# Electronic Module Development Write Exposition Text Based on Project Based Learning in Class X Madrasah Aliyah

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**Abstract.** Learning the Indonesian language has evolved. The focus of Indonesian language instruction is on mastering a variety of texts. The types of texts that are required by the curriculum must be understood and mastered by the learners. Learners in room X read an expository text as one of their texts. Expository writing skills among pupils are really poor. Providing pupils with electronic modules is one technique to help them develop their writing abilities. In this study, the term "electronic module" refers to a collection of independent exposition text learning modules that are delivered electronically and contain animation, graphics, and sound in order to meet learning objectives. In order for leaners to meet their full potential as learners, this research aims to help them build their expository text writing skills. In order to define, plan, develop, and distribute its findings, this development research use four-dimensional models, or 4-D models. This study's findings describe how to create an electronic module for learners in room X Madrasah Aliyah that is valid (in terms of the content, presentation, speech, and graphics), practical (in terms of aesthetics, ease of use, legibility, and timeliness), and effective (in terms of learning activities, effectiveness, and learning outcomes). PjBL stands for Project-Based Learning. Then describe the end product of the research and development.

**Keywords:** development · electronic module · exposition

## 1 Introduction

Student-centered learning was one of many enhancements made to the 2013 curriculum [1]. In order to achieve the same competencies, learners have options about the subject matter being studied and learning styles [2]. Learning that is interactively patterned may involve interaction with the instructor, other learners, the society, the outdoors, or other forms or media [3]. Learners that take part in the learning process frequently employ learning materials and technologies[4] leanerss will learn more effectively if they participate in the process [5]. According to Kristina [6], who also agreed, kids who frequently used the media were considerably more active.

The four fundamental competences in the 2013 curriculum, in the area of skills, show it (KD 4). This is evident in the features of fundamental Indonesian language abilities, which include language exercises centered on comprehending and writing prospective texts and motivating learners to write effectively [7]. Learners must therefore possess writing skills in addition to text comprehension.

Writing exposition text has been incorporated into the 2013 curriculum as one of the writing abilities [8]. One of the essay writing techniques thatleanerss must learn and perfect is the ability to write expository texts, which are also used to persuade readers of the viewpoints presented in a variety of supporting evidence (Mahsun, 2014). However, it is not as simple as it may seem to write an expository piece. Expository text writing demands knowledge, commitment, and formal writing training [9].

Providing pupils with electronic modules is one technique to help them develop their writing abilities. Electronic module research has recently been conducted in the USA, Thailand, UK, Saudi Arabia, Malaysia, and Indonesia. The benefits of adopting this electrical module are noticeable financially in the USA. Given that utilizing electronic modules is less expensive than using printed ones, kids rapidly feel at ease using them [10].

In order to discover more about how learners in room X at Madrasah Aliyah, Agam Palace learned to produce expository texts, the authors conducted learners analysis, instructor analysis, and idea analysis.

The usage of learning resources can be inferred to be one of the most fundamental issues. In the study of exposition texts, the learners handbook serves as the sole educational tool. Resources for instruction in schools must be suitable and sufficient. In terms of knowledge, the content of the book falls short of what learners require.

Therefore, room X MA exposition text education module is required in order to provide learners with an effective learning medium that can be used to address their issues with producing exposition texts. It is envisaged that learners would understand topics more quickly and be able to write effective explanatory texts as a result of the presentation of the material and planned activity processes. For learners who struggle to create explanation texts, this subject is meant to offer solutions. The expected product in this research is an electronic module based on PjBL on exposition text material for room X MA learners which is measured based on its validity, practicality, and effectiveness. This electronic exposition text module consists of an introduction, learning activities I, learning activities II, and evaluation. The electronic module is designed using the Power Point application first.

## 2   Method

Research and development is the term for this kind of study (R&D). The (R&D) approach is a research technique used to create specific goods and evaluate their efficacy. The aspect of the study is a research methodology that is specifically and methodically aimed or channel at discovery, trying to formulate, trying to improve, continuing to develop, going to produce, testing the efficiency of products, models, methods/strategies/methods, assistance, specific procedures that are better compared, new, effective, efficient, product, and meaningful.

The define, create, develop, and distribute 4-D models are used in this development research. In this instance, research and development are being done in order to create a learning module for producing expository texts that is based on reliable, useful, and efficient discoveries.

## 3   Results and Discussion

### 3.1   Define Stage

#### 3.1.1   Analysis for the Define Phase

A preliminary-final analysis, a learners analysis, and a task analysis make up the interpretation for the defining stage. Interview sheets were used to collect the data, which is qualitatively reported in both the initial and final analyses. Learners analysis data is obtained through a questionnaire filled out by learners. This data is analysed with a percentage scale. This aims to determine the characteristics and needs of learners. And concept analysis was obtained through filling out questionnaires by researchers. The data were.

