

Developing Noun Words Domino Card (NWDC) Learning Media to Improve English Vocabulary Mastery of Junior High School Students

By Arif Bulan

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Abstract

Research on the development of learning media urgently needs to be done for junior high school students. The existence of learning media is expected to increase students' understanding and mastery of certain materials. This research aims to: (1) produce a product in the form of learning media Noun Words Domino Card (NWDC) that is feasible for seventh graders of eight State Junior High School Satap Woja, (2) know the practicality of NWDC learning media for students, (3) know the effectiveness of NWDC learning media in increasing student vocabulary mastery. This research is Research and Development (R&D) by using the ADDIE model consisting of five steps: Analyze Design, Develop, Implement, and Evaluate. The results showed: (1) the learning media noun words domino card (NWDC) is feasible for using and testing to students. The feasibility is based on the assessment by material experts with a feasibility value of 3.7 and media experts 3.5, (2) the learning media of noun words domino card (NWDC) is practically used in improving the vocabulary mastery of students. The practicality is based on the student's response as a user of learning media with a total average score of 3.6, (3) learning media noun words domino card (NWDC) is effective in increasing the mastery of student vocabulary. It was obtained from the average oral test score of students who passed the minimum completion criteria of English subjects.

Keywords: Domino card, English learning, learning media, vocabulary

INTRODUCTION

Education and learning are now a serious concern for the government in Indonesia, this is in line with the growth and development of scientific and technological progress that is increasingly growing very rapidly. Therefore, education and learning must be able to be directed at the achievement of educational goals, namely learning to know, learning to do, learning to be, and learning to live together. Conventional learning systems (conventional teaching) that is thick with an instructional atmosphere, considered less in accordance with the dynamics of the rapid development of science and technology. Conventional learning systems are less flexible in accommodating the development of competency materials, because teachers must intensively adapt the subject matter to the latest technological developments. The development of technology requires educators to be more innovative in designing and making learning devices. One of them is to develop creative and interesting learning media in an effort to improve students' understanding of the material taught by teachers (Vartiainen, Leinonen, dan Nissinen, 2019). Learning media is a factor that supports success in the learning process in schools, because it can help the process of conveying information from teachers to students or vice versa (Trianto, 2016).

Next Sudjana dan Rivai, (2015) stated that the learning media can improve the process and learning outcomes for students. Further Mubasyira dan Widiyanto, (2017) claimed that the use of learning media can help achieve optimal learning goals for students. Therefore, learning media must be designed in such a way, especially learning media in English subjects so that learning activities can spur students' learning activities to be more active and student-centered. In the learning process, the presence of media has a fairly

important meaning, where the media can stimulate and motivate students in the learning process (Sadiman, 2012). The use of media in learning results in new desires and interests, increases the motivation and stimulation of learning activities, and even psychologically affects students. So, students can meet or achieve the target of minimum completion criteria.

Several empirical studies show that the use of instructional media can improve students' vocabulary mastery. Moreover, the research conducted by Enayati and Gilakjani (2020) showed that the use of computer-assisted language learning media (CALL) can increase students' vocabulary. In addition, Islam and Hashim (2020) recommended a learning vocabulary using print media. The use of print media is very suitable for students who are not native speakers. Thus, the novelty of the research that the researchers are doing lies in the development of the new products in the form of dominoes which are expected to be a learning media which can improve students' mastery of English vocabulary.

Many of the experts agree that the media of learning is a tool or means that are desired in achieving learning goals (Kustandi dan Sudjipto, 2011; Karwati, 2014; Akbar, 2015; Sudjana and Rivai, 2015; Arsyad, 2016). The tools or means used as a medium of learning must be educative, have practical value and benefits. There are four benefits of learning media according to Sudjana dan Rivai (2015). First, learning will attract more students' attention. Second, the learning material will be clear in meaning. Third, the method of learning will be more varied. Fourth, students will do a lot of learning activities. The estuary of the benefits of learning media mentioned above can improve the process as well as student learning outcomes.

Sumanto in Akbar (2015) clarified that the learning media serves as a messaging tool in the teaching and learning process. So Akbar (2015) proposed three functions of learning media, namely the function of attention, affection and cognition. Furthermore (Akbar, 2015) explained that the attention function is related to attracting the attention of students to concentrate on the content of the lesson. The function of affection is related to creating a feeling of pleasure in students, while cognition functions as tools to understand and remember information.

