

Development of Student Worksheet Text of Complex Procedure for Class X SMA Medan Labuhan

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Abstract: *The objectives of this research are: (1) To produce student worksheet teaching materials on learning the text of complex procedures to facilitate students' understanding of the material, (2) to know the feasibility of student worksheet teaching material product. The development model used is (research and development). This learning product development model is a programmable model organized in a systematic order. The model includes several stages: (1) conducting preliminary research, (2) data collection, (3) planning of instructional materials, (4) making and developing products, (5) material and design validation (6) try small group and large group trials, (7) effectiveness test. The test subjects of two Indonesian language teachers, two material professionals, two design instructional professionals, three students for individual testing, 9 students for small group test and 35 students for field test. Data on the quality of this development product were collected by questionnaire. The collected data were analyzed by qualitative descriptive technique. The results of the research show: (1) the test of the material professionals are included in the category of very good, (2) the test of the instructional design professionals in the assessment with very good category, (3) the individual test is in excellent quality, (4) the small group test is in quality very good and last assessment field test in excellent quality. It was concluded that the development of student worksheet text of complex procedures is very feasible and easy to use for grade X high school students Medan Labuhan. Result of effectiveness there are significant difference that is student learn to use student worksheet after developed with mean value 81.85 whereas before using student worksheet developed with average value 71.71. Thus, it can be concluded that the use of complex student worksheets of complex procedures is used.*

Keywords: *student worksheet development, complex text material procedures, activity sheets*

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I. Introduction

The 2013 curriculum is a curriculum that emphasizes the importance of balance of attitude, knowledge and skills competencies. This requires the students' activeness and creativity formed through continuous learning from observing, asking, exploring, associating and communicating. This process starts from improving the competence of knowledge about the types, rules and context of a text followed by the competence of the skills of presenting a text both oral and written, and boils down to the formation of language politeness and appreciation of Indonesian language as the nation's cultural heritage. Demand that can realize a fun learning according to the curriculum. Learning activities should create some teaching materials. Teaching materials is one tool used in the learning process that can increase interest and critical thinking of students. One of the teaching materials that can be used is student worksheet. Student worksheet can help students to understand, observe, think critically and provide motivation to students.

Based on observations to teachers and students regarding the use of student worksheet on November 4, 2016 in SMA and SMK Hang Tuah Belawan with Mr. H.Tanjung and Mrs. R.Siregar said student worksheet is needed. But the school currently does not allow the student worksheet to be used because many parents complain about the amount of money spent on student worksheet. In addition, many teachers are still not good in applying information technology is growing. So in the process of learning teachers spoiled by using student worksheet provided, this causes the elimination of student worksheet. Currently teachers are required to be more creative in order to be able to convey learning according to the expected goals, but what happens in the field there are still teachers who are less able to choose teaching materials and turn the classroom atmosphere to make it more interesting to make students creative in learning. This resulted in students less interested in learning Indonesian. Indeed student worksheet is very helpful for students in learning, because student worksheet facilitate teachers to know the ability of students, as well as helping students who are less able to understand the lesson. The process of learning in the classroom students have different abilities, many possibilities that occur in

the classroom such as less conducive students when the learning process takes place, the lack of clarity of the voice of the teacher resulted in students less understanding of lessons delivered.

The result of observation and experience of the researcher of problem that happened in student worksheet teaching material is not achievement of basic competence, lack of material exposure, lack of explanation of problem, lack of sample problem, lack of availability of answer sheet and less attractive color. This is also reinforced by the research of Chotimah [1] in his research problems that arise is less interesting appearance on the student worksheet, the lack of examples that trigger the material and not achieving the basic competencies expected by the curriculum 2013. Learning materials is one component in the learning system which plays an important role in helping students to achieve the basic competencies and learning objectives contained in the curriculum. According to Zulaeha et al in Toni [2] the subject of Indonesian language consists of components of language skills, namely the aspect of listening, speaking, reading, and writing. Learning that is only concentrated on the teacher and ignoring the importance of effective, creative, and innovative teaching materials also makes students weak, in the cognitive, affective, and psychomotor aspects. In addition, the presentation of teaching materials that emphasize more on the theory can also make students less able to participate actively in learning.

II. LITERATURE

Student Worksheet

Majid reveals that student work sheets are sheets containing tasks that must be done by students. This worksheet contains instructions and steps to complete a task given by the teacher to his students. The tasks assigned to students can be theory and practice [3]. Trianto describes that "student worksheets are student guides used to conduct investigative or problem-solving activities [4].

