

Development Of Interactive Digital Big Book History of North Sumatra as A Source of Learning for History Education Students on the MBKM Curriculum

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Abstract: The importance of developing an interactive digital ledger of the history of North Sumatra which is open access for students of history majors/study programs as a learning resource is the main background for the implementation of this research. In addition, to respond to government programs, especially in the world of education with the implementation of the Merdeka Learning Campus Independent curriculum, and to answer the challenges of education in the Industrial Revolution Era 4.0. Lecturers and students in their learning, especially the History of North Sumatra course, tend to use printed books whose content is less relevant to Graduate Learning Outcomes and Learning Outcomes Department of History Education Faculty of Social Sciences UNIMED. This condition is due to the existence of printed books that currently contain limited material about the geographical, economic, and socio-cultural conditions of several regions of North Sumatra with a time limit of only the 20th century. Studies on the existence of figures and the development of art by artists, especially composers, especially musicians and composers, such as Liberty Manik with the national anthem Satu Nusa Satu Bangsa, for example, are almost untouched. Therefore, the use of the interactive digital-based History of North Sumatra ledger will greatly facilitate students in exploring learning resources in the form of digital, multimedia such as audio, video, animation, photos, graphics, and so on, especially in the current era of the covid-19 pandemic. In addition, the digital application will give students access to other sources such as historical archives from sites such as the National Library, KITLV, and the Indonesian National Archives, to the acquisition of the latest scientific articles through national and international links available on digital applications. Therefore, research on the development of an interactive digital ledger of the History of North Sumatra is very important to do.

Keywords: Big Book, Interactive, Local History

1. INTRODUCTION

Based on Permendikbud No. 3 of 2020 which states that every higher education institution (PT) is obliged to facilitate students in strengthening competence by providing opportunities for learning outside the study program at the same university and taking learning in the same study program at a different university, therefore The MBKM curriculum is one of the strategic policies of the Ministry of Education and Culture in improving the quality of Indonesian human resources through higher education in facing global challenges [1]. In addition, RI Government Regulation Number 4 of 2022 concerning National Education Standards, article 6 point (4) c states, Graduate competency standards in higher education units are focused on knowledge, skills, independence, and attitudes to discover, develop, and apply science, technology, and art, which are beneficial to humanity, the State University of Medan (Unimed) as an accredited A PT (SK BAN-PT No. 2988/SK/BAN-PT/Akred/PT/XII/2016) responded, by participating in opening the most comprehensive opportunity for students to implement these policies through several programs such as student exchanges through Permata Sakti, Permata Sari, Internships, and so on. This Government Regulation and Ministry of Education Program also provide incentives to maximize distance learning to accommodate the

needs of MBKM in conducting online lectures. The use of learning platforms by Unimed such as SIPDA, GAFE (Google Application For Education), Zoom, and others, will greatly assist lecturers and students in distance learning activities, especially in this pandemic era [2].

To maximize classical and distance learning in the MBKM program, in addition to using the learning platform provided by Unimed, lecturers of course need to develop digital-based learning materials as an alternative to printed teaching materials, because they can enrich teaching materials/materials through multimedia facilities such as audio, video, , animations, photos, graphics, journal web links, and so on. This makes it possible for students to obtain digital applications as learning resources with smartphones based on Android and iOS through Google Play and the App Store, so that classical, blended, distance learning or full online history learning can run more effectively, flexibly, and efficiently. Interactive digital-based teaching materials as learning resources are still rare in the UNIMED FIS environment, especially JPS.