Learning media has many criteria. The criteria have to appropriate with the purpose of learning, content of learning, ease of using, time of using, and the level of students (Sudjana dan Rivai, 2015). Meanwhile, learning media also has principles in the use of media used to make it easier for students to learn, learning media must be in accordance with the interests, needs and conditions of students, and the media used must pay attention to effectiveness and efficiency (Sanjaya, 2012) (Sanjaya, 2012).

Learning media can be obtained practically and can also be developed according to student needs, materials and learning goals. Related to that, Akbar (2015) offering learning media development procedures include: (1) problem identification, (2) media design, (3) expert validation, (4) revision based on expert validation, (5) limited-scale trials, (6)

revisions based on trials, (7) broad-scale trials (8) producing the final product. The procedure offered by Akbar (2015) must be followed gradually so that the media developed is valid.

Numerous experts argue in a wide range of literature (Akbar, 2015; Aleksandrov & Levitskaya, 2018; Arke & Primack, 2009; Purnomo & Purnama, 2013; Sanjaya, 2012) claimed that the use of learning media could both attract attention and improve students' learning outcomes. However, the learning media must be selected according to the learning material. One of the contents of understanding in English learning in junior high school is related to vocabulary. To teach vocabulary, of course, must be used the appropriate media and the right way (Okyar, 2021).

Learning any language, the main condition is that you have to have a good vocabulary. Wiyanti, (2015) reported that vocabulary is an element of language that students must master before learning a language. In addition, according to Beck, Mckeown, and Kucan as cited in (Azizah dan ⁵adloeli, 2021) said that vocabulary is the knowledge of words and the meaning of words. Without enough vocabulary students will not be able to use the language properly and correctly according to its purpose. Therefore, the main requirements mentioned above must be instilled through learning activities both formally and informally.

English vocabulary is formally learned through subject matter. In the 2013 curriculum, each learning material must contain vocabulary elements that must be mastered or learned. Although vocabulary does not become subject matter, vocabulary is part of the learning material. English, in general, has a wide range of vocabulary such as words, verbs, adjectives, and adverbs. More ⁵tails Prastyo (2017) classified various words in English in detail abbreviated PANCAVIP (pronoun, adjective, noun, conjunction, adverb, verb, interjection, and preposition).

Mastery of vocabulary in English has several indicators. Firman, Hastuti, Sukmawati, and Rahmawati (2019) offered five indicators of student vocabulary mastery in the form of meaning mastery, a mastery of a fixation, mastery of word classes, mastery of raw word forms, and mastery of non-standard forms. Thus, the English vocabulary both in the form of form and class is important to be mastered by students.

Based on data findings at state junior high school eight *Satap Woja* most seventh graders do not yet have adequate English vocabulary. In addition, the findings of classroom observations showed teachers taught vocabulary did not match supporting media. It is also recognized by the teacher of English subjects that during this time he taught only relying on the teacher's handbook. So, the vocabulary taught also only focuses on textbooks.

Based on this, the researchers are interested in developing English learning media by using Noun Words Domino Card (NWDC) to improve the mastery of English vocabulary of seventh grade students of eighth state junior high school SATAP District Woja ¹¹Dempu District of West Nusa Tenggara Province. Rumidjan, Sur²anto, dan Badawi, (2017) stated that the use of learning media in the form of word cards can make it easier for students to

understand the subject matter. NWDC develops in the form of a modified domino card model by including images and vocabulary on one domino. This NWDC media is expected to stimulate students in increasing vocabulary mastery by means of educational games that are specially designed during the teaching and learning process in the classroom. NWDC is tailored to the material and learning objectives that have been set. Thus, the educational game can support the purpose of learning in English subjects.

