# Improving Motivation, Learning Efficiency Utilizing Rinfo and iME (A Case Study of Higher Education Raharja)

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***ABSTRACT***

*Student learning motivation is one aspect to obtain good learning outcomes. With good learning outcomes, the application of the knowledge gained will be useful for students. the current application of the system of teaching in an evening class Raharja university been computerized for the submission of learned, but it had not been optimal and efficient because of teaching materials that can not be obtained from anywhere and at anytime as well as teaching and learning activities and discussions carried out only in the class so that students tend to be saturated and show the emotional symptoms such as lack of zeal in carrying out lectures, so that suggests a self learning disabilities in students. learning difficulties allegedly closely associated with the motivation to learn owned. Thus the need for a new learning method is applied so that students can termotiviasi and efficiency in learning. In this study the application of the system of learning that will be used is to utilize Rinfo in the adoption of Gmail and iMe in the adoption of Wordpress so that lessons learned are easily digested and fun and will make students more motivated to learn determination of students to be more active. Liveliness characterized by the activity of the post and comment on the iMe so that it can be measured with a dashboard on the front page of an iMe Class which will be a medium for decision support lecturers to give the value of the assignment to students. for the research method used is qualitative, to examine the population or sample data collection using research instruments, analysis of quantitative data which will then be tested for validity and reliability so that we can conclude effect of the use Rinfo and iMe in increasing motivation and efficiency of learning in students.*

***Keywords****: Motivation, Rinfo and iMe, Learning Outcome.*

## Introduction

The use of technology in education, especially in the learning system has been transformed from the conventional form into digital form. Learning pattern that begins in the form of traditional modern media on the Information and Communication Technology (ICT). Although now some universities have made use of existing technology to facilitate learning systems such as the use of computers and the projector for delivery of the material, but it is inevitable it is not quite up to the need for a concept and mechanism of teaching and learning based on information technology in higher education becomes a thing should complex. Overall educational effort learning process is the most important activity because it is through this process of educational goals to be achieved in the form of changes in student behavior.

In Higher Education of Raharja has implemented a new learning system created specifically for personal Raharja called with iLearning. iLearning implies that "*It is a method of learning system which was prepared by the Raharja College with efforts to provide excellent service to all students in the form of service excellence as a flagship campus*". Higher Education of Raharja in developing the concept of a learning process based online multimedia packaged entertainment, so bring the concept of Interactive Education Learning is touched in the process of teaching and learning for the entire academic community and continually make continues improvement towards perfection in teaching materials that always evolving along with the progress and development of technology.

iLearning is composed of some media that raharja.info and iLearning.me. Raharja.info or commonly referred to Rinfo is an online email facility that was adopted from Google or often called Gmail that provided by the Private Higher Education of Raharja. Raharja College for free that is useful to facilitate communication. It looks like there is a feature for Gmail and chat to fellow users Rinfo even Google email (Gmail). By using Rinfo student will be easier to interact with other students and even lecturers. While iME (iLearning.me) is a website iLearning is packaged specifically for online learning activities adopted from Wordpress. Viewed from Rinfo usability and iMe as supporting the learning process of students Raharja College so as to improve the motivation and efficiency of learning in students of Raharja College especially in evening classes.

**Problems**

Although Raharja College has been able to take advantage and feel of the advancement of technology and information. One of the new learning system created by the Raharja College namely iLearning, but not all students can feel the benefits of iLearning is in learning because of limited faculty in the application iLearning overall. There are still some students used learning methods that conventional especially in grade non-regular or evening classes that make students extend to feel bored and passive in the learning process so that extends motivation to learn is reduced and the learning system is less efficient as well as cost efficient in the collection of tasks, time efficiency in gathering to discuss tasks. This is evidenced by the results of questionnaires on learning before use Rinfo and IME on students, especially in evening classes as follows:

**a. Motivation of Students.**

Based on the results of questionnaires from 50 respondents obtained from the questionnaire item number 25 (Learning before using IME Rinfo and tend to be monotonous and boring). There are three respondents disagree, 9 respondents answered neutral, 26 respondents agreed and 12 respondents answered strongly disagree. With this, showed a trend of low student motivation to learn before using IME Rinfo and learning due to monotonous and boring