The Department of History Education is one of the four majors/study programs in the FIS environment that is accredited A (SKBAN-PT No. 9574/SK.BAN-PT/Ak-PJ/S/VII/2021) responding to the MBKM program by the

Rector's Regulation No. . 0362/UN33/PRT/2020 concerning Freedom of Learning, which requires every Lecturer to be able to develop learning activities, both offline, blended learning, and fully online [3]. This is a mandatory solution for implementing distance learning as a result of the covid-19 pandemic and as an adaptation to facing the challenges of the Industrial Revolution 4.0 in the world of education, as well as the realization of the MBKM curriculum. North Sumatra History Course is one of the courses launched by JPS. as a subject in the independent learning program that is taken not only by JPS FIS UNIMED students but also by students who join from other universities. To maximize learning in lectures, it is necessary to develop teaching materials using digital-based learning resource applications. This is done to be able to access teaching materials/materials easily through the use of smartphones by students who attend North Sumatra History lectures either offline, blended learning, or fully online [4].

One of the big obstacles faced in lectures at JPS FIS UNIMED in the RI 4.0 era and the MBKM curriculum was the absence of digital ledgers that were up to date and relevant to the CPL-CPMK, especially for the class of courses called spatial history such as Indonesian history, Sumatran history. North, American History, European History, African History, Asian History, and other spatial history courses. The big book available in the market today and which is considered the most complete for the study of North Sumatra is the work of William Marsden, History of Sumatra, published in 1966 by Oxford University, translated and published by Komunitas Bambu in 2008. in the historical study of the 20th century, precisely in 1950 (not up to date), and relatively limited because it does not specifically discuss North Sumatra, and is not by CPL and CPMK in the MBKM Curriculum which has been formulated by the JPS Lecturer Team so that the teaching materials are not can meet the needs of Lecturers and Students, and result in CPL-CPMK far from expectations.

The description above shows how important the digital-based ledger or the interactive digital North Sumatra History Ledger is to help optimize the competence of JPS students in mastering the materials in special courses, especially the History of North Sumatra so that each CPL-CPMK that has been formulated can be achieved. Therefore, research on the development of digital teaching materials in the form of interactive applications can be a novelty and something very important to be carried out to answer the challenges of Higher Education in the RI 4.0 Era and Independent Learning to welcome UNIMED to become The World Class University.

2. METHOD

The method used in this research is the research and development method. Development research method is a method used to produce certain products, and test the effectiveness of these products (Sugiyono, 2010:407). Research and Development is a process or steps to develop a product or improve existing products, which can be accounted for [5].

The process of developing this interactive digital-based North Sumatra History Ledger Application uses the research and development (R&D) model by Borg and Gall [6]. The stages of the R&D development model include: a) the needs analysis stage, consisting of student analysis, material analysis,

and goal specification; b) the design phase of teaching materials products, including the selection of teaching materials, and initial design; c) the production/implementation stage of initial product development, including the manufacture of teaching materials, and the preparation of assessment instruments (validation sheets, questionnaires/questionnaires; d) the validation stage, including assessments from design experts (Historical Education Lecturers), and assessments from material experts (History Education Lecturer); e) the revision stage, which includes revisions or improvements to the media based on suggestions by the validators; f) the product trial phase, including testing the material on students, filling out questionnaires by students and carrying out learning outcomes tests; g) the final revision and dissemination stage, including the analysis of the success of the media and the final improvement or revision of the media as well as the dissemination of the media. The last step in this research is the effectiveness test [7].

3. RESEARCH RESULT

Analysis Stage

The development of this media begins with analyzing some of the necessary needs. These needs include: material selection and user determination, to be used as a reference in the development of the North Sumatra History Ledger.

1) User (user)

The target users of the North Sumatran History Ledger Application developed are students of the Department of History Education at the Faculty of Social Sciences, State University of Medan. Based on interviews with several students, it is shown that learning using mobile devices (smartphones) is very interesting for them and can help students learn independently whenever and wherever. Based on a preliminary study conducted by researchers through observations and interviews, data obtained that the average student has an Android smartphone which of course can access the North Sumatran History Ledger that will be developed [8].

2) Material Needs

The content referred to in this case is learning material for the North Sumatra History course. Several learning topics that have been prepared by the researcher are then shown to students, then the researcher conducts interviews. Students were asked to give their opinion on how important these topics were to them based on the needs they encountered in the lectures. The question that the researcher asked was about how important the topics that had been prepared were studied to develop students' abilities in the North Sumatra History course.