As such, these research questions include three important things, (1) is the learning media of noun words domino card (NWDC) developed feasible for seventh grade students of state junior high school eight Satap Woja, (2) how is the practicality of NWDC as a learning media for seventh grade students of state junior high school eight Satap Woja, (3) how is the effectiveness of NWDC learning media in improving vocabulary mastery of seventh grade students of state junior high school eight Satap Woja. Therefore, the study aims to: (1) produce a learning medium Noun Words Domino Card (NWDC) that is feasible for seventh graders of state junior high school eight Satap Woja, (2) know the practicality of NWDC learning media for seventh graders of eighth state junior high school Satap Woja, (3) know the effectiveness of NWDC learning media in improving vocabulary mastery of seventh grade students of state junior high school eight Satap Woja.

METHOD

This type of research is Research and Development (R&D) by using an ADDIE model consisting of five steps; analyze, design, develop, implement, and evaluate. The study was conducted at state junior high school eight SATAP Woja by taking a seventh grade sample of eighteen. The sampling technique used in this research was the purposive sampling technique. This research follows development procedures developed by (Dick, Carey, and Carey (2005) as seen in the picture below.

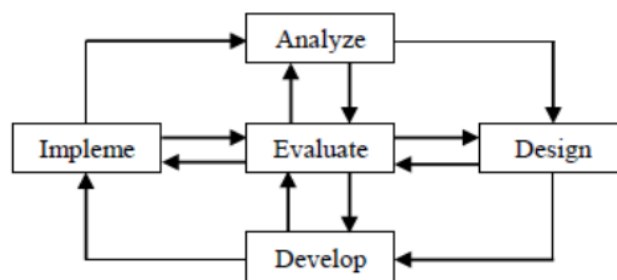


Figure 1. ADDIE development model
(Source: Dick, Carey, and Carey)

There are several stages of learning media development based on this model. First analyze. From analysis stage, the data obtained that the vocabulary mastery of the seventh grade students of state junior high school eight SATAP Woja was very low. This can be seen from the questionnaire which was distributed where students were asked to write ten

noun words in English, none of the eighteen students were able to write it down and none of them even reached the five vocabularies. In terms of core competence and basic competence, vocabulary material was given at the beginning of the semester. This material was very urgent to be mastered by the students because it was a prerequisite material for subsequent materials. Thus, the solution must be found immediately. Based on the literature review, the solution that fits the character of junior high school students who still likes to play was obtained by making a card media. Second stage is design. This stage is the process of design or blue print products developed. Through this step, learning objectives were determined which form the basis for developing card media, followed by making a storyboard of the product developed and put them on the computer, then designing learning activities using the product developed. The third stage is development. This stage is realizing the product then validated by experts. The fourth stage is implementation. This stage is a process of testing products to users on a limited basis and large-scale trials. The implementation of NWDC product was carried out for eight meetings. These eight meetings were active meetings in addition to the pre-test and post-test. Fifth evaluation, this stage measures the quality of the product and process before and after the implementation of the activity.

There were two experts involved in assessing products that have been developed, namely material experts and media experts. Diana Purwati, M.Ed (TESOL), is one of the lecturers in English education at STKIP Yapis Dompu who was also a graduate of the master of Teaching English to Speakers of Other Languages (TESOL) from the University of South Australia whose expertise is language teaching material. While the media expert is Mardiah, M.Pd who was a graduate of the master of technology education programs of Yogyakarta State University whose expertise is the medium of learning.

The instruments used in this study are questionnaires for material experts, media and students. Questionnaires for material experts are used to assess product feasibility in terms of content. Questionnaires for media experts are used to assess the feasibility of the product in terms of appearance. While the questionnaire for students are to know the quality of the appearance of the product, the ease of understanding the product, and the practicality of its use. In addition, there was also an observation of student activities during the use of the product.

In the material validation questionnaire, there are three aspects that are assessed, namely aspects of content feasibility, language and product use. There are eight statements in this questionnaire that represent these three aspects. Below, the researchers show in table 1 about the aspects and number of items of the statement.

Table 1. Questionnaires of Material Validation

Aspects	The number of statements
Content eligibility	3
Language	2
Usage	3

In the media validation questionnaire, there are 4 aspects that are assessed, namely color, typography, product display and presentation. There are about sixteen statements in this questionnaire that represent these four aspects. Below, the researchers show in table 2 about the aspects and number of items of the statement.

Table 2. Questionnaires of Media Validation

Aspects	The number of statements
Color	6
Typography	4
Display	4
Presentation	2
Total	16

In the validation questionnaire of student response to learning media, there are seven statements in this questionnaire that represent these three aspects. Below, the researchers show in table 3 about the aspects and number of items of the statement.

