

# Handout Development Based On Crossword Puzzles in Economic Lessons

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**Abstract:- In fact, there was low motivated in the use of innovative learning media which caused the students become not really active in the learning process. A strategy to improve the learning outcomes is by developing a learning media in form of handout which is integrated with crosswords and could help teachers in the learning process. The purposes of this study is to produce a valid and practical media which can improve learning outcomes. Type of this study is research and development that used the 4-D (four-D) development model. The 4-D consist of four stages: defining, designing, developing and disseminating. As the result of the study; 1) validity of learning media with the percentage 89,5%, 2) validity of teacher responses questionnaire wiht the percentage 92,9% 3)validity of the students questionnaire responses was 85,7% which categorize very valid, 4) Teachers' practicality 83,9%, 5) Students' practicality 86,7%, 6) the students' learning outcomes completeness 84,4% which is categorized successful. In conclusion, handout based on crossword puzzles on economics subject are very valid, practical and can improve the students leraning outcomes.**

**Keywords:-** development, handouts, crosswords, economics.

## I. INTRODUCTION

Learning that involves students actively will be more effective if the teacher is able to use appropriate teaching materials. The learning process is inseparable from other interconnected components within it (Samuelsson & Johansson, 2006), (E. Susanti et al., 2020). One important component in the learning process is teaching material (Rondón & Vera, 2016). The use of *handouts* in the learning process can provide a great opportunity for students to get better learning outcomes (Kim, 2020), and also provide full opportunities for students to use their abilities and skills to do things themselves in developing their thought and communication processes (Kirschner et al., 2006).

The initial observation results obtained stated that the learning media in the form of *handouts* had never been used in the learning process at Al-Furqon Madrasah and only used printed books and student work sheets (LKS) provided by schools. Data from the subjects of private Madrasah Aliyah Private (MAS) Al Furqon Padang, the economic learning outcomes of class XI are still low, with an average daily exam score (UH) of 70. While the minimum completeness criteria (KKM) value determined by the school is 75. From 9 students only 2 people reached the KKM and 7 people who did not reach the KKM. The

incompleteness of learning outcomes occurs due to several factors, including learning resources that are still lacking. From these problems, it is necessary to have independent learning media as an alternative to the more interesting questions.

One of the learning media that can be used in the economic learning process is a crossword puzzle, and this is a learning medium that serves as an alternative to the question exercise and can also be used as an evaluation tool (Trinanda et al., 2018). Crosswords can enrich knowledge, so that they can be used as a medium in economic learning (Gössling & Hall, 2019). Judging from this, crossword puzzles can help students in learning (Rusmawan, 2018). The exercises in the form of crossword puzzles further encourage students' curiosity when presented attractively and are designed so that students learn in calm and pleasant conditions (A. Susanti, 2014). Crossword puzzles can encourage students to learn independently, that is, students find out for themselves the answers to the questions provided and students can develop their knowledge (Gössling & Hall, 2019).

## II. RESEARCH PROBLEM

The problems in this study are; 1) is there an increase in economic learning achievement in class XI students through the crossword puzzles *handouts* ?, 2) how is the change in disciplinary attitude in the XI grade students of Al Furqon Madrasah Private Al Furqon in following the process of economic learning through crossword puzzle *handouts* ?.

Aim this research is; 1) To know the increase in economic learning achievement in class XI Madrasah Aliyah Private Al-Furqon Padang through crossword media *handouts*, 2) to find out the change in disciplinary attitudes in class XI students Aliyah Private Al-Furqon Madrasah Padang by following the economic learning process through media *handouts* crossword puzzle.

## III. RESEARCH METHODS

The model of this research is research and development. This research methods used to produce certain products. Research development is a process or steps to develop a new product or improve existing products that can be accounted for. In this study developed learning media in the form of *handouts* that are useful for the learning process of class XI at Al Furqon Padang Private Madrasah. *Handout* learning media developed based on crossword puzzles.

Development of instructional media in the form of *handouts* based on this crossword learning model uses a 4-D model development device. This model consists of four stages of development, namely define, design, develop, and disseminate, or be adapted into a 4-D model, become defining, designing, developing, distributing. This research starts by making learning media in the form of *handouts*, then validation is done which will ultimately produce a valid and practical learning tool.