Furthermore, for the learning materials needed by students to be displayed in the North Sumatra History Ledger application. Researchers obtained data that the average student considers that audio and video media are very important media in learning Research Methods [9].

So to annul the needs of students, researchers will include several additional features such as practice questions and videos related to the Indonesian History course. The video presented is a video about phenomena or symptoms related to

the subject matter of the Indonesian History Course which will then be used as material for student projects in that course.

a. Product Design Phase (Design)

The product design of the North Sumatra History Book Application in this study was divided into two parts, namely the development of project-based research method teaching materials and the development of the North Sumatra History Ledger Application for Android-based research method teaching materials.

Initial Design of North Sumatra History Ledger Application Products

After the analysis and creation of project-based learning textbooks, the next stage is to design a product in the form of the North Sumatra History Ledger Application [10]. The initial design of the North Sumatran History Ledger application product based on Android is divided into 2 designs, namely the design for the front-end, namely the design for users (students who take Indonesian History courses) and the back-end design, namely the design design for administrators, namely lecturers so that at any time time can update the North Sumatran History Ledger Application that was developed.

Display Design of the North Sumatra History Ledger Application

a) Initial Screen of Application

The initial view of the application (login) is the view after the application is accessed by the user. In the display there are two fields that must be filled in by the user, namely the user name and password. Students who are registered as participants in the Research Methods course will be given a password by the lecturer who also acts as an admin on this North Sumatra History Ledger application.

b) Front View Design

The front screen is the display that appears after the student has passed the Login stage. On the front screen you will see a menu. In the first menu "About" is a menu that displays about the North Sumatran History Ledger Application product, the second menu "Material" is a menu that contains materials and sub-materials that will be discussed in lecture activities, the third menu "6 assignments" is a menu that will displays the 6 KKNi task sub menu items. The fourth menu is the RPS menu.

c) Display Design "Home"

The "Home" menu is a menu that contains matters relating to the North Sumatra History Ledger Application, such as; 1) The name of the North Sumatran History Ledger Application, 2) the purpose of the North Sumatran History Ledger Application, 3) how to use the North Sumatran History Ledger Application [11].

d) Material Display Design contained in the "Home" sub menu

The material menu is a display in which there are various kinds of material that are in accordance with the teaching materials in the online version of the Indonesian History course, both in written form and in the form of images and videos [12]. This menu also contains RPS (Semester

Learning Plan) and powerpoint slides that can be downloaded by students.

e) 6 Task Display Design

In addition to supporting the blended learning model, the North Sumatra History Ledger Application is also designed to support 6 tasks determined by the KKNi curriculum applicable at Medan State University [13]. On the 6 task menu there is a detailed explanation display of 6 tasks that students must do. The display design is shown in Figure below.

Product Development Phase (Development)

The development stage is the stage of making the North Sumatran History Ledger Application. In making this North Sumatra History Ledger Application, it was adjusted to the design design. First, the collection of materials used to fill in the content in this North Sumatra History Ledger Application such as images, videos, and animations is carried out. These materials are obtained by using electronic books, google and youtube [14].

After all the materials have been collected, the next step is to make the North Sumatran History Ledger Application, the Android version of the North Sumatra History Ledger Application, using the Sigli software.

Implementation Stage

The implementation phase contains product trials that have been developed to a number of respondents. In the implementation, the researcher makes a learning scenario using the Blended Learning model. The implementation of blended learning consisted of 4 meetings, namely 2 face-to-face meetings and 2 online meetings using Zoom and Dandroid web meetings for Indonesian History lectures. During the trial, the researcher asked 2 experts, namely the learning media expert and the material expert to provide an assessment of the North Sumatra History Ledger Application product [15].

1) Expert Validation

Before the product was used, the researcher asked for the assessment of the Research Methods Material Expert and the Digital-based Learning Media Expert. The assessments of the three experts are as follows:

(a) Media Expert Assessment Results

Media experts are respondents who are considered to have a good or bad assessment of a learning media. This North Sumatra History Ledger application was tested by 1 digital learning media expert who assessed the software engineering and visual communication side.

