

DEVELOPMENT OF TEACHING MATERIALS OF JEMBER'S LOCAL WISDOM CROSSWORD PUZZLES FOR ELEMENTARY SCHOOL HIGHER CLASS STUDENTS

Faisma Isnaini Rizki Amalia ^{a,1*}, Suhartiningsih ^{a,2}, Zetti Finali ^{a,3}

^a Program Studi Pendidikan Guru Sekolah Dasar, Universitas Jember, Jember, 68121, Indonesia

¹ 160210204138@mail.unej.ac.id *; ² suhartiningsih.fkip.unej@gmail.com; ³ zetti.fkip@unej.ac.id

*korespondensi penulis

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ABSTRACT

This study aims to create a product in Indonesian language teaching materials by containing crossword puzzles of Jember's local wisdom that are valid, interesting, and effective when used by students during the learning process. The stages of the product development process adopt the 6-stage Design-Based Research (DBR) approach by Peffer et al. in Gems et al. (2016). The results of product validation and testing obtained the following data (a) the results of validation by validators and educators reached a percentage value of 86.6 with very feasible criteria, (b) the results of large-scale trials on products, the value of completeness of student learning outcomes reached a percentage of 92% with 93% of the total respondents giving a positive response to the teaching materials, and (c) the teaching materials developed were very valid, effective and interesting to use in the learning process based on the results of validation, student learning outcomes, and student responses toward the teaching materials.

INTRODUCTION

The education system in Indonesia has undergone several changes over time. The Indonesian school system is currently using the 2013 curriculum. As a reference for assessment, the 2013 curriculum incorporates three educational domains (Wijaya & Sholeh, 2021). The 2013 curriculum promotes learning through a scientific method focused on the environment, allowing students to participate actively in the learning process. Changes in the educational system influence not only the curriculum's applicability but also the role of each topic, particularly the Indonesian language course (Aji & Budiyono, 2018). According to Musaddat, Indonesian language instruction in the 2013 curriculum is text-based language learning (Musaddat et al., 2020). Indonesian plays an essential part in the curriculum as an introduction to other learning resources. In the text-based learning method of the Indonesian language for pupils, a scientific approach is employed that comprises watching, asking, attempting, reasoning, analyzing, and conveying the results. This is because, under the 2013 curriculum, learning takes place not just between teachers and students (as in the traditional model), but also in the surrounding environment, which may be exploited as a source of instructional materials (Setiawan, 2020). The facts obtained by researchers in the field at SDN Kepatihan 03 Jember, stated that the renewal of teaching materials based on the environment around students was very important. This is also reinforced by the conclusions of interviews with students and educators as follows (1) the lack of teaching materials that carry the theme of the surrounding environment, especially Jember local wisdom in learning, (2) many students are not familiar with various kinds of local wisdom in the surrounding environment (3 According to one educator, students prefer to read teaching materials combined with games so that the learning process is more fun and not boring. Teaching materials are one of the important factors in the learning process because of their important role as a learning resource.

Lawrence et al. states that teaching materials are a set of subject matter that refers to the curriculum used in order to achieve predetermined competency standards and basic competencies (Lawrence & Tar, 2018). Teaching materials can also stimulate students to study harder. For this reason, the development of teaching materials by carrying Jember's local wisdom material is considered to be able to assist teachers in conveying material about the environment and help students be more enthusiastic in learning and preserving important values in the local wisdom around them. The notion of learning in the 2013 curriculum, which makes the surrounding environment a source of learning, cannot be separated from the selection of local wisdom in teaching materials. According to Jumriani, local wisdom is cultural ideals concerning notions that dwell in most people's brains about things that they must consider valuable/valuable in life and serve as the highest rules (Jumriani et al., 2021). The development of local wisdom materials in teaching materials is also expected to help students, the nation's next-generation, to always preserve and love the local wisdom around them. During learning, students tend to feel bored. Therefore, the local wisdom material will be packaged with a combination of crossword puzzle brain teasers and fun reading texts. This is also in line with previous research on the effectiveness of using crossword puzzles in the learning process studied by Yudiati et al. (Yudiati & Rizqi, 2021), Ritonga et al. (Ritonga et al., 2021), and Zamani et al. (Zamani et al., 2021). The crossword game was chosen as an alternative to renewing teaching materials because it was felt that it could help students practice solving problems with a scientific approach (Fachrozi et al., 2021). The crossword game was also chosen because, according to Setiawan and Zuhdi (2019), it can motivate students' enthusiasm in learning and help students expand their knowledge through the vocabulary learned during playing (Anwar, 2018). So that later learning Indonesian by combining crossword puzzle games is more meaningful and very effective in its application in helping the learning process. What has to be known, based on the preceding explanation, is how the process and outcomes of the product generated in the form of Indonesian language teaching materials based on Jember's local knowledge crossword puzzles for elementary school (SD) top level students.