The purpose of this stage is to define and define learning requirements by analyzing competency standards and teaching materials based on the curriculum for education units (CEU). This definition stage consists of several steps, namely:

- *Initial to Final Analysis*, is a matter that really needs to be considered and becomes the basis for consideration to produce learning media products in the form of *handouts* currently in force. This analysis aims to bring up and determine the basic problems in economic learning so it is necessary to develop an economic learning *handout*.
- *Student Analysis*, student analysis was conducted to determine the characteristics of students which include age, ability, background knowledge, learning motivation, psychomotor, and the level of cognitive development of students. By knowing and understanding the characteristics possessed by students, it can be used as a general description of the material used in the process of designing and developing crossword based *handouts*.
- *Task analysis*, task analysis is a collection of procedures for determining content in learning units. Task analysis is carried out to detail the content of teaching material contained in *handouts* in outline. Task analysis can be in the form of content structure analysis including competency standards, basic competencies, and indicator.
- *Concept analysis*, concept analysis is done by identifying the main concepts to be taught and compiling systematically and linking one concept with other relevant concepts. Concept analysis is needed to identify declarative knowledge or procedures on the theme to be developed.
- *Learning objectives analysis*, learning objectives analysis is done by combining the results of task analysis and concept analysis in the learning objectives. From this analysis produced learning objectives that are the basis for making teaching materials developed.

The purpose of this stage is to prepare a *handout* based on the crossword learning model. Based on competency standard, Basic Competencies, and indicators according to CEU. At this design stage, *handout* framework is first prepared without ignoring the principles of *handout* preparation. *Handouts* that are designed contain *handout* components such as teacher and student instructions, material sheets, student notes sheets, evaluation sheets, and questions based on crossword puzzles.

This stage is to produce a learning media *handout* with three stages:

- Validation Instrument Rating Phase, at this stage the experts are asked to evaluate the validation instrument first before validating the learning media in the form of a *handout* that has been designed.
- Learning Media Validation Stage; a) Initial Validation, after the instrument is declared valid then a validation of learning media is carried out in the form of a *handout* by the validator, b) Revision Phase, enter the validator is used to improve or revise the learning media to be developed.
- Stage of Practicality of Learning Media Practicality is the level of use of instructional media by teachers and students, namely implementing revised learning based on validator assessment, instructional media in the form of *handouts* that are made are said to have very high practicality if they are practical and easy to administer in the sense of easy to use, easy to check, and complete with complete clear instructions.

After the validation process of the *handout* by 3 validators has been valid, then a *handout* based on a crossword puzzle is conducted to see the practicality of the *handout* before conducting the research. The product trial was conducted in class XI IPS of Ekasakti Senior High School Padang with 15 students.

The data used in this study are primary data, that is data obtained directly through the provision of instruments (questionnaire validity and practicality) to the research subjects.

#### A. Data Collection Instrument

Instrument this development research data collection is an instrument of validity and practicality.

##### a. Validity instrument

The learning media validation sheet contains aspects of assessment which include material, achievement language, and presentation. This validation sheet is used to see the truth of the concept and presentation of the material.

##### b. The practicality instrument

Practicality questionnaire contained a statement about the *handout* that was developed. Practicality questionnaires are filled by teachers and students who aim to get responses, suggestions, and criticisms for improving *handouts* so that the crossword-based *handouts* that are developed actually become practical *handouts* used in the learning process. Each indicator in the questionnaire was assessed on a Likert scale according to.

##### c. Learning Outcomes Test

In development research, learning outcomes test greatly influences the success of a product, student learning outcomes can be known by conducting an assessment of research respondents through tests. In general, the test is defined as a tool used to measure knowledge or mastery of measuring objects against a certain set of content or material. In this study

obtained from the results of exercises conducted at the end of learning.

Test scores	Criteria
≥75	Complete
<75	Not complete

Table 1: Success Criteria Student Learning Test Results

**B. Data analysis technique**

**a. Validity Analysis of Learning Media**

The data that collected from this study are the results of the validity of instructional media, the data are analyzed by descriptive analysis. The feasibility data of this learning media in the form of a Likert scale of all items provided, then the mean score is searched using the formula:

$$Validity\ score = \frac{score\ of\ item}{maximum\ score} \times 100\%.$$

Then provide validity assessors with criteria that have been modified to fit the validation assessment.

Percentage (%)	Criteria
85-100	very valid
75-84	Valid
65-74	valid enough
55-64	less invalid
≤ 54	Invalid

Table 2: Weight Assessment validation

Based on table above, the learning kit is valid if the achievement of the validation value is ≥75%.