The results of the media assessment recap are shown in Table 5.1 below:

No	Item	Skor
1	Desain tampilan Aplikasi Buku Besar Sejarah Sumat Jawa	4,00
2	Fondasi penggunaan Aplikasi Buku Besar Sejarah Sumat sudah dipahami	4,00
3	Tampilan sesuai Aplikasi Buku Besar Sejarah Sumat	4,00
4	Aplikasi Buku Besar Sejarah Sumat tidak memuat banyak materi	3,50
5	Proses loading media video dan Gambar berjalan dengan baik	4,00
6	Tampilan layout Aplikasi Buku Besar Sejarah Sumat menarik	4,00
7	Komposisi dan desain warna yang digunakan menarik	4,00
8	Tampilan desain, ukuran, dan tata letak baik tepat	4,50
9	lay tombol yang memisahkan pengguna dalam menggunakan media	4,50
10	Link audio dalam Aplikasi Buku Besar Sejarah Sumat berjalan dengan baik	4,50
11	Video pembelajaran berjalan dengan baik	4,50
12	Aplikasi Buku Besar Sejarah Sumat dapat dijalankan di versi android	4,00
13	Penggunaan jenis dan ukuran font sudah tepat	4,50
14	Penggunaan etik dan tampilan antarmuka pada Aplikasi Buku Besar Sejarah Sumat sederhana dan menarik	4,00
15	Aplikasi Buku Besar Sejarah Sumat bisa digunakan kapan saja dan di mana saja	4,50
16	Desain tampilan sesuai dengan rangkaian penggunaan	3,50
17	Kemudahan dan kenyamanan dalam memanfaatkan	3,50
18	Bahasa yang digunakan sudah dipahami	4,50
19	Kemudahan penggunaan media gambar dan video	3,50
20	Keterkaitan antara ke gambar dan warna huruf	4,50
Jumlah total		82,50
Rata-rata		4,10
Kategori		Sangat Baik

In the assessment questionnaire above, we can see that media experts gave very good ratings for all items with a total of 82.50 with an average score of 4.10. Based on the total and average values, it can be concluded that the Android North Sumatra History Ledger Application "History of Indonesia" is suitable for use in learning with the blended model.

(b) Material Expert Assessment Results

Material experts are respondents who assess the feasibility of the material content contained in the developed North Sumatra History Ledger Application media. In this study, the material experts appointed by the author are experts who really understand how to design interesting learning based on materials and sub-materials in the Indonesian History course and have a scientific background related to learning Indonesian history and understand learning models. The results of the material assessment are shown in Table 5.2 below.

No	Item	Skor
1	Materi yang dimuat dalam Aplikasi Buku Besar Sejarah Sumut sesuai dengan kurikulum KKN1	5,00
2	Aplikasi Buku Besar Sejarah Sumut ini dapat menunjang tercapainya tujuan pembelajaran	4,00
3	Kesesuaian antara desain materi dan project based learning	5,00
4	Aplikasi Buku Besar Sejarah Sumut ini dapat membuat peserta didik tertarik untuk lebih mempelajari materi ajar	4,50
5	Materi yang dimuat dalam Aplikasi Buku Besar Sejarah Sumut sesuai dengan RPS mata kuliah Metode Penelitian	4,00
6	Aplikasi Buku Besar Sejarah Sumut dapat menambah keberanian mahasiswa untuk menggunakan Metode Penelitian	4,50
7	Aplikasi Buku Besar Sejarah Sumut ini memungkinkan peserta didik untuk belajar secara mandiri	4,00
8	Keterbacaan kalimat dan paragraf jelas	4,50
9	Materi yang dimuat dalam Aplikasi Buku Besar Sejarah Sumut tersusun secara sistematis dan runtut	4,00
10	Video yang ditampilkan pada Aplikasi Buku Besar Sejarah Sumut dapat membantu peserta didik untuk memahami materi	4,00
11	Tautan video yang disajikan sesuai dengan materi	3,50
12	Mendorong peserta didik terlihat aktif	4,00
13	Latihan soal yang diberikan dalam Aplikasi Buku Besar Sejarah Sumut sudah sesuai dengan materi yang disajikan	4,50
14	Kesesuaian latihan soal dengan tujuan pembelajaran	4,00
15	Menggunakan istilah-istilah yang tepat dan mudah dipahami	4,50
16	Memberikan motivasi/minat dan rasa ingin tahu peserta didik	4,50
17	Materi up to date	4,50
18	Materi yang disajikan mengandung 4 kompetensi Metode Penelitian	4,50
19	Kesesuaian antara materi dan kebutuhan jurusan Bimbingan dan Konseling	4,50
20	Gambar-gambar yang digunakan pada Aplikasi Buku Besar Sejarah Sumut	4,00
Jumlah total		86
Rata-rata		4,3
Kriteria		Sangat Layak