A designated validator or expert verifies the validity of this verification modules that has been created. Two authorities in Indonesian literature and language as well as educational technology verified this electronic program. According to the area of competence, a content validation sheet. Filling out a validation form is how the validation procedure is carried out. The validation sheet is made up of 67 questions in total, with 25 content divisions, 8 language statements, 20 presentation feasibility questions, and 14 statements about the use of graphical elements. Alternative responses employ a Likert scale with four rating scales: Strongly Agree receives a score of 4, Agree receives a score of 3, Disagree receives a score of 2, and Strongly Disagree receives a score of 1 (STS).

Overall, the statements are favorable, thus the scores are 76–100 for strongly agreeing, 51–75 for agreeing, 26–50 for disagreeing, and 0–25 for strongly disagreeing. The following processes are taken to prepare the questionnaire sheet. (1) Build a grid using indications that are customized for the theory being employed. (2) gathering the statement items in accordance with the survey indicators. (3) carrying out a logical analysis to see whether the questionnaire items were prepared with the aspects measured in mind as well as their appropriateness with the indicators. The kids were also given a questionnaire to gauge their skills.

#### 3.1.2   Analysis of Learners Characteristics

Analysis of learners characteristics was conducted to identify the gender, age, and level of maturity of the tenth graders of Madrasah Aliyah, Agam Regency. The number of learners in this room consists of 22 female learners and 8 maleleanerss. The age ofleanerss in this room ranges from 15–17 years. Based on this, according to Piaget's cognitive theory, human cognitive development consists of 4 stages, namely the sensorimotor period (0–2) years, the preoperational period (2–7 years), the operational period (7–11 years).), and formal operational period (11–15 years).leanerss aged 11 years and over, are generally able to solve problems and test possible solutions in a systematic and organized way.

### 3.1.3  Task Analysis

Task analysis is a collection of procedures to determine the content in the learning unit. Task analysis was carried out to detail the teaching materials in the form of an outline. Task analysis consists of content structure analysis, concept structure analysis, and formulation of learning objectives.

## 3.2  Design State

The design stage is the stage carried out for the electronic module prototype. There are two activities carried out in this stage, namely (a) the design of the electronic module framework, and (b) the design of the draft module.

### 3.2.1  Electronic Module Framework Design

The search for the necessary references is the first step in preparing the electronic module. This is taken into consideration in the analysis done at the defining step. The digital unit outline should then be created, and it should be attractively designed. In order to prepare the electronic module framework, the used learning resources, notably (PjBL). Learning activity 1 is about the knowledge aspect or is based on KD 3.12, and learning activity 2 is about the skill aspect or is based on KD 4.12, which is produced through learning stages. These two learning activities make up the learning activities section of the module. The application of this methodology sets expository writing instruction apart from other room exercises.

## 3.3  Development Stage (Develop)

The maintenance stage is carried out following the completion of the definition and design phases. The development is done in order to test the created electronic module's draft. Three tasks are completed at this point: a validity test, a practicality test, and an efficacy test. These three steps are completed in that order. The electronic module's legitimacy is checked as the first activity. To ascertain the degree of validity of the developed module, a validity test is conducted. Experts in their respective professions do the validation procedure. The module's validity or suitability for testing can be determined based on the validation's findings.

Following the module's declaration of validity, the next task is to conduct a practicality test. Teachers and learners are tested on modules that have proven to be effective. The purpose of the trial was to evaluate the usefulness and efficacy of the device on a network. After implementing the electronic module, practicality is gained by having teachers and learners complete forms based on observation of learning activities. The effectiveness of the electronic module is obtained from the learning outcomes and values of learners ' attitudes and character while studying the electronic module.

### 3.3.1  Electronic Module Validity

An identified validator or expert verifies this verification modules that has been designed. Two specialists in educational technology and Indonesian literature and language

endorsed this electronic module. Validation sheet for the content according to the subject matter. First, Prof. Dr. Harris Effendi Thahar, M. Pd., from the Department of Indonesian Language and Literature validated the module in terms of content, linguistic, and presentation feasibility. Second, Dr. Darmansyah, S.T., M. Pd., from the Department of Educational Technology, validated the module in terms of graphics. Completing out a validation form is how the validation procedure is carried out. The validation sheet is made up of 67 questions overall, with 25 content divides, 8 language statements, 20 presentation feasibility statements, and 14 proclamations on the use of graphics.

