Carey development model)</td>
<td>Based on the results of the validation by experts, this HOTS math student worksheet was declared valid in the very good category and the test results obtained very valid, interesting, practical and effective results.</td>
</tr>
<tr>
<td>19</td>
<td>2021</td>
<td>Prihastari &amp; Widyaningrum</td>
<td>R&amp;D (ADDIE)</td>
<td>Student worksheets are very feasible according to media experts with a percentage of 84.375% and 88.46% are very feasible according to material experts, and get a score of 4.4 from students in the very feasible category. So, this student worksheet is very feasible to be disseminated to the field.</td>
</tr>
<tr>
<td>20</td>
<td>2021</td>
<td>Vebrianti, et al.</td>
<td>R&amp;D (4D)</td>
<td>The student worksheets were declared very feasible by the validator with a percentage score of 88.3 and the limited trial obtained a score of 95.76 in the very good category and the teacher's response obtained an average of 90.1 with a very decent category.</td>
</tr>
<tr>
<td>21</td>
<td>2021</td>
<td>Arianthy, et al.</td>
<td>R&amp;D (ADDIE)</td>
<td>The student worksheets based on local wisdom in the Lawang-Malam sub-district received a validation percentage of 88% with a very good category, obtaining a student response of 98%. So this student worksheet is feasible and interesting to be used as a reference in the implementation of learning in introducing the cultural diversity of the Indonesian nation.</td>
</tr>
</tbody>
</table>
| 22  | 2021 | Murni                | R&D (ADDIE)                                      | Student worksheets get validation results from validators with very valid categories. The results of practicality
<table>
<thead>
<tr>
<th>No.</th>
<th>Year</th>
<th>Authors</th>
<th>Methodology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.</td>
<td>2022</td>
<td>Aminullah, &amp; Elihami.</td>
<td>R&amp;D (ADDIE)</td>
<td>The developed student worksheets received a very good category from the validators and the responses of teachers and students. The student worksheet obtained a percentage of 75% and 94% with the category of being well implemented, and the effectiveness being in the medium category. So that this student worksheet is valid, practical and effective.</td>
</tr>
<tr>
<td>24.</td>
<td>2022</td>
<td>Asmara, &amp; Satria</td>
<td>R&amp;D (Dick &amp; Carey development model)</td>
<td>Student worksheets get a validation percentage of 83.28% from validators and 88.75% limited trial results in the very good category, so this student worksheet is valid, practical and effective.</td>
</tr>
<tr>
<td>25.</td>
<td>2022</td>
<td>Risyanti, dkk.</td>
<td>Qualitative Descriptive</td>
<td>The local wisdom-based student worksheet on theme 6 My ideals contains science material that can be linked to local wisdom in the surrounding area, for example the wisdom of the people near the sea. This can increase students' understanding of the material being taught and attract students' attention to learning.</td>
</tr>
<tr>
<td>26.</td>
<td>2022</td>
<td>Meilana, &amp; Aslam.</td>
<td>R&amp;D (ADDIE)</td>
<td>Mathematics teaching materials based on local wisdom that were developed were categorized as good and suitable for use.</td>
</tr>
<tr>
<td>27.</td>
<td>2022</td>
<td>Wardani, &amp; Suniasih</td>
<td>R&amp;D (ADDIE)</td>
<td>Interactive Student Worksheets based on local wisdom Balinese akasara material is effective and feasible to be applied to fifth grade elementary school students, this is in accordance with the results of the material test with a percentage of 98.7%, media experts 98.6%, design experts 100%, teacher responses 97.5% and 96.1% student responses.</td>
</tr>
<tr>
<td>28.</td>
<td>2022</td>
<td>Restian, et al.</td>
<td>R&amp;D (ADDIE)</td>
<td>The results of the validation of the experts stated that the material was 90.67%, the teaching material expert was 73.33% and the linguist was 93.33%. The results of the questionnaire responses from teachers are 85.71% and student responses are 91.71% so that student worksheets based on Malang local wisdom are interesting and effective to use in learning.</td>
</tr>
<tr>
<td>29.</td>
<td>2022</td>
<td>Hattarina, et al.</td>
<td>R&amp;D (ADDIE)</td>
<td>The results of the validation of teaching materials got 88%, thematic learning validation got 88.6% with a very good category. The results of the student response questionnaire are 98% so this student worksheet is feasible and interesting to be used as a reference in the implementation of learning to develop students' motivation and interest in learning.</td>
</tr>
<tr>
<td>30.</td>
<td>2022</td>
<td>Agung, &amp; Wulandari</td>
<td>R&amp;D (ADDIE)</td>
<td>The results of the feasibility test for STEAM-based interactive student worksheets obtained 93.75% of material experts in the very good category, design experts 87.50% in the good category, media experts in 90% in the very good category, the test results in 90% in the very good category, so the participants' worksheets These</td>
</tr>
</tbody>
</table>
Table 1 illustrates that the use of student worksheets will provide convenience in the learning process. Ease in the learning process because there are work instructions that students must do so that the learning objectives desired by the teacher can be achieved. This student worksheet is feasible and interesting to be used as a reference in the implementation of learning to develop students’ motivation and interest in learning. In terms of the method developed, it can be seen in Figure 3.