RESEARCH METHODS

The study is a type of development research that uses a Design-Based Research (DBR) approach (Fahd et al., 2021). The end result is a product of Indonesian language teaching materials based on Jember local wisdom crossword puzzles for SD top level students. Development research, according to Ulandari, is a research process that produces, validates, and tests the effectiveness of an educational product in the form of models, approaches, modules, teaching materials, or learning media that can be used to support the effectiveness of learning processes and products while also increasing the power of learning (Ulandari et al., 2019). There are six research phases in the DBR approach, namely; (1) identifying problems; (2) formulating product development; (3) product design and development; (4) product testing; (5) evaluating product trial results; (6) communicating the results. The first phase of identifying the problem consisted of two activities carried out (a) field observations at SDN Kepatihan 03 Jember and (b) interviews with educators and ten top level students. The second phase is to formulate a development product containing details of the analysis of the problems found during the first phase, which will then be used as a determinant of Basic Competence (KD), developed local wisdom, and evaluation of student learning outcomes. Basic Competencies that are the basis for developing teaching materials are Indonesian Language Basic 3.7 to explore new knowledge contained in texts and 4.7 KD to convey new knowledge from non-fiction texts into writing in their own language. There are five kinds of Jember local wisdom that were chosen as the source material, namely (1) Tanjung Papuma Tourism Area (2) tobacco natural resources (3) Duplang site (4) Lahbako dance and (5) Puger sea picking with the evaluation of student learning outcomes in teaching materials in the form of crossword puzzles. The third phase of product design and development consists of three activities that must be carried out (a) preparation of teaching materials (b) product validation to experts and (c) product trials on a small scale. The validation results are then analyzed to see the level of product validity before being used in large-scale trials. In the fourth phase of product testing, in this

case, the researcher tested the product on two elementary schools, namely SDN Kepatihan 01 Jember and SDN Gebang 04 Jember, with class IV B SDN Kepatihan 01 Jember as the control class and class IV A and IV B SDN Gebang 04 Jember as the control class, or experimental class. The fifth phase evaluates the results of product trials by analyzing student learning outcomes data and questionnaires on student responses to teaching material products obtained in the fourth phase. The final phase of this approach is to communicate the results of the developed product and explain the validity and effectiveness of the product.

RESULTS AND DISCUSSION

The product of Indonesian language teaching materials based on Jember's local wisdom crossword puzzles for high school elementary school students was developed according to the design. The display of products that have been developed can be seen in Figure 1.

