

# Website *Rumahbahasa.id* as a Basis for Development of Scientific Work Teaching Materials in Universitas Negeri Semarang

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**Abstract**--Industrial revolution 4.0 initiates a new model with more innovative strategies in the world of language education. This has encouraged the digitalization of education system. Therefore, the renewal of the world of language education can be applied through web-based learning. The objective of this study was to analyze aspects of *rumahbahasa.id* website as the basis for developing scientific work teaching materials as well as analyzing the needs of students and lecturers on *rumahbahasa.id* website as the basis for developing scientific work teaching materials in Universitas Negeri Semarang. The type of study was qualitative descriptive, using a qualitative naturalistic approach because it carried out in natural conditions. Data obtained by questionnaires, interviews, and observations. Data analysis was quantitative techniques. The aspects contained on *rumahbahasa.id* website as the basis for developing scientific work teaching materials consisted of material content aspects, presentation aspects, language and readability aspects, and figureic aspects. Student needs on *rumahbahasa.id* website as the basis for developing scientific work teaching materials in Universitas Negeri Semarang showed that there was a very needed category in presentation aspect was 24% and figureic aspects was 20%, category was needed in the content and material aspects was 49%, and enough categories on language and readability aspects was 70%, while lecturer needs on *rumahbahasa.id* website as the basis for developing scientific work teaching materials showed that there was a very needed category in presentation and figureic aspects was 23%, category was needed in the content and material aspects was 48%, and category of language and readability aspects was 73%.

**Keywords:** *need analysis, website, teaching materials, scientific work*

## I. INTRODUCTION

The discourse about the disruption of industrial revolution era 4.0 is a new challenge that must be faced with all society levels. Its role changes the paradigm of thinking and acting for community to be able to survive. Disruption invites the birth of new models with more innovative and disruptive strategies. This has penetrated the development of Information and Communication Technology (ICT) which has led to rapid internet use.

Technological developments in the disruption era led to innovative changes in various

fields. In relation to the education world, technology has encouraged the digitization of education system. Innovations in the field of education occur not only in operational system, but also pay attention to the existence of existing teaching materials. Just as it has been emphasized that teaching materials innovations currently available can be felt by the availability of teaching materials in digital form, one of them is web-based teaching material [1]. Quality of learning can be improved by providing learning that tends to be simulated in accordance with the needs of workforce.

In dealing with various challenges and changes, learning process in higher education needs to be structured so that it is still able to determine the nation's competitiveness, so that the education sector continues to improve. Therefore, universities must move quickly to encourage innovation, facilitate students to become active learners by preparing a curriculum that meets the development of times based on the needs of community.

As mandated in Constitution of the Republic of Indonesia No. 12 of 2012 concerning higher education, precisely in article 35 parafigure 3. Indonesian Language Subject including a subject that must be followed by every student [2]. As a General Course (MKU) which contains scientific material, making Indonesian Language plays an important role in answering the challenges of disruption era. As stated by the Director General of Higher Education, Indonesian Language Subject is lessons that develop students' ability to speak Indonesian Language properly and correctly, because mastery of Indonesian language can be used as a measure of one's nationalism as an Indonesian Language nation. Therefore, Indonesian Language has an important position in higher education curriculum [3].

In the MKU curriculum of Indonesian Language based on KKNi and conservation, it sets out some learning outcomes that students must have. The achievement of learning is an effort to change the students' behavior and attitudes aimed at increasing knowledge, skills and awareness of conservation values, so that it can move students to play an active role in efforts to preserve values, environment and culture for benefit of present and future generations.[4].

Based on the result of observations on scientific work material in MKU textbook of Indonesian Language used in Universitas Negeri Semarang in 2012 edition, 2016 edition, and 2018 edition with the title "*Bahasa Indonesia Pengantar Penulisan Karya ilmiah*", the following points can be identified; *first*, the existing scientific works teaching materials have not been able to meet the needs of students to understand the material in the context of lecture competencies, *second*, content of scientific works contained in Indonesian Language books is still dense in theory, *third*, problem exercises are still in the descriptions form, not yet there were variations in other types of problem training, *fourth*, teaching materials of existing scientific work have not directed students to the learning aspects of attitudes and skills, more on the aspect of knowledge, *fifth*, there has been no renewal in digital-based teaching materials.

Responding to this thing, of course, it cannot be denied that disruption era has encouraged educators to constantly develop themselves based on the demands of times. One of them is by holding innovative forms of teaching materials based on the needs of students. Because good teachers are teachers who are creative in developing relationships between competency components, one of them is communication competence in digital world or digital literacy. Teachers have rights to be creative in developing the relevance of competence components, one of them is communicative competence [5]. The more rapid information technology and internet have influenced students to manage digital information that is increasingly abundant.

One of the learning facilities that can be reached with technology is web-based learning. By this website, students can access various materials anywhere and anytime, so the learning process is more effective and efficient. With the presence of website, teaching materials can improve the learning quality, facilitate the material distribution, learning becomes more interactive [6].