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 3 | 6.0 | 6.0 | 6.0 |
| | 3 | 9 | 18.0 | 18.0 | 24.0 |
| | 4 | 26 | 52.0 | 52.0 | 76.0 |
| | 5 | 12 | 24.0 | 24.0 | 100.0 |
| | Total | 50 | 100.0 | 100.0 | |

Table 1. Results of The Questionnaire Statement Number 25

**b. The Efficiency of Student Learning**

Based on the results of questionnaires from 50 respondents obtained from the questionnaire item number 28 (Before using media Rinfo and IME, the lecture material can not be obtained from anywhere and at anytime) there were 3 respondents disagreed, 13 respondents answered neutral, 18 respondents agreed and 16 respondents answered strongly disagree.

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 | 3 | 6.0 | 6.0 | 6.0 |
| | 3 | 13 | 26.0 | 26.0 | 32.0 |
| | 4 | 18 | 36.0 | 36.0 | 68.0 |
| | 5 | 16 | 32.0 | 32.0 | 100.0 |
| | Total | 50 | 100.0 | 100.0 | |

Table 2. Results of Questionnaire Statement Number 28

Table 3 state that a questionnaire item number 29 (Collection of the learning task before using the media in a way Rinfo and IME in print so that it is not efficient in terms of cost) there are three neutral respondents, 25 respondents agreed and 12 respondents answered strongly disagree. with this shows the tendency of learning in students who have not been efficient before using Rinfo and IME in terms of time and cost.

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 3 | 4 | 8.0 | 8.0 | 8.0 |
| | 4 | 25 | 50.0 | 50.0 | 58.0 |
| | 5 | 21 | 42.0 | 42.0 | 100.0 |
| | Total | 50 | 100.0 | 100.0 | |

Table 3. Results of The Questionnaire Statement Number 29

**Theoretical Based**

E-learning is principally a learning process (learning) based electronic. In this case, refers to the use of a variety of electronic devices (mainly computers) as a medium of learning **(**Capraris, 2000; Harrison & Bergen, 2000). Rinfo (email rahaja.info) is the email communication services provided by Higher Education for all *Pribadi Raharja*, the main communication tool and most vital to the *Pribadi Raharja*. Each user *rinfo* given capacity up to 30 GB. It is also widely available advanced applications such as RinfoH (Rinfo Hangout). All the activities carried out will be impossible without this Rinfo. In addition, it could also be said that Rinfo integrates with all existing pillar-pillar on TPI (Ten Pillars of IT iLearning). Rinfo use google platform that has a lot of free facilities that can be utilized. Additionally Rinfo could be potential for single sign on with the TPI system (Rahardja, 2014).

Figure 1. Logo Rinfo

iME (iLearning Media) is an official blogging portal that is dedicated specifically for *Pribadi Raharja* and each will get a *Pribadi Raharja* subdomain as the media documentation of any activity Tridharma (Rahardja, 2014).

Figure 2. Logo iLearning Media

Wordpress is an open source application (open source) which is most popularly used as an engine blog (blog engine). Wordpress is build with PHP (*Hypertext Preprocessor*) and a database (database) MySQL (*My Structured Query Language*). PHP and MySQL, both of which are open source software (open source software). A side from being a blog, wordpress also began to be used as a CMS (*Content Management System*) for its ability to be modified and adapted to the needs of its users. Wordpress is the official successor of b2 or cafelog developed by Michel Valdrighi. Wordpress name suggested by Christine Selleck, a friend of the chairman of the developer Matt Mullenweg.