![Figure 3. Percentage of Use of Research Methods](image)

Based on the graphic above, the article meta-analysis conducted by the author is dominated by the R&D (Research and Development) research method. The R&D method has a percentage of 64%, the qualitative method is 13%, the experimental method is 10%, the participatory learning and action method is 7%, and the mixed methods and concurrent triangulation strategy is 3%, and the DDD-E model is 3%. Which of these is illustrated that the development of teaching materials such as student worksheets has increased in number in recent years. In the development process carried out by researchers, the most widely used R&D models are ADDIE, 4D, 6-stage R&D and 8-stage R&D. However, the trend of the researchers is the ADDIE model.

The results of research conducted by researchers based on table 2 above illustrate that the use of teaching materials such as modules, models, student worksheets, animated video media, audio-visual media, and student worksheets has a positive impact on the learning process, learning outcomes and student character. In experimental articles, the research results tend to be about the use of comics,
student worksheets, teaching materials and comics. The availability of teaching materials such as textbooks and student worksheets, which are limited to explanations of concepts accompanied by examples of questions, makes students less motivated in learning science/physics learning concepts (Pramadi et al., 2013) which motivates the emergence of other teaching materials. The limitations of interesting teaching materials, having steps, explanations of the material and the questions in it are very minimal available in elementary schools. Therefore, many researchers carry out various studies including development to solve problems that occur in the world of education.

In elementary school education, the concept of a subject is still given and explained in general and media is needed to concrete the abstract of the material concept, one of which is using teaching materials based on animated videos, and audio-visual media. Media that displays images and sounds will attract students' interest in paying attention to explanations or media displayed by an educator. In addition, something seen will be remembered longer in the memory and understanding of students than from hearing. If the two are combined, it will optimize students' understanding of the learning material explained by a teacher (Sururuddin et al., 2020). In this meta-analysis, the materials used by the researchers are science, physics, arts and culture, Indonesian language, thematics, mathematics, and social studies. However, in terms of numbers, researchers tend to use science and Indonesian subjects in their research.

The results of the meta-analysis of articles using the R&D method also showed good results. Overall research and development get satisfactory results on the product. In research on product feasibility development, which is made and thoroughly researched by researchers, it is determined from the results of the validation of the validators, both product validators, language, material, design and others. And the feasibility of usability is also determined from the results of small or large scale trials to teachers and students. Research on the development of student worksheets based on local wisdom of the Masserempulu culture with the theme of my country's diversity in elementary schools obtained a very valid category, namely material validation 85%, media 75% while for an average of 80% with a very valid category and the responses of students and teachers were good (Aminullah et al., 2022).

CONCLUSIONS

Based on the meta-analysis of 30 articles, the percentage of students' use of worksheets is quite high. But the use of student worksheets in each year is different. In 2013 the percentage of student worksheet usage was 3%, in 2016 it was 14%, in 2017 it was 7%, in 2018 it was 3%, in 2019 it was 10%, in 2020 it was 13%, in 2021 it was 23%, and 2022 is 27%. The results of the researchers, the most use of student worksheets in 2022 with a percentage of 27% compared to other years. While the use of the R&D method has a percentage of 64%, qualitative methods 13%, experimental methods 10%, participatory learning and action methods 7%, and mixed methods and concurrent triangulation strategies 3%, and the DDD-E model is 3%. In a period of approximately 8 years, the use of student worksheets in research has increased, especially in the last two years. In research, researchers mostly use the R&D method with the ADDIE model. Research and development produces new products or modifies existing products into new ones as one way to solve educational problems. And the results of the study show a positive direction where research on the development of student worksheets based on local wisdom of the Masserempulu culture with the theme of my...
country's diversity in elementary schools gets a very valid category, namely material validation 85%, media 75% while for an average of 80% with a very valid category, and the response of students and teachers is good. Then, other studies also show good results such as experimental research which shows that there is a positive influence in the use of teaching materials such as student worksheets in improving learning outcomes.

REFERENCE


Munjiatun, Dkk | Meta Analisis, Lembar Kerja Siswa
Halaman | 1127

& Learning in Faculty of Education, 8(2), 110-125.


Undang-undang No.23 Tahun 2003 tentang Sistem Pendidikan Nasional. (n.d.).


https://doi.org/10.32332/elementary.v5i2.1750


https://doi.org/10.36232/jurnalpendidikanndasar.v3i2.1155


7
Undang-undang No.23 Tahun 2003 tentang Sistem Pendidikan Nasional. (n.d.).