Text Structure Procedure

Depdiknas states the structure is the way something is conceived or constructed, as well as the text of complex procedures that also have the arrangement to become a complex text of procedure [5]. According Kemendikbud, the linguistic features of procedural text can be seen in the use of time conjunctive words, pronouns, verbs and commands [6].

Development Research

Borg and Gall define educational research and development (R & D) is a process used to develop and validate educational products. These process steps are usually referred to as R & D cycles that study the research findings related to the product to be developed, and develop the product based on the findings [7]. Seals and Rickey in Rustaman [8] state development research as a systematic review of the design, development and evaluation of programs, processes and learning products that must meet the criteria of validity, practicality and effectiveness.

III. RESEARCH METHODOLOGY

The type of research used is the development or often known as research and development (R & D). This research was hold in SMA Negeri 9 and Yap Belawan by X grade students in 2017.

The development of student worksheet text procedure is using Borg and Gall development model with the reason that this design has the design of developing and validating the product. The procedure of student worksheet product development in this research is preliminary study (Phase I), planning, development (Phase II), professional validation, (Phase III) individual testing on three students, Small group trial of six students and large group trial and revision. The instrument used in this study to collect data is an professional team's validation instrument against complex text teaching procedures (the questionnaire validation sheet of subject matter and design learning professionals), instrument responses of students and teachers on teaching materials (individual trials as many as 3 people, Small group trials 9 people, Field trials limited to 35 people, Response Indonesian teachers 2 people), student learning result test (the instrument is cognitive and affective test).

Assessment instruments for validators and individual trials, small groups and limited field groups are created in the form of Likert scales that have been scored as in the table below [9].

Table 1. Criteria of Validation Instruments with Likert Scale

response	Score
very good	4
good	3
enough	2
bad	1

Then the data is analyzed descriptively quantitative, that is calculate percentage of indicator for each category on instructional material developed.

$$\text{Percentage Score} = (\text{Total of indicators per category}) / (\text{Total of indicator total category}) \times 100\%$$

Based on the calculation of the formula above, the figure is generated in percent. The classification of scores is then changed to classification in percentage form [10], then interpreted with qualitative sentences listed in table 2 below.

Table 2. Criteria Percentage of Occurrence Indicators

responses	score
very good	$81\% \leq X < 100\%$
good	$61\% \leq X < 80\%$
enough	$41\% \leq X < 60\%$
bad	$21\% \leq X < 40\%$
very bad	$0\% \leq X < 20\%$

IV. RESULTS

The results obtained by spreading the questionnaire needs analysis to Medan Labuhan students and 2 teachers of Indonesian language against student worksheet text of complex procedures. The results showed 82.86% of students said need student worksheet and 100% of teachers claimed to require student worksheet for the learning process more effective. Based on the results of needs analysis of student worksheet developed for teachers and students can be concluded that the student worksheet developed is very needed by teachers and students in the learning process. The next step is to design and develop teaching materials based on local needs and context.

The validation results before the revision were obtained from the content feasibility aspect with the percentage score of 71.9% and the "good" criterion. Then on the aspect of language percentage score of 60% with the criteria "enough" and aspects of the presentation of the percentage of the score of 57.6% with the criteria "enough". Based on the opinion Arikunto [11] decision-making of the teaching materials used the qualification criteria of the feasible level of 76-100, 60-75 is sufficient, 26-60 less feasible, <26 unfeasible. Validation results before the revision show the content feasibility aspect with the percentage score of 71.9% criteria "quite feasible". Aspects of language percentage score of 60% with criteria "quite feasible" and aspects of presentation of the percentage score of 57.6% with criteria "less feasible". Assessment of products in terms of feasibility of content, feasibility of presentation, and language feasibility is still in the criteria "less feasible" so this study should make a revision. Validation results after the revision, got a valid assessment of the content feasibility aspects with the percentage score of 82.35% and the criteria of "very good". Then on the aspect of the language percentage of the score 82.69% with the criteria of "very good" and presentation aspects of the percentage of scoring score 82.69% with the criteria of "very good".