Table 3. Validation Questionnaire of Students Response to Learning Media

Aspects	The number of statements
Students response	7
Total	7

The data obtained from this study is in the form of quantitative and qualitative data. Quantitative data is obtained from the results of calculations of each item of questionnaire filled in, then qualitative data in the form of responses or comments provided by validators related to the product developed. The data analysis techniques used in processing the data obtained use qualitative descriptive analysis techniques for the feasibility, practicality and effectiveness of the product, as well as students' activities in the learning process using the product. Meanwhile, quantitative data is analyzed following the references of Mardapi, (2012). Data analysis is done with the provisions. The first provision, quantitative data is obtained from instruments that have been filled by experts and users by using the data of the fill score on the instrument into the form of qualitative data. Second, calculating the average score of the total charging of the instrument¹⁶ by using the formula (total score divided by number of respondent). Third, convert the average score into a qualitative value with the assessment criteria adopted from Mardapi (2012) as shown in the Table 4 below:

Table 4. Converting Quantitative Score to Qualitative Score

Score	Score range	Category
4	$x \geq 3,1$	Very feasible
3	$3,1 > x \geq 2,5$	Feasible
2	$2,5 > x \geq 1,9$	Less feasible
1	$X < 1,9$	Very less feasible

RESULTS AND DISCUSSION

There are three main points presented in this chapter of result and discussion. These three things are based on the above research objectives, which include, producing a learning medium Noun Words Domino Card (NWDC) that is feasible for seventh graders of state junior high school eight *Satap Woja*, knowing the practicality of NWDC learning media for seventh grade students of state junior high school eight *Satap Woja*, and knowing the effectiveness of NWDC learning media in improving vocabulary mastery of seventh grade students of state junior high school eight *Satap Woja*.

The development of NWDC learning media is carried out using research and development of ADDIE models developed by Dick, Carey, dan Carey, (2005) which consists of five steps; *Analyze, Design, Develop, Implement and, evaluate*. The steps will be explained below.

First step, analyze. In this step the researchers conducted an analysis of the student's needs, student characteristics and learning objectives. This is done by observing in the classroom, it can be seen from the questionnaire which was distributed where students were asked to write ten noun words in English, none of the eighteen students were able to write it down and none of them even reached the five vocabularies. The second step is design. At this stage the researchers did the initial product design in detail in the form of a storyboard. Step three, develop. This stage, in fact, the stage of making NWDC learning media products arrives at the printing of dominoes, after which it is validated by two experts, namely material and media experts. Step four, implement. In this stage, it elaborates the implementation of small-scale product trials on eight students and large scale on eighteen students. The last step, evaluate. This stage of the researchers conducts a final assessment of the achievement of the objectives of the development of learning media products, as well as the understanding and achievement of students.

Learning Media Noun Words Domino Card (NWDC)

The feasibility of NWDC learning media developed must be based on assessments from experts' namely material experts and media experts. Assessment or validation conducted by expert aims to find out the feasibility of NWDC learning media products. The assessment uses a questionnaire that is scientifically developed and has passed the process of validation of instruments from experts. The validation results are then calculated to get an average score using the formula as seen in table 4 above. Details of validation results by material and media experts are shown below.

The material expert's assessment questionnaire on NWDC learning media has three main aspects, namely aspects of the feasibility of content, language and use. The content feasibility aspect consists of three statements including the suitability of the material with basic competencies, the suitability of the material with learning indicators, and the suitability of the material with learning objectives. Meanwhile, the language aspect consists

of two statements, namely the suitability of the words used with the level of students' vocabulary mastery, as well as the accuracy of words and images in the media. While the aspect of use consists of three statements, namely the media is presented systematically and clearly, the media is easy to use, and the last is the media is interactive.

The following will be presented in table 5 related to the data on the results of the material expert assessment. This assessment contains only three aspects.

Table 5. Material Expert Assessment Results Data

No	Aspects	Average score	Category
1	Content eligibility	4	Very Feasible
2	Language	3.5	Very Feasible
3	Usage	3.7	Very Feasible
Total average score		3.7	Very Feasible

Table 5 above shows that the material experts' assessment of the NWDC learning media product is categorized as very feasible. Based on the results of this assessment, the product that has been developed can be tested both on a small and large scale on seventh grade students of state junior high schools eighth *Satap Woja*.