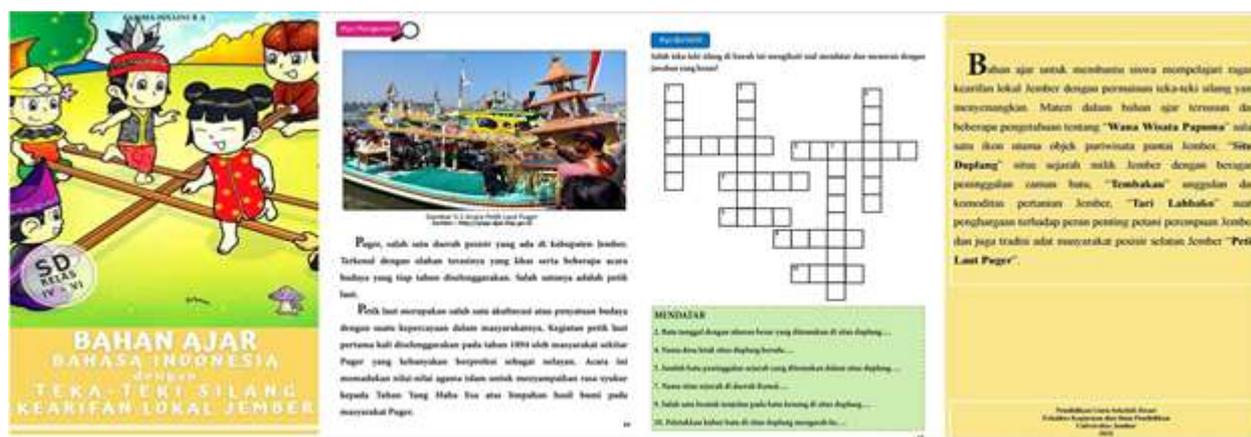


Figure 1. Display of Teaching Materials

Furthermore, the product was validated by five experts with the aim of knowing the level of product development validity. The average results of product validation I and II can be seen in Table 1.

Table 1. Average Product Validation Results

No	Jumlah Skor					Rerata
	Validator 1	Validator 2	Validator 3	Validator 4	Validator 5	
I.	81	71	84	82	72	78

Based on the results of product validation in Table 1, researchers conducted an analysis based on the Valpro formula, and it was found that the product had a validity of 86.6 with very feasible criteria. In addition to quantitative data, qualitative data is also obtained in the form of suggestions, criticisms, and inputs as the basis for product improvement in revision. The following are suggestions, criticisms, and inputs submitted by the validator (1) improving writing procedures during product preparation (2) improving the mapping of basic competencies, indicators, and learning objectives in the product (3) increasing colour combinations (4) increasing the size of the product and the picture in it (5) uses the correct Indonesian language and is in accordance with the education level of the research subject. The criticism and suggestions are given then become a reference in product improvement so that the product can be tested. The trials were carried out in two stages, namely, small group trials and large group trials. Small group trials were conducted after the product was declared valid. The product was tested on ten fifth grade students at SDN Jember Lor 04 with the Minimum Completeness Criteria (KKM) of 75. Based on the test results, it was found that the percentage of completeness of student learning outcomes was 86%, with 97% of students in the small group trial giving a positive response to the development product. Large group trials are carried out after the product is declared valid and has been tested in small groups. The large group trial was conducted in 3 classes in 2 elementary schools.

Thirty-two students of class IV B SDN Kepatihan 01 Jember became the control class, 32 students of class IV A and 32 students of class IV B SDN Gebang 04 Jember as the experimental class.

During the research, the results of student learning evaluations and student response questionnaires to the product became a reference for the level of effectiveness of product development. In the implementation of the trial, the experimental class students carried out learning using the developed product, while the students in the control class carried out learning without the development product. After learning is complete, students in the control class and experimental class are directed to fill in 25 objective questions as an evaluation of learning outcomes. Furthermore, students are also directed to fill out a student response questionnaire to the product development. The criteria for the effectiveness of teaching materials based on the percentage of completeness of student learning outcomes and student responses to the product can be seen in Table 2.

Table 2. Student Learning Outcomes

No	Kelas Eksperimen	Jumlah Siswa	Ketuntasan
1.	IV A SDN Gebang 04 Jember	32	30
2.	IV B SDN Gebang 04 Jember	32	29
Completeness Percentage			92%

Table 3 shows the percentage of completeness of student learning outcomes on the product effectiveness level of 92% with very effective criteria. The student responses obtained also stated that the product developed was very interesting and had an effect on the effectiveness of the product, with a percentage of positive student responses of 93%.

Table 3. Student Response Results

No.	Hasil Belajar Siswa	Jumlah		Kriteria Respon
		Jumlah Siswa	Persentase	
1.	IV B SDN Kepatihan 01 Jember	32	92 %	Positif
2.	IV A SDN Gebang 04 Jember	32	93%	Positif
3.	IV B SDN Gebang 04 Jember	32	94%	Positif
Percentage			93%	Positif

Based on the data obtained during the development research, it was found that the Indonesian language teaching materials based on the Jember local wisdom crossword puzzle for elementary school high-grade students met the criteria for being very suitable for students to use in the learning process. This is based on the product assessment obtained based on the results of validation by five validators and 86.6 teaching staff, with a note that the teaching material product needs to be improved according to the suggestions, comments, and input of the validator so that the product developed is better and attractive to students. The effectiveness of teaching materials and students' interest in teaching materials were assessed based on the results of the evaluation tests of student learning outcomes and student response questionnaires. These data were obtained in large-scale trials. Indonesian language teaching materials based on Jember's local wisdom crossword puzzles for elementary school high-grade students get very effective criteria in large-scale trials with a percentage value of student learning outcomes completeness of 92% in the experimental class. Teaching material products are also considered very attractive to students based on students' positive responses to the product. As many as 93% of students in the experimental class and control class think that the teaching materials developed are very interesting and motivate students to learn and preserve local wisdom, especially the local wisdom of Jember.