**b. Analysis Practicality of Learning Media**

Data practicality obtained from the questionnaire responses of teachers and students to the learning media in the form of *handouts* and observation sheets for the implementation of the *handouts*. The questionnaire in this research is arranged in the form of a Likert scale. Likert scale is arranged with positive and negative categories according to the opinion of. Following are the weights of each statement to modified the students response questionnaire form.

Statement	Positive	Negative
Strongly agree	4	1
Agree	3	2
Disagree	2	3
Very Disagree	1	4

Table 3: Assessment Weight of Statement on Questionnaire

The assessment of practicality is analyzed by the formula:

$$P = \frac{X}{Y} \times 100\%$$

Information :

P = percentage of practicality

X = Score of the item obtained

Y = Maximum score

Based on the percentage of the level of practicality obtained criteria are set as in the following table.

Interval	Category
0-20	not practical
21-40	Lesspractical
41-60	Practicalenough
61-80	Pra
81-100	Verypractical

Table 4: Practical Learning Media Practical Category

Based on the table above it can be concluded that the learning device is said to be practical if the achievement value is ≥75%.

**c. Analysis of Learning Outcomes**

Completeness of student learning outcomes is measured based on individual completeness obtained by students, as the following formula below [7].

$$KB = \frac{T}{Tt} \times 100\%$$

Where:

- KB = mastery learning
- T = number of scores obtained by students
- Tt = total score

Student completeness is measured based on individual completeness obtained by students, if individual completeness is greater or equal to the minimum completeness criteria. The basic minimum completeness criteria used and determined by schools is 75. Learning is said to be effective if the number of students who achieve mastery is ≥75.

**IV. RESEARCH RESULT**

**A. The results of the practicality of the crossword by using *handout***

From the results of the questionnaire practicality analysis by the teacher, it can be seen that the average value of practicality obtained by 83.9% with very practical criteria. While the results of the practicality questionnaire analysis filled out by 9 students, the practicality value was 86.7% with very practical criteria. This shows that the *handout* is very useful to use in the learning process by both teachers and students.

**B. Student learning test results with a crossword-based *handout***

Based on the recapitulation of student learning outcomes, it can be concluded that the crossword-based *handouts* were successfully used. This can be seen from the number of students who graduated with completeness criteria as many as 8 people, while students who received grades below the completeness criteria there were as many as 1 person. With the highest value is 100% and the

lowest value is 70%. The average test score of student learning outcomes of 8 students is 91% so it can be categorized as successful.

## V. DISCUSSION

The development of learning media based on crossword puzzles is designed to handle the problems faced by teachers in economic learning that are identified in the background of the problem. These problems can be overcome, because in making instructional media this is done in several stages. In the initial stage, a preliminary analysis, concepts, students, assignments and learning objectives are carried out. From the results of the initial analysis of the final economic material more abstract. Material that is abstract requires learning media that can visualize material that is abstract.

Accounting information material was tested in class XI of Ekasakti Padang High School with average students aged 15-17 years. The results of the analysis of these students are essentially able to solve abstract problems properly. However, there are still many students at this age who have not been able to do this. Then this crossword-based *handout* has been able to help students understand economic subject matter well.

**Handout** This crossword based puzzle is an interesting medium so that it can stimulate students of class XI Madrasah Aliyah Private Al Furqon Padang to learn. Students become motivated to learn because the appearance of learning media in accordance with student characteristics. The media is also equipped with interesting animations, and includes issues related to students 'daily lives, so learning by using crossword-based *handouts* can eliminate students' boredom in learning and students are more active in learning.

Based on the analysis of the results of practicality instruments, the average practicality assessment for teachers is 83.7% and students have a score of 86.7% or are in the very practical category. Taherdoost (2017) that a product that is developed can be said to be practical if there is consistency between the typology of expectations and assessments (Taherdoost, 2017), as well as expectations and operations. That is, the practicality of a learning product is determined by: (1) expert or practitioner judgment, which states that the product developed can be applied, and (2) the reality shows that what is developed can indeed be applied. This means that economic learning media that have very practical value can be applied in the learning process.

In addition to conducting practicality tests on instructional media, student learning outcomes tests are also carried out, to find out how student learning outcomes are after using instructional media. From the analysis of learning outcomes, it can be seen that the percentage of students who have completed grades ( $\geq 75$ ) is 91%. Learning outcomes according to Nguyen are all effects that can be used as indicators of the value of using learning strategies under different conditions (Nguyen, 2017). If this

research produces good learning outcomes, then the use of learning media based on crossword puzzles produces good effects.