Information dashboard, which is defined as a visual display and important information, which is necessary to achieve one or several goals, with consolidate and organize information in one screen (single screen), so that organizational performance can be monitored at a glance. Visual display here has a sense that the presentation of information should be designed as possible, so that the leadership can capture this information quickly and easily understand its meaning correctly **(**Bayu et.al on Stephen Few, 2015). Learning is an activity or psychic that takes place in an active interaction with the environment that resulted in a number of changes in knowledge-the knowledge, skills, values and attitudes that are constant and settled (W. S. Winkel, 2009: 59)

According Sumardi Suryabrata cited by Djali (2011: 101) "motivation is a state located in the one who encouraged him to perform certain activities in order to achieve a particular purpose". The concept of efficiency is derived from the concept of micro-economics, the theory of consumer and producer theory. The standpoint of the consumer theory to try to maximize the utility or satisfaction of the individual, while the standpoint of theory manufacturers try to maximize profits or minimize costs (Ascarya and Diana Yumanita, 2007: 97).

***Literature Review***

Necessary to study the literature to be used as reference material to reinforce the results of research by the identification of the exact methods, develop previous research that has correlation balanced by learning to use Rinfo and iMe (iLearning Media). Some of the literature review were obtained are as follows:

1. *Utilization System IME (iLearning Media) and Rinfo (Raharja.info) in the implementation of the E-Journal System in CCIT Journal On Higher Education of Rahardja* (Indri Handayani, 2015). Explaining that the current journal system that runs on Higher Education of Raharja in CCIT Journal is still traditional, the authors had to come to Higher Education of Raharja and submit the results of both softcopy and hardcopy writing to the admin so it takes a lot of time and cost. Therefore, it is necessary to process quickly and efficiently in the process of receiving and processing CCIT Journal in Higher Education of Raharja, then made an e-journal by using two systems of Ten Pillar IT iLearning or better known as FAP is iMe (iLearning Media) and Rinfo (Raharja.info), the difference with this study is the lack of motivation and efficiency effect on student learning and IME.
2. *The Role of Peer Influence and Perceived Quality of Teaching in Faculty Acceptance of Web-Based Learning Management Systems* (Florin D Salajan, Anita G Welch, Chris M Ray, Claudette Peterson, 2015). This study's primary investigation is the impact of peer influence and perceived quality of teaching on faculty members' usage of web-based learning management systems within the Technology Acceptance Model (TAM) framework. These factors are entered into an extended TAM as external variables impacting on the core constructs in the prevailing TAM literature: perceived ease of use, perceived usefulness, intention to use and system use. The investigation is conducted within the context of higher education faculty members' utilization of web-based learning management systems, such as Blackboard. A sample of 171 faculty members from three higher education institutions in Midwestern United States is utilized for the purpose of this study. Using exploratory path analysis, twelve hypotheses were tested for the learning management system. The results of the analyses reveal that perceived quality of teaching plays a significant role in the faculty members' consideration to use learning management systems. In turn, peer influence does not appear to predict

faculty perceptions of the system's usefulness for teaching. The results of additional hypotheses testing are presented. Alternative explanations and implications of the results are discussed.

3. *Development Learning Model Of Character Education Through E-Comic In Elementary School* (Achmad Buchori, Rina Dwi Setyawati, 2015). The research was aim to develop a learning model of character education through e-comic in elementary school. Development theory was used a modification development theory of Plomp and Borg and Gall with the following steps:(1) the initial research (literature study field study) (2) design (design model and the media), (3) realisaasi / construction (design assessment-revisi design) (4) test, evaluation and revision (improvement products hypothetical) (5) implementation (pre and Post test effectiveness test) The research was showeddeveloplearning model in character education consists of five phases and test effectiveness fromlearning process as indicated by the increased value of character in students through observation and value student achievement.
4. *Utilization E-Learning-Based LCMS Moodle As Media Learning To Course Accounting Information Systems* (Harahap, 2015), explaining that the learning process is carried out in the classroom always apply learning system centered where students always expect the source of teacher only, while the students in this case does not too active in the classroom due to the limited time available in the classroom. So that the learning activities are not creative because students are not required to be independent in learning activities. Through the utilization of teaching materials based E-learning is expected to solve the problems of learning activities. Moodle is an acronym for Modular Object-Oriented dynamiclearning environment. This application is built for teaching and learning activities by utilizing the Internet through websites and using social constructionist pedagogy principles which can help teachers in the learning process of all points of view. The method used is descriptive qualitative by using saturated sample that population number equal to the number of samples. Data collection technique used observation, interview and documentation. The outcome of this study is the interaction between faculty and students in the learning process, in addition to the e-learning also serve as a forum for discussion between faculty and students, and can also be used as an online quiz, so that all activities of the learning process becomes very effective.