After validation of the material professional, the next step is to validate the product in order to know the opinion of the design professional on the design of the developed student worksheet. The validation result is the first assessment score on the student worksheet rating indicator that has been developed from the validity aspect of validity of the graduates with the percentage score of 68.3% and the criteria of "good". The results of the assessment carried out on products intended to obtain information to improve the quality of student worksheet that have been developed in complex text learning procedures in terms of advice and assessment of design professionals. Then the validation results in the form of scores assessment of indicators that have been developed from the aspect of validity of validity of the legality with a percentage score of 85% with the criteria of "very good".

In this study, complex text teaching material that has been developed, assessed by the teacher. The results of the assessment in the form of scores on learning components in accordance with Indonesian language learning, especially on the text of complex procedures. The result of responses or responses by Indonesian teachers concluded that the text material of complex procedures including the criteria of "very good" with the average total percentage of 91.66%. This means that the student worksheet text of complex procedures that have been developed to meet the demands of learning needs that will be taught to students in the class X SMA Medan Labuhan.

Individual trials conducted at SMAN 9 and SMA Yapim Belawan each school were taken by three students in class X consisting of one high-achieving student, one student with medium achievement and one low achieving student. The results of the individual test assessments at SMAN 9 and Yapim Belawan above concluded that the developed student worksheet included in the criteria of "very good" with the average total percentage of 84.72% and 87%. Individual trials are conducted to determine the initial responses of students as respondents and to identify product deficiencies against products developed prior to small group trials. The percentage results in the above table can be concluded that there is no need to revise again on teaching materials

that have been developed and research can be continued to the next stage, that is small group trials namely high school students X class of 9 students.

The small group trial was conducted in SMA Negeri 9 and Yapim Belawan. Trials of each school were drawn by nine students with varying ability, moderate, and low to re-examine students' perceptions of developed and revised products of weaknesses after individual trials. Having obtained small group trial data on student worksheet that have been developed, it can be concluded that the developed student worksheet are included in very good criteria, with the average percentage of 86.11% and 85%. Based on the results shown, the research can be continued to the next stage is a limited field trial of class X who numbered 35 people SMA Negeri 9 and 35 students Yapim Belawan.

The next stage is to conduct field trials limited to 30 students in SMA Negeri 9 and 30 students in Yapim Belawan to generate data that will be used to determine how the feasibility of student worksheet SMA Negeri 9 and Yapim Belawan has been developed for the wearer. The results of class X student responses to student worksheet that have been developed as a whole in the criteria is very good for all assessment indicators with a percentage score of 90.83% total 94. This means that the developed student worksheet has no significant problems or shortcomings to be fixed so no revisions are necessary. Thus, the student worksheet text of the complex procedures developed has a certainty in the development and can meet the demands of the needs in learning. The assessment of this limited field trial is the final stage of the student worksheet text test of complex procedures in class X.

The average acquisition of students in learning before using student worksheet developed equal to 71,7 mean while acquisition of average after using the material 88,9. This proves that student learning outcomes are improving well. So also the results of research by some researchers, Ayu [12] in his thesis suggests the use of student worksheet is needed to improve student learning outcomes in writing exposition texts. Students' writing results greatly improved with an average grade of 90.2 with very good criteria. Research thesis of Jannah with title of development of student worksheet Playing drama based on auto biography of Habibi and Ainun, also suggested student worksheet is needed, result of researcher needs 100% of teachers stated need student worksheet with result 86,9%, and student learning result increase with average at 92.5% [13]. The results showed that student worksheet was developed feasible to be used and test of student worksheet use was also feasible to be used in some schools. Chotimah research titled development of teaching materials student worksheet listen audio-based media for students of class VII SMP Curriculum 2013 [1] suggests student worksheet is very well used to assist students in understanding, composing and writing text observation reports. The results showed that after using student worksheet developed audio-based media is very effective with the average value of students 90.1%, it shows very good criteria. Based on the results of the explanation of learning theories, needs analysis, student learning outcomes and previous research results can be concluded that the developed student worksheet is stated to help students in the learning process and improve student learning outcomes.