### 3.3.2 Electronic Module Practicality

The PjBL model-based electronics module for learning to produce exposition texts has been approved by the assessor and has been changed in accordance with their recommendations. To ascertain the viability of the constructed learning device on a network, the redesigned electronic module was put to the test during the learning process. The trial was carried out in Room X Madrasah Aliyah MUS V Canduang Tribe. The trial run lasted for one week. The trial was carried out during Indonesian language learning hours. The implementation of this activity was carried out in three meetings or 6x30 minutes. The trial implementation when learners study online was carried out in two meetings and in one meeting in person. Each learners gets an electronic module link online or shared via group chat via the WhatsApp application. Learners learn to use electronic modules based on the instructions given. Learners are also allowed to ask if there is information in the electronic module that has not been understood.

To obtain the practicality value of the electronic module, a questionnaire on the practicality of the electronic module was distributed to teachers and learners after learning to write an exposition text. The practicality of the electronic module is useful for knowing whether the designed electronic module is an electronic module that is practically used by learners The practicality questionnaire contains statements about the two practical aspects of the electronic module. The statement points were developed by referring to the practicality indicators of the electronic module, namely ease of use and can be learned in accordance with the allotted time. The practicality questionnaire for teachers consists of 18 statement items and for learners consists of 17 statement items. Alternative responses are given on a Rating scales with four rating scales: Strongly Agree receives a score of 4, Agree receives a score of 3, Disagree receives a score of 2, and Strongly Disagree receives a score of 1 (STS).

During the instructional process, the teacher completes a questionnaire about the usability of the electronic module. The instructor also makes observations and offers an evaluation of the usability of the electronic module. In this case, the teacher can see learners learning with electronic modules. Then, the teacher assesses the practicality of the electronic module by using the questionnaire that has been provided. Furthermore, learners fill out the practicality questionnaire for the electronic module after learning with the electronic module is completed by holding a meeting at the school directly.

In addition to filling out the questionnaire, online observations of learners learning activities were also carried out. Observations were carried out by filling out the observation sheet by observer 1 (teacher) and observer 2 (researcher). The activities observed

were related to the suitability of the learning activities carried out by learners with the instructions for learning activities in the electronic module.

The process of creating an electronic module for grade X Madrasah Aliyah Agam learners to learn how to produce expository texts using a project-based learning approach is now at the deployment stage. Prior to deployment, the electronic module was modified in light of feedback from the practicality and efficacy test. The distribution was done in accordance with the recommendations made by the trial room's collaborating instructor.

The digital module is deployed during the course of two steps. The initial step is the limited dissemination of electronic modules to teachers who are not trial room collaborators, i.e., teachers of other courses. A link or a physical file is supplied to the teacher who then receives it. A question about the deployment of digital courses is also sent to the teachers. The link to the electronic module is shared in the Chat Group using the WhatsApp app in the second step of distributing the electronic module to learners.

The dissemination included activities at the research institution as well as social activities with friends. The dissemination was accomplished by sending links to masters learners in UNP's Indonesian Literature and Culture Education Study Program as learning electronic modules. Teachers of room X at senior high school who teach Indonesian are among the learners who receive the electronic module.

This electronic module was distributed to Indonesian language teachers, namely Mrs. Welly Sundary, M.Pd. This electronic module gets a very good response. Based on the deployment questionnaire, the distributed electronic module received a very good rating with five statements. Statement 1 received a response Strongly Agree (SS), statement 2 received a response Strongly Agree (SS), statement 3 received a response Strongly Agree (SS), statement 4 received a response Strongly Agree (SS), and statement 5 received a response Strongly Agree (SS). In addition, Welli Sundari, S.Pd. Also commented that the electronic module is easy to distribute because only by sharing the link of the electronic module online everyone can access and use it.

The electronic module of Exposition Text for MA Room X was developed with a 4D development model (Four–D Model) which consists of four stages, namely (1) define (definition), (2) design (design), (3) develop (development), and (4) disseminate (spread). Based on the analysis conducted at the definition stage, it was concluded that there were several problems that hindered the achievement of the learning objectives of writing exposition texts, namely the limitations of the teaching materials used. This has an impact on learners learning outcomes who still have an average below the Minimum Completeness Criteria (KKM). Therefore, one of the teaching materials was designed in the form of an electronic module for learning to write exposition texts assisted by the Project Based Learning learning model as a solution to overcome this problem.

## 4   Conclusion

The conclusion that may be drawn from the research and discussion is as follows. First off, this electronic module based on Project Based Learning is a great resource for learning to create expository texts for room X. (Madrasah Aliyah MA). The viability of this electronic module can be evaluated from four perspectives: the viability of the information, the language, the presentation, and the graphics. The module that is created

in accordance with the new Curriculum KI and KD in expository text learning illustrates the element of the content's viability, making it very valid.

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