5. *Application Rinfo As Media Support For Learning Process In Perguruan Tinggi Raharja* (Untung Rahardja, 2014), explaining that the email application that is Rinfo become the official email used by the whole community in Perguruan Tinggi Raharja to communicate with each other. Rinfo is Gmail, which is adapted from the Google Platform with typical raharja.info as its domain. Rinfo are media communication as well as support tools in the learning process in Perguruan Tinggi Raharja. Because in addition integrated with TPI, Rinfo is also linked well with other learning support tools, such as Docs, Drive, Sites, and other supporting tools. The difference with this study is the lack of motivation and efficiency effect on student learning and iMe.

6. *Eangagement in E-Learning Opportunities: An Empirical Study on Patient Education using Expectation Confirmation Theory* (Hsin-Kai Chou, I-Chun Lin, Lin Chung Woung, Ming-Tsu Tsai, 2012), explanation that medical e-learning technology is widely employed to create an online platform for patients and

healthcare providers alike. However, there are few studies that have investigated the reasons why some users reject e-learning technology usage after their initial experience. This study was conducted with the aim to better understand the factors leading to patients' continued usage of e-learning technologies. The theoretical foundation was based on the expectation-confirmation theory (ECT). The questionnaire survey was conducted during a two-month period and covered a total sample of 281 outpatients in a regional-teaching hospital. We found that the intention to continue e-learning usage was significantly related to patients' education level, expectation, perceived performance, confirmation and satisfaction. The use of this ECT model may provide administrators in the healthcare industry insights into the implementation of e-learning technologies. This research also opens up a new direction and enhances the completeness of related researches in the fields of medical informatics and health education.

**Solve the Problems**

The method used in this research is to approach quantitative descriptive method and types of problems are investigated using survey methods.

Descriptive method is a method aimed at describe phenomena that exist, both natural phenomena and man-made phenomenon. The phenomenon could be the shape, activity, characteristics, changes, relationships, similarities and differences between the phenomena the one with the other phenomena (Sukmadinata, 2006: 72). then analyzed and interpret the shape of the survey. Survey with the object studies conducted in populations large and small, but data Learning is data from a sample taken from the population.

In conducting the analysis related to problems that occurred this study used a test survey using a questionnaire as a research instrument.

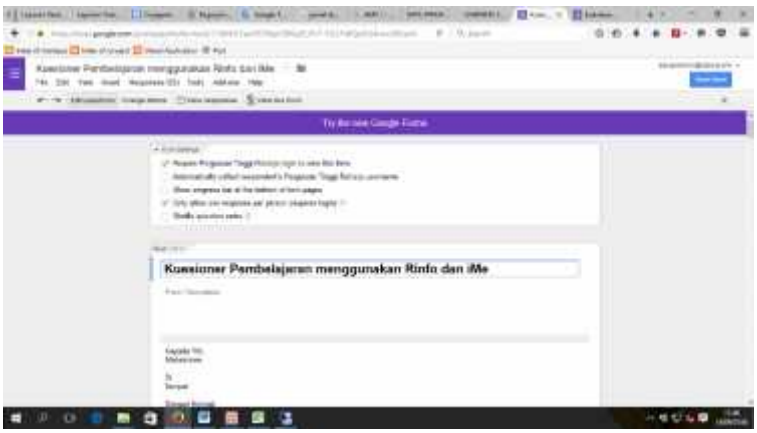



Figure 3. Questionnaire Learning Using Rinfo and iMe

Figure 3. An image questionnaires use Rinfo learning and iMe, this image contains 30 statements. The questionnaire was given to university students as respondents.

