

# Online Discussion with the Concept “Any Where, Any Time and Any How”

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## ABSTRACT

The tools is needed in the process of learning to students, especially with the support of the internet, the media can be used as an alternative to increasing the effectiveness and overcome the problems that sometimes arise in the process of education and teaching activities conducted by faculty in particular and educators in general. Media education in the form of discussion that can be used by lecturers to means of transferring knowledge through the medium of the Internet can be used as alternatives to help the learning process because it can be accessed at any time without obstructed space (any where) and time (any time), students can access at any time as well as the sharing of knowledge and technology with other students (any how), as well as the community can take advantage of this medium to extra knowledge.

Development of media education in the form of discussion can be conducted using "the waterfall model " of system development through identification stage of discussion needs for faculty and student learning, system design with tools Unified Modeling Language (UML) and implementation of web-based programming language and MySQL as database processing. Once the system is running well then online it to put the system on the internet.

The purpose of this research is to provide new insights into the application of information technology in education, especially to establish a medium of education in the form of discussions that take place online. So that the system can be used as an alternative for Lecturer to sharing knowledge more effective and efficient. Can also as a medium to interact and communicate more effectively and efficiently for faculty, students and the community. The expected benefits of this research is to improve the learning media for faculty to students, as well as to train students argue professionally in the spread of the Internet and improve the means of scientific information to the public.

## General Terms

Computer Application, Education Technology

## Keywords

Discussion, Design, Education, Online, PHP, MySQL

## 1. INTRODUCTION

Rapid technological developments and extends to a variety of fields, with the internet community can quickly get the information they need at any time. World Education welcomes this development by utilizing a variety of media to streamline the education and teaching .

This study is a follow up of the education and teaching activities conducted by lecturer at Campus AMIK JTC Semarang with system-face in the classroom and student

consultations to each lecturer. During this faculty of knowledge transfer through face-to-face class, assign tasks to students and collected in hardcopy or softcopy also by media mail. Consultation was also carried out to students via sms, email and chat sometimes there are with telephone.

What has been done lecturers are not well documented, so that the transfer of knowledge that is so precious disappeared without trace or can only be received by some students only.

The consultation via email, sms and chat are also many problems obstacles, the first lecturer was not enough time to serve all these consultations, disruptions of data communication that may occur.

From case on the faculty, came an idea to create a website that can be used as a medium of learning in the form of discussion to accommodate the learning materials and consultation of each student. In the web the students can log in and see the lecturer material , and can also see the answers themselves or consulting consulting another student, so that with consultation displayed can determine solution by it self if the same happens problems by another student who has been consulted.

From the lecturer can directly give the waiter a scheduled basis or in the order based on the date of posting, provide answers and a special note of each consultation of students. The interaction of students and lecturers are not limited to time because any time faculty can memereview every message from the students, as well as students can view the material and the results of the review and response from the faculty concerned.

Expected by the management of student case through this web media can be beneficial to students because of them gets knowledge of the discussions that seen previously as for the community can take advantage of the duty to additional knowledge.

Development of instructional media in the form of a discussion conducted by using the waterfall model of system development through identification stage needs of faculty and students, designing systems with tools Unified Modeling Language (UML) and implementation of web-based programming language and MySQL as database processing. Once the system is running well then put the system on the internet web hosting.

## 2. THEORETICAL

### 2.1. Discussion Media

Research using methods Discussions in the learning process by Muplihun, N., 2013 showed that the presence of a positive interaction to the application of the learning model discussion on students who have high motivation.

Other research on the use of the method of discussion in the learning process by the method of discussion by Ifadloh, 2012, By Title Method Discussion With Approach Science, Environment, Technology, Society and Media Question Cards (Sets) shows that learning to apply the methods and media discussion SETS denganpendekatan question card can create yangproduktif and fun classes, thus enhancing creativity and cooperation among students. Students are able to menghubungkankonsepkonsep science with Problems of that occurs in the community, students everyday environment that helps students apply their learning in everyday life.

Learning Media beneficiaries using the discussion forum was also investigated by Joseph, M, et al, 2013 showed that the discussion forum can be used to provide solutions to the ongoing problems in the learning process has been limited to the issue of time and place.

## 2.2. Any Four Concept

The concept of four has any notion that a system has the advantage of any where, any device, any time and any network. The point is that the more rapid development of technology can produce a system that can be accessed from any place, at any time, all devices and all networks.