Before student worksheet is tested to students, student worksheet is validated by professionals or professionals. According Emzir, validation is the process of assessment of product design conducted by providing an assessment based on rational thinking [14]. In this study, student worksheet is validated by 2 validation of professionals. Valid aspects include 4 aspects, namely content feasibility aspects, language feasibility aspects, feasibility aspects of presentation, and aspects of the graph. First, the content feasibility aspect, obtained validation value of 82.35 with valid category. Second, the aspect of language feasibility, also categorized valid. Validation values obtained for 82.69 with valid categories. Third, aspects of presentation feasibility, overall categorized as valid. Validation values obtained for 82.69 with valid categories. Fourth, the feasibility aspect of the graph also categorized valid. Validation value 85. The six indicators made obtained value 4 with valid category. Based on the description of the four aspects, it can be concluded that student worksheet learning Indonesian on the text of complex procedures designed categorically valid. This can be seen from the analysis of the validation questionnaire assessed by 2 professional validators. The next stage of student worksheet is tested to the teacher. The result of response or response done by the Indonesian language teacher to the student worksheet is valid with the total average of 91.66%. Further research is continued to the students to see the feasibility and effectiveness of student worksheet that have been developed. The results of the trial assessment of the students were conducted in 3 processes: individual trials (3 students), small group trials (9 students) and Trial Field Trial (35 students). The gains of individual trial results are "valid" with an average percentage of 84.72 and 87%, respectively. The acquisition of small group trial results is "valid" with an average total percentage of 86.11 and 85%. The acquisition of limited field trial results is declared "valid" with a total average score percentage of 90.83 and 94%. Based on the discussion of research results described above, it can be concluded that the development of student worksheet for feasibility is declared eligible to be used in SMA Medan Labuhan.

Based on product effectiveness test using effectiveness calculation formula [10], result of data processing research done, there are difference of learning result of producing text of complex procedure, between student learn to use student worksheet before developed with student worksheet which have been developed can be seen from value the results of learning using student worksheet has been developed that is equal to 81.85% while the average value of students who learn by using student worksheet before developed 71.54%. From these data it can be proved that the use of student worksheet after being developed is more effective in complex text learning procedures. Based on the results of student learning analysis, it can be concluded that all students who follow the learning with student worksheet is complete. It can be seen from the average value obtained that is 81.85 is in good qualification and has fulfilled the minimum criteria of completeness established by the school that is 75. If viewed individually, from 35 students, there are 10 students which gets very good category and there are 8 students get the value under the completeness with enough category and less, while the rest gets good category. From the results of the analysis of the effectiveness test of student worksheet text of complex procedures can be concluded that the cause of non-completion of students is less active in learning and less understanding of all the elements produce the text of complex procedures and the use of bad grammar. Description of each value of 35 students who became the subject of research are as follows. First, there are fifteen students who score > 80. The students' scores were 80.13, five students got 85, four received 90, ten students scored 95 of the four values, there were ten students who were categorized as Good and nine students were categorized Good. Secondly, there are 8 students who score 75-80. Details of the students' grades are students who scored 75 as many as 7 students. Third, there are 8 students who get the value below minimum criteria of completeness that there are four students who get the value of 74.07, one student who get score 65, three students who get score 60. Of the three students there is one student who is in the qualification of less, apart from being in the qualification of enough. Based on the above analysis results can be concluded that the overall mastery learning students have reached minimum criteria of completeness, although there are 4 students who have not completed. The average score of students reaches 76.85 with good qualification. If seen from the value of minimum criteria of completeness set in school then the students who have not completed and not yet meet the minimum criteria of completeness is 8 students that is less than 75. Students who have not been thoroughly able to review the material that has not been mastered in the text student worksheet complex procedures.

Limitations of research in the process of developing the Student Worksheet against complex text learning procedures are (a) Lack of availability Material validators and design professionals, since the wide student worksheet discussion covers the entire syllabus of the 2013 curriculum, it can be overcome with the help of the guide's recommendations, (b) Lack of student availability in research. This can be overcome with the help of teachers who participate in supervising students in the research process takes place, (3) Product testing is only to see eligibility, teacher responses, student responses as product users, and test the effectiveness of learning outcomes before and after using the Student Worksheet.

V. Conclusion

Needs analysis through a distributed questionnaire indicates the importance of student worksheets in the learning process to improve students' thinking skills in understanding lessons, making students active and able to learn independently. The products developed in the form of student worksheets on complex developed text writing materials are eligible and suitable for use as individual teaching materials, based on professional material judgments, instructional design professionals, instructional media, student responses on individual trials, small group trials, and limited field trials of the developed student worksheets are categorized as excellent so they are acceptable and worthy of use as teaching materials. The use of teaching materials in the form of student worksheet that can improve learning outcomes when compared with student worksheet before developed, it is shown from the results of student learning in learning by student worksheet has been developed higher than the results of student learning in learning by using student worksheet before developed.

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