**1. Data Processing**

In the questionnaire data processing in knowing the number of samples from a population of Raharja University students using the formula Slovin:

$n = N / (1 + N. e_2)$

Where :

n = Sample Size

N = Population Size

$e_2$ = Percent desired error or tolerated (used by 10%)

By using the formula slovin, this research requires a sample of college students as much:

n = 100 / (1 + 100. (0.1) 2)

n = 100 / (1 + 1)

n = 100/2

n = 50%

The number of samples if it follows the rules of formula Slovin of the total population (N = 100) will generate a minimum sample of 50 students.

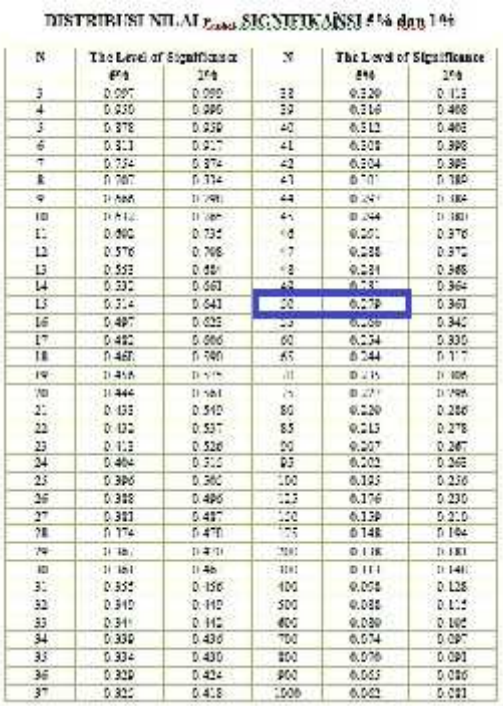
**2. Validity and Reliability**

To obtain valid research results, required validity and reliability of the instrument. Valid instrument means the instrument can be used to measure what should be measured. While the definition of reliably is when the instrument used several times to measure the same object, will generate the same data.

In SPSS, for validity, the results of respondents' answers will be compiled per item total matter and sought answers to each respondent. Next will be calculated the correlation (r) the answers to each item with the total value. The results are then compared with the value of $r_{table}$. If the total above $r_{table}$, then the item is declared valid instrument.

**1. Validity**

Of the total 30 items that were given to the respondents declared invalid all is if r count> r table of values where the value df = N-2, the number of respondents df = 52-2 = 50, where the value of r table for 50 df = 0.279. In testing the validity and reliability needed r table used as a reference if the item is valid or invalid.