Teaching materials as a form of renewal in education world in the field of literacy and especially the learning of MKU material of Indonesian Language in scientific work, to develop teaching materials requires a forum, namely the existence of *rumahbahasa.id* website as the foundation. This fact encourages students to improve their literacy skills, so the role of digitizing scientific works teaching materials in Indonesian MKU is able to answer and face the new challenges of disruption era of industrial revolution 4.0.

## II. METHODS

This study used a qualitative naturalistic approach because it was carried out in natural conditions. Qualitative research method used to examine the condition of natural objects in which the researcher becomes a key instrument. The subject

conducted on students of humanities and exact sciences who had attended MKU of Indonesian Language in Universitas Negeri Semarang and MKU lecturers of Indonesian Language in Universitas Negeri Semarang.

The form of instrument used non-test instruments. The non-test instruments were in the form of a questionnaire based on student perceptions, questionnaires of needs relating to the perceptions of lecturers, observation guides, and interview guides as reinforcement. Data sources consisted of students and lecturers with data collection techniques through needs questionnaire, observation, free interviews, and documentation.

## III. RESULTS AND DISCUSSION

This research was conducted based on the specified schedule by first designing research instruments used to gather information from respondents who would be a source of information. Sources of information were taken from MKU lecturers of Indonesian Language as well as students from humanities and exact sciences who had participated in MKU of Indonesian Language scientific work material in Universitas Negeri Semarang.

The research instrument before being used through the validation stage to measure the quality of instrument. The instruments used in data collection assessed by two supervisors as instrument validators. Data obtained from research results, suggestions, and comments were as material in revising the instrument.

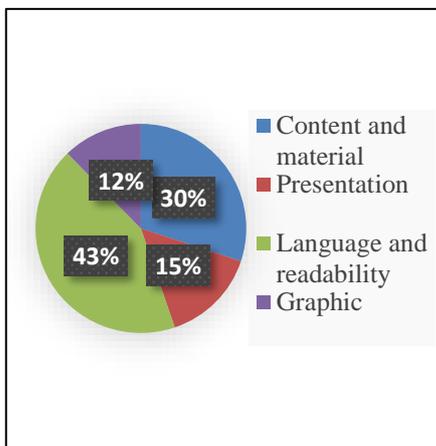
Based on the result of analysis, it found that the level of instruments reliability performed by calculating the average reliability coefficient using Cohen's Kappa (K) coefficient and the result compared with the minimum reliability criteria. The result of the agreement analysis between rater showed that the value produced for the instrument was 0.82, the instrument for the presentation was 0.75 while the language instruments and readability and figureical instruments found the results of analysis was 0.773. Seeing the agreement level between these values was greater than the predetermined standard which was equal to 0.70 [7], so that the instrument met the criteria criteria reliably.

Then, the analysis between instruments conducted to determine the needs of students and lecturers on *rumahbahasa.id* website as the basis for developing scientific work teaching materials in Universitas Negeri Semarang. The instrument was in the form of questions from four aspects, namely: 1) content and material aspects; 2) presentation aspects; 3) language and readability aspects; and 4) figureical aspects. The four aspects were described in 40 questions. The result of questionnaire distribution of needs analysis can be seen based on the following criteria.

**Table 1.** Requirements Criteria

Average score	Criteria
0%-24%	Very needed
25%-49%	Needed
50%-74%	Enough
75%-99%	Not needed

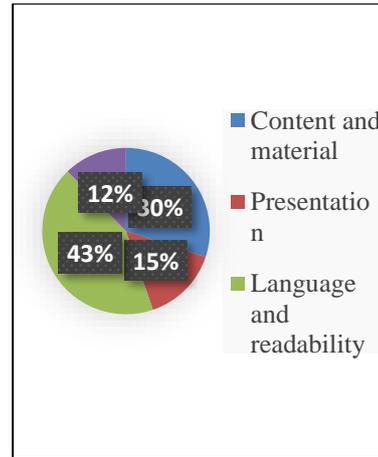
Based on the needs criteria in table 1, it has been used as the basis for making decisions to make a friendly language website as a basis for developing scientific teaching materials from student responses and lecturer responses. The results for student response data for each aspect can be seen in figure 1 and figure 2.



**Figure1.** Criteria for the Needs of Each Aspect of Humanities Student Cluster

The criteria for the needs of humanities community students state that the content and material aspects get an average score of 49% which means that the content and material aspects have the criteria needed on *rumahbahasa.id* website. As the basis for developing scientific work teaching materials in Universitas Negeri Semarang. The average score is 24% on the presentation aspect which means that this aspect is very much needed on *rumahbahasa.id* website as the basis for developing scientific teaching materials.. Language aspects and readability get an average score of 70%, which means that the linguistic structure contained on *rumahbahasa.id* website is sufficient to be used as the development of scientific work teaching materials. In the figureic aspect the score is 20%, which means that the figureics on *rumahbahasa.id* website are very much needed as a basis for the development of scientific teaching material.