## VI. CONCLUSION

The results of research on the development of a crossword by using *Handout* on economic subject matter to improve the learning outcomes of class XI students at Al Furqon Padang Private Madrasah, the conclusions can be made as follows: *first*, The validation results from 3 validators showed that the crossword by using *handouts* were very valid with a percentage of validity (89.45%). This is evident from the organizational aspect of the *handout* (94.4%); format aspects (87.5%); aspects of the translation of material (87%); language aspects (88.9%) and ready to use with a little revision. Questionnaire on the practicality of teaching materials in the form of *handouts* by the teacher according to 3 validators is 92.9% with a very valid category. Results validation of the practicality of the teaching material in the form of *handouts* by students according to 3 validators was 85.7% with a very valid category. *Second*, The results of practicality filled in by the teacher, in general it can be concluded that the results of the percentage of practicality of teaching materials in the form of *handouts* based on crosswords are included in the category of very practical with a percentage of 92.5%. *Third*, The results of the practicality of the *handout* questionnaire were filled in by 9 students shows the percentage of 86.7% with a very practical category. Learning outcomes, *Handout* based on this crossword puzzle can also improve learning outcomes, the percentage of students completing the test of learning outcomes is 91%.

## REFERENCES

- [1.] Gössling, S., & Hall, C. M. (2019). Sharing versus collaborative economy: how to align ICT developments and the SDGs in tourism? *Journal of Sustainable Tourism*, 27(1), 74–96. <https://doi.org/10.1080/09669582.2018.1560455>
- [2.] Kim, J. (2020). Learning and Teaching Online During Covid-19: Experiences of Student Teachers in an Early Childhood Education Practicum. *International Journal of Early Childhood*, 52(2), 145–158. <https://doi.org/10.1007/s13158-020-00272-6>.
- [3.] Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Experiential, and Inquiry-Based Teaching Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching. *Educational Psychologist*, 41(2), 75–86. <https://doi.org/10.1207/s15326985ep4102>
- [4.] Nguyen, V. A. (2017). The impact of online learning activities on student learning outcome in blended learning course. *Journal of Information & Knowledge Management (JIKM)*, September. <https://doi.org/10.1142/S021964921750040X>
- [5.] Rondón, E. J. C., & Vera, L. F. V. (2016). Understanding the Role of Teaching Materials in a



- Beginners' Level English as a Foreign Language Course: A Case Study. *PROFILE Issues in Teachers' Professional Development*, 18(2), 125–137. <https://doi.org/10.15446/profile.v18n2.52813>
- [6.] Rusmawan, P. N. (2018). Using Crossword Puzzle to increase Students' Vocabularies for Writing Skill in Descriptive Text. *ENGLISH FRANCA: Academic Journal of English Language and Education*, 2(1), 13–34.
- [7.] Samuelsson, I. P., & Johansson, E. (2006). Play and learning-inseparable dimensions in preschool practice. *Early Child Development and Care*, 176(1), 47–65. <https://doi.org/10.1080/0300443042000302654>
- [8.] Susanti, A. (2014). Crossword Puzzle in EFL Class: Nature and Strategies. *The 3RD UAD TEFL International Conference*, 72.
- [9.] Susanti, E., Ritonga, M., & Bambang, B. (2020). Pengaruh Penggunaan Media Powerpoint Terhadap Minat Belajar Bahasa Arab Siswa. *Arabiyatuna: Jurnal Bahasa Arab*, 4(1), 179-191. <https://doi.org/10.29240/jba.v4i1.1406>
- [10.] Taherdoost, H. (2017). Validity and Reliability of the Research Instrument ; How to Test the Validation of a Questionnaire/Survey in a Research. *International Journal of Academic Research in Management (IJARM)*, 5(3), 28–36. <https://doi.org/10.2139/ssrn.3205040>
- [11.] Trinanda, L., Lufri, Zulyusri, & Sumarmin, R. (2018). Validity of Students Work Sheet Problem Based Learning Equipped With Crossword Puzzles on Ecosystem and Environmental Changes for Senior High School. *International Journal of Progressive Sciences and Technologies (IJPSAT)*, 6(2), 454–460. <http://ijpsat.ijsh-t-journals.org>.