In the assessment questionnaire above, we can see that the material expert also gives a very good assessment of the material that has been displayed by the researcher on the product. The results of the calculation for all items in the material assessment, namely as many as 20 assessment items, obtained a total of 86 with an average value of 4.30. Based on the total and average values, it can be concluded that the material contained in the Android North Sumatra History Ledger Application "History of Indonesia" based on Literacy Hots is suitable for use in learning [16].

2) Application of the North Sumatran History Ledger Application in Learning the History of North Sumatra

The application of the North Sumatran History Ledger for the Literacy Hots-based Research Methods course is the product developed in this research. Therefore, it is necessary to implement the use of the North Sumatran History Ledger Application in learning Indonesian History courses to find out how students respond and evaluate the products developed.

Student Interest in Android-Based Learning

To find out students' interest in learning the Research Methods course using the North Sumatran History Ledger Application based on Literacy Hots, students were asked to fill out a response questionnaire by giving an assessment of each indicator by putting a check mark () on the range of numbers that are considered appropriate, namely (4) to strongly agree, (3) to agree, (2) to disagree, and (1) to disagree. The results of the questionnaire were then analyzed by calculating the percentage value obtained from each aspect, namely the total value of each aspect divided by the maximum number and multiplied by 100% as stated by Hariyadi (2009) in [17] as follows:

$$P = \frac{f}{N} \times 100\%$$

Keterangan:

P = Persentase

F = frekuensi yang sedang dicari atau skor yang diperoleh

N = Number of cases atau skor maksimal

Furthermore, to determine the response category given by students to an aspect by matching the percentage results with positive criteria according to Khabibah (2006) in Wulandari and Waryanto (2012), namely:

85% ≤ respon = sangat positif (sangat tinggi)

70% ≤ respon < 85% = positif (tinggi)

50% ≤ respon < 70% = kurang positif (kurang tinggi) respon

< 50% = tidak positif (tidak tinggi)

Table 5.3 Results of Student Response Questionnaires

No	Aspek	Persentase	Kriteria
A	Perasaan Sangat	87,15%	Sangat positif
B	Keterarikan Terhadap Aplikasi Buku Besar Sejarah Sumut	86,57%	Sangat positif
C	Perthatian	85,81%	Sangat positif
D	Keterlibatan Mahasiswa	88,24%	Sangat positif

The results of the student response questionnaire obtained a percentage of 86.49% on aspects of feeling happy, 87.67% on aspects of student interest in using applications, 85.81% on aspects of attention, and 88.24% on aspects of student involvement. Looking at the four aspects, it shows a very positive student response, so it can be concluded that students have a high interest in learning using the developed North Sumatra History Ledger Application.

4. CONCLUSION

The developed North Sumatran History Book application can be one of the effective learning media for students and helps in learning the history of North Sumatra. The Hybrid Learning learning model will certainly be more effective when coupled with the use of the Ledger Application. In addition, the use of the North Sumatran History Ledger Application can stimulate students in developing a learning and independent culture and also increase students' Literacy Hots skills.

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