The total average results of the above material experts are obtained from eight statements or indicators. The contents of the indicator have previously been validated by experts in the field of learning materials. Although, actually, there is some input from experts. Then the inputs are corrected as they should be and approved by experts. The results of the assessment are very decent from media experts obtained an average score of 3.7 as can be seen in table 5 above. This indicates that this product can already be tested both small and large scale.

The product in the form of learning media that has been developed for seventh graders of the state junior high school eighth *Satap Woja* has met the standards of quality of learning materials as stated in the variables. That's in line with the opinion of Yaumi (2013) that the media developed must be in accordance with the learning material. Learning media developed can also contain main materials and sub-materials in learning (Akbar, 2015). The material on this product is synchronized with the material in the seventh grade learning material chapter four entitled "This is My World" which focuses on name recognition of objects, animals and public buildings around the student.

Aspects of the language used in NWDC products are in accordance with the level of mastery of student boarding, thus the accuracy of words and images in the learning media is needed. Based on the results of expert assessments that aspects of the language fall into the category are very feasible, this is in accordance with the statement of Mardapi (2012) that if the expert rating score is above 3.1 then the media is declared very feasible. This means that the suitability and accuracy of the words and images in this product is so good that it is worth testing. In addition, this aspect of use in developed media is excellent. The results can be seen in table 5 above. According to Akbar (2015) aspects of media use

related to the systematic and clear presentation of media, media is easy to use and media is interactive. It is in statement of Trianto (2016) can increase students' mastery of certain materials.

The media expert assessment of NWDC learning media consists of several aspects including color, typography, appearance and presentation. The color aspect consists of several indicators such as the color combination used in the media, the color composition used in the media, the accuracy of the colors used in the image, the suitability of the colors used in the image, the accuracy of colors in the text, and the suitability of colors in the background of the text to the color in the text. Typographic aspects consist of indicators of the suitability of fonts used with student characteristics, the accuracy of font types in text, the accuracy of text size, the accuracy of the distance between letters in the text. Aspects of display consist of indicators of the suitability of image size in the media, the archiving of images in the media, the clarity of images on the media, the accuracy of the placement of images and words in the media. Aspects of presentation consist of indicators of medium durability and media are designed practically.

The following will be presented in table 6 regarding the data of media expert assessment results. This assessment covers four aspects.

Table 6. Media Expert Assessment Results Data

No	Aspects	Average score	Category
1	Color	3.7	Very Feasible
2	Typography	3.5	Very Feasible
3	Display	3.5	Very Feasible
4	Presentation	3.5	Very Feasible
Total average score		3.5	Very Feasible

Based on table 6 above, that media expert assessment of NWDC products is in the average of 3.5 or in the category is very feasible. The conclusion of this expert assessment of media is that NWDC products deserve to be tested both small and large scale. However, revisions are also needed based on expert advice and comments. As for the improvements that we have made on the aspect of display, especially regarding the size of images in the media is done based on the experts' suggestion.

NWDC media that has been developed is actually based on visual media. Visual media can take the form of images that show an object. Objects that are used as images in this medium come from vocabulary theory which is then detailed in the vocabulary of nouns. The nouns that appear in this NWDC are the names of animals or animals, place names and objects around the school that are all made up of local wisdom around the student's neighborhood. Visual media according to Arsyad (2016) It can facilitate students' understanding. Basically this medium was developed to improve the understanding of students' English vocabulary related to nouns.

NWDC media in principle has covered aspects that build the integrity and quality of learning media. These four aspects can be seen in table 6 above. The selection of learning media in this development research is in accordance with the principles expressed by Akbar (2015) among them the appearance and presentation of media that corresponds to the characteristics of students. Thus, this product is expected to be used as a medium of English learning in state junior high school eight *Satap Woja*.

NWDC Learning Media use

Data on the practicality of NWDC learning media is obtained from actual practicality data through filling out student response questionnaires to learning media. There are eight components of the statement that students fill in measuring the practicality of the developed media. The eight components of the statement include the use of learning media easily, the interest of learning media to learn, images clearly visible, the harmony of images in the learning media, images displayed help understand vocabulary, words in the media can be read clearly.

