



DEVELOPMENT OF THE BLENDED LEARNING MODEL OF THE
DATA SYSTEM OF DATA BASIS IN FACULTY OF COMPUTER
SCIENCE, BANTEN JAYA UNIVERSITY

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*Peer-review under responsibility of 3rd Asia International Multidisciplanry Conference 2019 editorial board
(<http://www.utm.my/asia/our-team/>)*

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Research Highlights

This study aims to develop a database system product as a learning system teaching material with the application of e-learning. The method used in this study is the method of research and development (R & D). The development model used is the Dick and Carry Instructional Development Model. The steps for developing learning materials begin with needs analysis and formulation of objectives, instructional analysis, identifying early learner behaviors and characteristics, writing specific instructional objectives, writing benchmark reference tests, developing learning strategies, developing instructional materials, designing and implementing formative evaluations, revisions, obtaining desired instructional system. In general conclusions, validation from learning design experts 93%, material experts 95% and media experts 94% so recommending learning materials can be used. In individual trials 91.95%, small group trials 92.24% and in the 92.82% field trials, the database system teaching materials are feasible to be developed using e-learning models. Then the basic competencies to be achieved and indicators of the presentation of material on learning materials and e-learning programs in the database system subjects have been very good and easily understood by students.

Keyword: Products, Learning Materials, E-Learning

Research Objectives

The field of education is one of the fields that utilizes technological developments in addition to the development of science. The use of technology is a creative and systematic effort to create student learning experiences so that eventually educational institutions will be able to produce quality graduates. Therefore, the development of science and technology in the world of education must also be supported by the availability of superior human resources (HR). In preparing superior human resources, an effort to improve the quality of education is needed. Schools as educational institutions play an important role in increasing the success of lecturers, students, and staff education.

The use of databases or databases is needed in various fields in a company / organization, like a database is a warehouse in data storage because databases are one of the important components in information systems that provide information for users in using data in accordance with their duties and functions. users easily and quickly in searching for this information. The undeveloped database or those that are not well prepared will certainly result in several problems, because interacting with the database is not only dealing with the problem of designing, accessing and inputting data but also with issues of data redundancy and inconsistencies, difficulties in accessing data, data isolation for standardization, multiple users, data security, data integration and data independence. Therefore learning is needed which can understand database concepts correctly, which currently does not have a structured learning design.

By using a learning design model that can describe the objectives to be achieved. design is a process for determining the conditions of learning (Richey & Klein, 2012). The emphasis in this definition lies in addition to the process of learning conditions, so that the scope includes learning resources or system components, the environment, and various activities in learning. In addition, design is also seen as a process to produce plans or *blueprints* in an effort to develop material that supports learning (Gagne, 2005). If the definition actually emphasizes the process and conditions of learning, what is done is in the form of a *blueprint* to support learning. *The*





Blueprint consists of at least four main coverage, namely the design of the learning system, message design, learning strategies, and characteristics of participants

Methodology

This research is a form of research and development which generally aims to produce products in the form of teaching materials database system subjects with the application of e-learning that can be used by students to study face to face or independently.

The study was conducted at the University of Banten Jaya Faculty of Computer Science students who had not yet attended the Database Systems course. The process of designing and making teaching materials is carried out from the beginning of January to April 2017. The field trials of e-learning learning models will be conducted in the odd semester of the 2016/17 academic year, following data analysis conducted at the end of the even semester 2016 / 2017. So overall this research implemented from January 2017 to December 2017.

This Research Approach uses research and development methods, in the field of R & D education directed at the development of effective product needs for education managers and is applied research. This research emphasizes change for improvement rather than omnipotence and increases its usefulness in education. Thus, the product in the form of Database System teaching materials with the application of e-learning is very appropriate in accordance with the characteristics of students at FIK Unbaja

Results

The results of the expert validation of interactive online based learning materials developed reflect the level of feasibility of the learning material. Overall the results of material validation are very good. According to material experts, the indicators of truth and feasibility of material with scientific studies are correct, suitable for use in development. Then on the indicators of language usage and the order of the materials in accordance with the rules that apply. On the indicators of material presentation and student learning participation is feasible. Then the indicators of clarity and accuracy of the learning outcome assessment instruments are correct and clear.

Findings

From the results of the formative evaluation for the small group, the research received input from the nine students on learning materials and e-learning database system subjects, namely: **First**, students are still confused to use learning materials and e-learning. From the student's input, the researcher explained to students that learning materials were used in book and online forms.

Second, students suggest in the compilation of bibliography in the learning material that each chapter of the chapter should be arranged alphabetically from the name of the author of the source material for learning material.

Third, in the formative evaluation of the small group students suggested that the use of e-learning be supplemented with learning material by adding animation so that the lecture material became interesting.

Fourth, students suggest researchers in terms of using e-learning media to be directly used in the learning process because the learning material is very interesting and no lecturer has used it.





Acknowledgement

This Research supported by Universitas Banten Jaya

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