CONCLUSION

Indonesian language teaching materials are based on Jember's local wisdom crossword puzzles for top-level elementary school (SD) top-level students. The first phase starts from observing directly in

the environment to product design. The validator then assesses the product, and then the product is tested. According to the results in the discussion above, the development product was declared to meet the valid criteria, very effective and interesting for students to use in the learning process.

REFERENCES

- Aji, W. N., & Budiyo, S. (2018). The teaching strategy of Bahasa Indonesia in curriculum 2013. *International Journal of Active Learning*, 3(2), 58–64.
- Anwar, K. (2018). The Implementation of Cooperative Integrated Reading and Composition (CIRC), Explicit Instruction, and Crossword Puzzle Models for Increasing the Indonesian Language Student Outcomes. *1st International Conference on Creativity, Innovation and Technology in Education (IC-CITE 2018)*, 296–300.
- Fachrozi, I. F., Rahmawati, R., Andini, M. A., Tampubolon, E. M., & Tarigan, E. A. B. (2021). The Use of Crossword Puzzles as the Way to Increase Student's Vocabulary Mastery at SMA Tamansiswa Binjai. *Linguistic, English Education and Art (LEEA) Journal*, 4(2), 249–256.
- Fahd, K., Miah, S. J., Ahmed, K., Venkatraman, S., & Miao, Y. (2021). Integrating design science research and design based research frameworks for developing education support systems. *Education and Information Technologies*, 1–22.
- Jumriani, J., Mutiani, M., Putra, M. A. H., Syaharuddin, S., & Abbas, E. W. (2021). The Urgency of Local Wisdom Content in Social Studies Learning: Literature Review. *The Innovation of Social Studies Journal*, 2(2), 103–109.
- Lawrence, J. E., & Tar, U. A. (2018). Factors that influence teachers' adoption and integration of ICT in teaching/learning process. *Educational Media International*, 55(1), 79–105.
- Musaddat, S., Suryadi, I., & Suyanu, S. (2020). The Validity of Text Based Evaluation Learning Instruments: Reconstruction of Character Evaluation Instrument Models in the Indonesian Language Learning. *1st Annual Conference on Education and Social Sciences (ACCESS 2019)*, 305–309.
- Ritonga, A. W., Ritonga, M., & Septiana, V. W. (2021). Crossword puzzle as a learning media during the covid-19 pandemic: HOTS, MOTS or LOTS? *Journal of Physics: Conference Series*, 1933(1), 12126.
- Setiawan, B. (2020). The anxiety of educational reform and innovation: bridging of top-down and bottom-up strategies within practice educational reform of curriculum in Indonesia. *Studies in Philosophy of Science and Education*, 1(2), 87–96.
- Ulandari, L., Amry, Z., & Saragih, S. (2019). Development of Learning Materials Based on Realistic Mathematics Education Approach to Improve Students' Mathematical Problem Solving Ability and Self-Efficacy. *International Electronic Journal of Mathematics Education*, 14(2), 375–383.
- Wijaya, L. H., & Sholeh, M. (2021). Evaluation of 2013 Curriculum Implementation in Economic Learning Class XI in Madrasah Aliyah Dakwah Islamiyah Putra Nurul Hakim Kediri West Lombok. *Edunesia: Jurnal Ilmiah Pendidikan*, 2(1), 93–103.
- Yudiati, R., & Rizqi, H. (2021). The Development of Learning Media Based on Android Using Crossword Puzzles to Improve Student's Vocabulary Skill. *2nd Borobudur International Symposium on Science and Technology (BIS-STE 2020)*, 208–214.
- Zamani, P., Haghghi, S. B., & Ravanbakhsh, M. (2021). The use of crossword puzzles as an educational tool. *Journal of Advances in Medical Education & Professionalism*, 9(2), 102.