The following, researchers present in table 7 regarding data from the student response questionnaire to the NWDC learning media.

Table 7. Student Response Questionnaire Results Data on NWDC Learning Media

Amount of students	Total average	Category
18	3.6	Very practical

Table 7 shows that the average results of student response to the practicality of NWDC learning media are in a score of 3.6. This implies that the NWDC learning medium is practical in its use in the state junior high school student eighth *Satap Woja*. The practicality of the media is obtained from the response of students as users of learning media. The first indicator of the practicality of learning media is that media can be used easily by users of the media. This is in line with the opinion that learning media is said to be practical if users can easily use the media (Plomp & Nieveen, 2013).

Below, the researchers show an example of twenty-eight images and the word dominoes resulting from product development. This image is a domino (NWDC) that has not been printed and cut or separated per sheet.



(Figure 2. Things around school in NWDC)

The Effectiveness of NWDC Learning Media

To be able to conclude the level of effectiveness of NWDC products in improving the mastery of English vocabulary students can usually be seen from the initial grade or pretest then compared to the final grade or posttest. The two scores are compared to see the difference or their ability in increasing vocabulary mastery.

In the design of this development research, the effectiveness of NWDC learning media products developed is assessed from the results of evaluation of students' English vocabulary mastery after learning using NWDC learning media. Vocabulary mastery focused here is the mastery of the vocabulary of objects. Developed nouns include three aspects, namely animals, public places, and things around school.

Assessment of the effectiveness of NWDC learning media products in improving vocabulary mastery is through oral tests. Before the oral test there are learning activities that students go through with the teacher. The teacher conveys the material, and then to make it easier for students to understand the material in which there is an element of vocabulary, then the teacher uses NWDC media that has been developed. Learning activities through students and teachers refer to the applicable curriculum, namely the 2013 curriculum which emphasizes scientific approaches that include observing, assessing, gathering information, associating and communicating.

In the activity of observing the teacher forming a group and inviting students to observe the dominoes that have been dealt by the teacher. After that the teacher explains how to play using domino cards, after which students are welcome to play. After playing students are required to ask questions about things they don't know. At the activity of collecting information, students are asked to report any vocabulary or images encountered. In the activity of questioning students are given the opportunity to mention all the images obtained from the dominoes held. While in the activity of communicating, students are asked to memorize the vocabulary of objects that have been played in dominoes.

In the final activity that lies in this communication activity, integration is carried out with the final test in the form of oral tests to find out the improvement of students' vocabulary before and after using media. The aspect that is assessed is the amount of vocabulary mastered by the students. In addition, it is more important that this final assessment or test is based on basic competencies and test problems or evaluations contained in the teacher handbook.

Below, the researchers show in table 8 data on evaluation values in the form of oral tests conducted to students after teaching and learning activities using NWDC learning media.

Table 8. Seventh Grade Student Evaluation Results Data

Amount of students	Total average score	Category
18	79	High

Based on the data in the Table 8 above, it was found that the average score of students after following the evaluation on the material that has been studied is 79. This indicates that the evaluation results are in the high category.

So it can be concluded that NWDC learning media is effective in increasing the mastery of student vocabulary. The effectiveness of NWDC learning media in improving student vocabulary mastery is assessed from all students evaluated to achieve and pass the minimum completion criteria of state junior high school eight Satap Woja English subjects which is 65. Prastyo (2017) reveals that noun vocabulary material is the basic material that must be taught and mastered by students. Therefore, increasing mastery of English vocabulary students can help students in learning English.

CONCLUSION

There are three important things that can be concluded in this research, (1) the media of noun words domino card which has been developed was feasible for use as a learning media for the seventh grade students of state junior high school eight Satap Woja, (2) the media of noun words domino card which has been developed was practical for use as a learning media for the seventh grade students of state junior high school eight Satap Woja, (3) the learning media of noun words domino card was effective in improving vocabulary mastery of the seventh grade students of state junior high school eight Satap Woja. The implication of this research is expected to be a parameter for teachers in developing learning media so that the students can increase their mastery of a certain material.

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