Figure 1. Concept Four Any (Any time, Any Network, Any Device, Any Where)

## 2.3. The concept of Web-based Applications

Web-based application is an application that utilizes the World Wide Web (WWW) as an interface, which means that the desired data can be accessed and manipulated using a web browser. In practice, this is very beneficial, because this application can be run on any computer, as long as the computer has a built-in web browser. Some other advantages of Web-Based Applications is (Pressman, 2001).

- 1) The data can be accessed anytime and from anywhere.
- 2) Easy to use, the user simply to point and click.
- 3) The Company did not have to buy the program accessed because the browser is generally available for free on the Internet.
- 4) In addition, a web-based application makes it easy maintenance, because the application only physically exist on the server. If there is any modification or addition of modules do not need to be done on the client computer one by one.

## 3. ANALYSIS AND DESIGN SYSTEM

### 3.1 Analysis of the system

From the observation in Jakarta AMIK Technology Cipta become material to perform systems analysis and development phase of the system, with the following steps:

#### 3.1.1. Analysis of the problem

Analysis of the problem with the approach taken PIECES, which according Wetherbe (1994), that this approach is used to classify the problem based on the need to improve the performance of the system (performance), information and data

(Information), control costs (economics), control and security systems (control ), Infrastructure Efficiency (efficiency) and repair service (service). Source of data analysis problems derived from interviews and questionnaires were conducted during the study. This information is then sorted into PIECES approach and formulated a plan to solve. From out of this process in order to take the analysis a source of problems and plan solutions as shown in Table 3.1. below this:

Table 3.1. Table analysis of the problem and solution plan

	Problems	Solutions
Service	Discussion and guidance made between students and lecturer have been carried out during working hours, so that the student is limited time to consult with faculty.	Discussions are online at any time via the web has been provided, is stored in a file and stored in a data base.  Control and Efficiency
Control and Efficiency	Discussions between faculty and students are undocumented and therefore can not be used by other students when the case will be asked the same, so the less efficient lecturer activities and spend a lot of time.	Case discussion is stored in a file and stored in a data base on faculty, students and the public can use the results of the discussion that has been done.
Information	Information Students must meet the lecturer to obtain information through a discussion in detail, it will spend time lecturers.	The discussion can be monitored by lecturers, students and the general public and may be used as an additional insight into the deepening of the material and the solution of the problem.
Performance and Economics	In the process of guidance and discussion in which students and faculty takes time, effort and concentration lecturers, whereas professors have many tasks.	Activity Lecturer to be effective because it can conduct discussions anytime, and anywhere, the results of an online discussion terdokumntasi into useful materials for students or the general public to help solve the problems.

### 3.1.2 Analysis of Online Discussion System requirements

From the analysis of the problems with PIECES framework, needed an automated system for discussion for faculty and students more effectively and efficiently, while the analysis of the system requirements are as follows:

#### 3.1.2.1 User Needs

User needs of system management tasks online students divided into two users, as shown in the following table:

##### 1). Actor Admin / (Lecturer)

**Table 3.2. actor admin**

Actor Name	Definition
Administrator (Lecturer)	Administrator duty to control the information system applications, conduct discussions with the user.

**2). System User Actor / Student / User**

**Table 3.3. actor user**

Actor Name	Definition
User (Students)	actor who sends discussions, monitor the results of the discussion and contribute to a discussion theme.

**3). Guest Actor / (Guest) / Society**

**Table 3.4. actor admin**

Actor Name	Definition
Guest (Public)	view and use this discussion to broaden and complete knowledge.

**3.1.2.2. External Interface Requirements**

These needs include the need to interface to the user input process, needs hardware and software system requirements.

**1). User Interface**

Server management system online discussion using a web-based interface. Users can operate using an input device, keyboard and mouse that comes with the Windows operating system, Linux and the web browser.

**2). Device Interface-Hardware**

Web servers, database servers and computer applications online discussion that runs on hardware devices Personal Computer (PC) with minimum specifications Processor Intel Xeon 2.4GHz, 2G RAM memory, 160G hard drive, and Windows operating systems, Linux.

**3). Device Interface-Software**

software used is divided into two requirements, namely

**a) The need for the software from the server**

- a. The operating system is Linux or Windows XP and above.
- b. Program to the server with Apache Friends XAMPP (Base Package) version 1.7.3, MySQL 5.1.41 Processing databases with PHP 5.3.1
- c. Mozilla Firefox Web Browser 4.0
- d. Web Hosting and Domain web

**b) The need for software from the user side**

- a. The operating system is Linux or Windows XP, 7
- b. Mozilla Firefox Web Browser 4.0

**3.1.2.3. Functional Requirements**

Functional requirements of system discussion online is divided into two processes, namely functional processes on the computer user and functional processes on the computer ADMIN with the following details:

**1). The process of the Computer User (student)**

- a. User Login

**b. Management of user data**

**c. Delivery Article discussion**

**d. Finding the data**

**e. Management Messages**

**2). Process the Web Server and ADMIN (Lecturer)**

**a. Process Admin Login**

**b. Data Management Admin**

**c. Management Discussion Themes**

**d. Data Management this discussion**

**e. Finding the data**

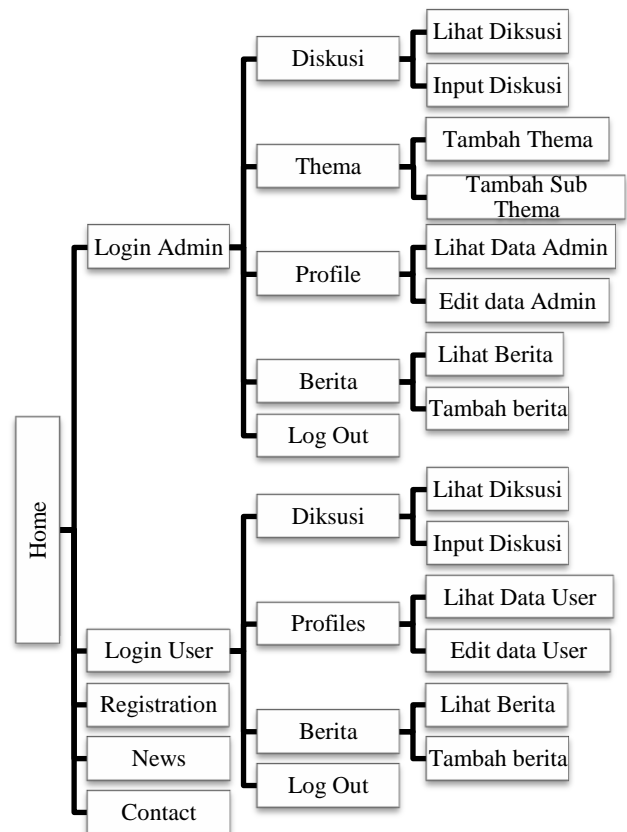
**f. Management Discussion Archive**

**g. Monitoring this discussion**

**h. The whole process is on the user side**

**3.1.2.4. The need for a menu system**

The menu system on the online discussion system are as follows:



**Figure 3.1. System Menu**

Figure 3.1. describes the menus available in the system is built, the details of these menus are:

- 1) The main view of the web is a page that displays the login input and Discussion Thema, Sub Thema Discussion, News, Registration, Contacts, Users Online where to be able to discuss the user must log in first.
- 2) Discussion Thema is a collection of themes of discussion that has been done by the user, while the sub-theme is a collection of sub-sub-theme that can be added within a theme.
- 3) User Login is used to validate the user or student who will enter into the system. In the user menu there are

several menus that are used to manage user data, send discussions, monitoring the discussions and seek discussions.

- 4) Login Admin is used to validate that the user will enter as an administrator, guest or students.. In the admin menu, there are several menus that are used to manage the data admin, enter theme, sub-themes and information, monitoring discussions, chat and manage discussions.
- 5) Users that are not registered as a guest user can only access the system but can only monitor and view the results of discussion only.
- 6) Logout used to get out of the system both in the Admin and Users.
- 7) Messages sent or this discussion can be:
  - a) Posts with various effects that can be chosen by the student
  - b) Pictures of type .jpg, .gif and jpeg with size defined by the system
  - c) Insert File is a file that is included in the Messages that can be downloaded by the user, adapau size of the file that is inserted too limited
  - d) Videos are linked to youtube
  - e) Symbols provided by the system

### 3.2 System Design

At this stage of the system design process using equipment Unified Modeling Language (UML), which is an object-oriented modeling language for specifying, visualizing, and construction of the system or software (Booch et al., 1999). Here are the models that are used in the development of an online discussion system:

#### 3.2.1. Uses Case Diagram

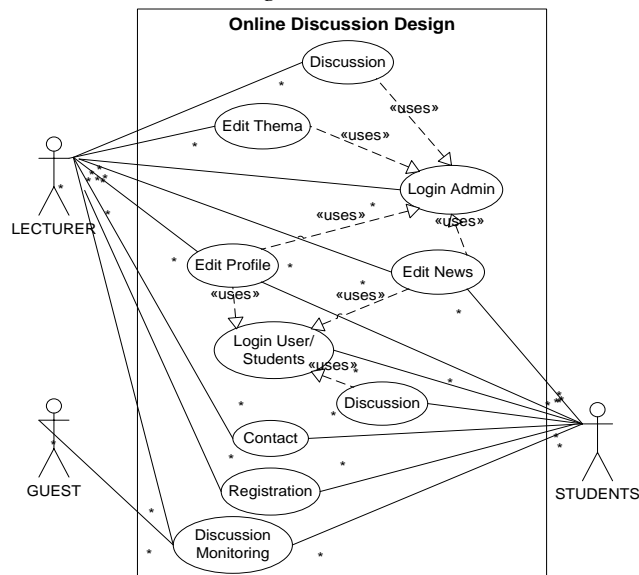


Figure 3.2. Draft Systems with Use Case Diagram

In Figure 3.2 Design System with Use Case Diagram there are three actors are admin, guest and student use casenya while there are 10 that can be done by the actor-actor.

#### 3.2.2. Conceptual Data Model

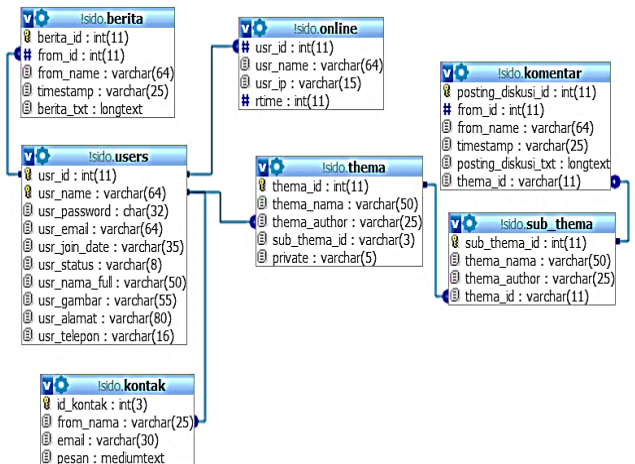


Figure 3.4. Conceptual design of Database

## 4. INPUT AND OUTPUT DESIGN

### 4.1 Web Page



Figure 4.1. Web Page

### 4.2 Discussion Form

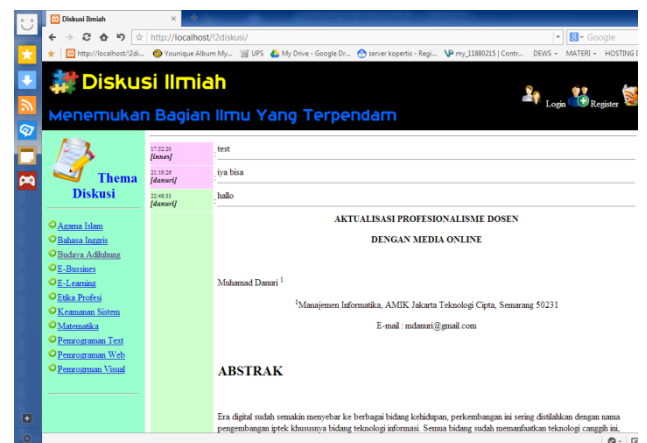


Figure 4.2. Discussion Form

### 4.3 Sub Thema Discussion Form

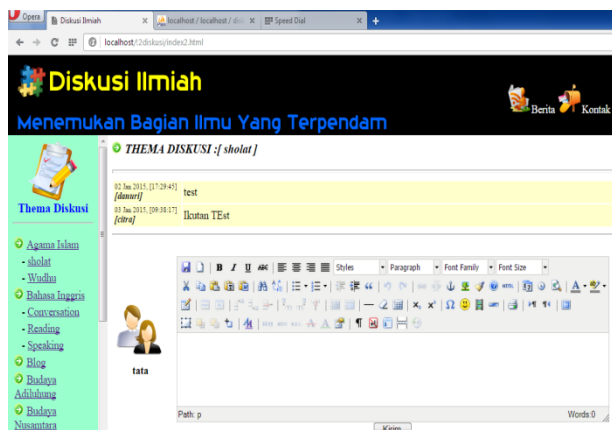


Figure 4.3. Sub tema Discussion Form

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## 6. CONCLUSION

Conclusion Discussion of online information systems can help the students to the process of consultation and guidance to faculty. There are many advantages of online discussion among others:

6.1. Online Discussion System can improve the effectiveness and efficiency of the activities of faculty and students, as well as documentation that can be utilized by the public discussion.

6.2. The effectiveness of time for lecturer as well as students in doing communications and consultation.

6.3. The public can see the sharing of information and consultation on the online discussion.

## 6.1 Future Work

The proposed work For advanced research can develop discussion media that provide alerts and answer each question automatically.

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