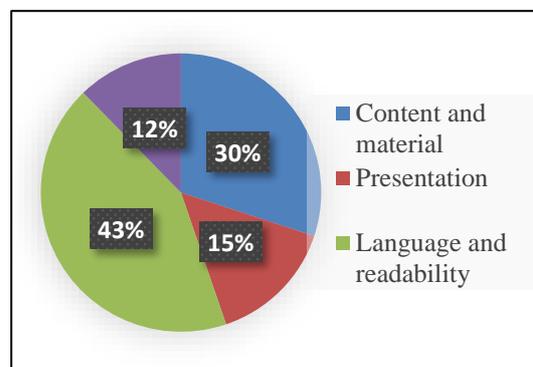
In addition to the criteria for the needs of students in humanities sciences, the following criteria are obtained for the needs of each aspect of exact science students is described in figure 2 below.



**Figure. 2** Criteria for the Needs of Each Aspect of Students in the Exact Science Clusters

Based on the needs criteria figure 2, it can be stated that the content and material aspects get a score of 45%, which means that the content and material aspects are needed on *rumahbahasa.id* website as the basis for developing scientific work teaching materials. An average of 20% in presentation aspect is stated by students of exact sciences that this aspect is very much needed on *rumahbahasa.id* website as the basis for developing scientific teaching material. Language and readability aspects get an average score of 70%, which means that the language published on *rumahbahasa.id* website is enough to be used as the development of scientific work teaching materials. In the figureical aspect get an average score of 21%, which means that the figureics on *rumahbahasa.id* website are very much needed as a basis for developing scientific work teaching materials in Universitas Negeri Semarang.

Next, the result of analysis was based on the needs of MKU lecturers of Indonesian language which were used as the basis for decision making on *rumahbahasa.id* website as the basis for developing scientific work teaching materials in Universitas Negeri Semarang. The result of analysis can be seen in the following figure 3.



**Figure 3.** Criteria for Needs for Each Aspect of MKU Lecturers of Indonesian Language

The criteria for lecturers' needs in figure 3 can be stated that the content and material aspects get an average of 48%, which means that the aspects of content and material are needed on *rumahbahasa.id* website. The average score of 23% is stated by MKU lecturers of Indonesian Language that the presentation aspect is very much needed on *rumahbahasa.id* website as the basis for developing scientific teaching materials in Universitas Negeri Semarang. Language and readability aspects get an average of 70%, which means that the language on *rumahbahasa.id* website is enough to be used as the development of scientific work teaching materials. The figureic aspect gets an average score of 21%, which means that the figureics on *rumahbahasa.id* website are very much needed as a basis for developing scientific work teaching materials in Universitas Negeri Semarang.

The needs analysis above shows that the required aspects are on *rumahbahasa.id* website as the basis for developing scientific work teaching materials, namely content and material aspects, presentation aspects, language and readability aspects, and figureic aspects. The material aspects of three respondents have the same criteria that are needed. In this aspect, students and lecturers need learning material that has a strong influence on students and is suitable with learning objectives. This is reinforced by Tomlinson that learning material should have a strong influence on students [8]. In addition, the suitability of the material is also needed according to the purpose of education [9].

The presentation aspects of three respondents have very much needed criteria on *rumahbahasa.id* website as a basis for developing scientific teaching material. Students and lecturers need innovative forms of teaching materials based on the times. Clear and interesting material presentation, balanced layout, illustrations, and images [10]. One of the teaching materials that can support the technology development today is web-based teaching materials. A website as a basis for developing teaching materials has a goal, namely efficiency, operates as a supplement and effectiveness, as an effort to improve the learning process [11].

Language and readability aspects based on the needs of three respondents have sufficient criteria. The language and readability on *rumahbahasa.id* website must be based on the rules and structure. Students need to be accustomed to behaving in a real manner, behave well in language, and have conservation insights into the culture that works in their environment [12]. The figureic aspects of three respondents have very much needed criteria. Figureic on *rumahbahasa.id* website must adapt to innovativeness and attractiveness. The innovation and creativity of teaching materials can be applied with the availability of digital teaching materials, as well as interesting teaching materials that must pay

attention to the balanced and varied layout, illustrations, and images.

#### IV. CONCLUSION

Based on the research, the following results are obtained. First, the aspects needed on *rumahbahasa.id* website as a basis for developing scientific work teaching materials, namely content and material aspects, presentation aspects, language aspects and readability, and figureic aspects. Second, the criteria for the needs of each aspect of the humanities community students show that the presentation and figureic aspects have much-needed criteria on *rumahbahasa.id* website as the basis for developing scientific work teaching materials in Universitas Negeri Semarang with a score of 24% and 20%. For students in the exact sciences, the aspects of presentation and aspects of figureics have very much needed criteria with a score of 20% and 21%. The criteria for the needs of each aspect of the lecturer indicate that the presentation and figureical aspects have the much-needed criteria with the same score of 23%. Third, the expectations of students and lecturers that *rumahbahasa.id* website can be disseminated and serve as the basis for developing scientific work teaching materials at several universities and schools that learn about scientific work.

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