DISTRIBUSI NILAI r_tabel SIGNIFIKANSI 5% dan 1%

| N | The Level of Significance 5% | 1% | N | The Level of Significance 5% | 1% |
|---|---|---|---|---|---|
| 3 | 0.997 | 0.999 | 38 | 0.320 | 0.413 |
| 4 | 0.950 | 0.990 | 39 | 0.316 | 0.408 |
| 5 | 0.878 | 0.959 | 40 | 0.312 | 0.403 |
| 6 | 0.811 | 0.917 | 41 | 0.308 | 0.398 |
| 7 | 0.754 | 0.874 | 42 | 0.304 | 0.393 |
| 8 | 0.707 | 0.834 | 43 | 0.301 | 0.389 |
| 9 | 0.666 | 0.798 | 44 | 0.297 | 0.384 |
| 10 | 0.632 | 0.765 | 45 | 0.294 | 0.380 |
| 11 | 0.602 | 0.735 | 46 | 0.291 | 0.376 |
| 12 | 0.576 | 0.708 | 47 | 0.288 | 0.372 |
| 13 | 0.553 | 0.684 | 48 | 0.284 | 0.368 |
| 14 | 0.532 | 0.661 | 49 | 0.281 | 0.364 |
| 15 | 0.514 | 0.641 | 50 | 0.279 | 0.361 |
| 16 | 0.497 | 0.623 | 55 | 0.266 | 0.345 |
| 17 | 0.482 | 0.606 | 60 | 0.254 | 0.330 |
| 18 | 0.468 | 0.590 | 65 | 0.244 | 0.317 |
| 19 | 0.456 | 0.575 | 70 | 0.235 | 0.306 |
| 20 | 0.444 | 0.561 | 75 | 0.227 | 0.296 |
| 21 | 0.433 | 0.549 | 80 | 0.220 | 0.286 |
| 22 | 0.423 | 0.537 | 85 | 0.213 | 0.278 |
| 23 | 0.413 | 0.526 | 90 | 0.207 | 0.267 |
| 24 | 0.404 | 0.515 | 95 | 0.202 | 0.260 |
| 25 | 0.396 | 0.505 | 100 | 0.195 | 0.256 |
| 26 | 0.388 | 0.496 | 125 | 0.176 | 0.230 |
| 27 | 0.381 | 0.487 | 150 | 0.159 | 0.210 |
| 28 | 0.374 | 0.478 | 175 | 0.148 | 0.194 |
| 29 | 0.367 | 0.470 | 200 | 0.138 | 0.181 |
| 30 | 0.361 | 0.463 | 300 | 0.113 | 0.148 |
| 31 | 0.355 | 0.456 | 400 | 0.098 | 0.128 |
| 32 | 0.349 | 0.449 | 500 | 0.088 | 0.115 |
| 33 | 0.344 | 0.442 | 600 | 0.080 | 0.105 |
| 34 | 0.339 | 0.436 | 700 | 0.074 | 0.097 |
| 35 | 0.334 | 0.430 | 800 | 0.070 | 0.091 |
| 36 | 0.329 | 0.424 | 900 | 0.065 | 0.086 |
| 37 | 0.325 | 0.418 | 1000 | 0.062 | 0.081 |

Figure 4. r $_{table}$

After the data is processed using SPSS by using the technique of Pearson Bivariate Correlation (Pearson Product Moment Correlation), then the results obtained:

**a. Utilization Rinfo (Variable $X_1$)**

| No. Item Instrumen | r $_{total}$ | r $_{table}$ | description |
|---|---|---|---|
| 1 | 0,695 | 0,279 | Valid |
| 6 | 0,616 | 0,279 | Valid |
| 7 | 0,519 | 0,279 | Valid |
| 8 | 0,707 | 0,279 | Valid |

Table 4. Utilization Results of Analysis Instruments Rinfo Item (Variable $X_1$)

The test validity results of data for variable X1 (Utilization Rinfo) shows all of the items above statement Valid as many as four instruments statement, because the value of r count > r table is df = 52-2 = 50, where the value of r table 2 toward a significance level of 0.05 r value table for 73 df = 0.279.

**b. Utilization iMe (Variable $X_2$)**

| No. item Instrumen | r $_{total}$ | r $_{tabel}$ | description |
|---|---|---|---|
| 5 | 0,638 | 0,279 | Valid |
| 9 | 0,819 | 0,279 | Valid |
| 10 | 0,588 | 0,279 | Valid |
| 14 | 0,718 | 0,279 | Valid |
| 30 | 0,575 | 0,279 | Valid |

Table 5. Utilization Results of Analysis Instruments iMe Item (Variable $X_2$)

The test validity results of data for variable X2 (Utilization IME) shows all of the items above statement Valid statement that is 5 instrument, because the value of r count > r table is df = 52-2 = 50, where the value of r table 2 toward a significance level of 0.05 r value table for 73 df = 0.279.

**c. Motivation and Efficiency of Student Learning (Variable Y)**

| No. Item Instrumen | $r_{total}$ | $r_{tabel}$ | description |
|---|---|---|---|
| 2 | 0,713 | 0,279 | Valid |
| 3 | 0,734 | 0,279 | Valid |
| 4 | 0,591 | 0,279 | Valid |
| 11 | 0,757 | 0,279 | Valid |
| 12 | 0,841 | 0,279 | Valid |
| 13 | 0,746 | 0,279 | Valid |
| 15 | 0,769 | 0,279 | Valid |
| 16 | 0,694 | 0,279 | Valid |
| 17 | 0,756 | 0,279 | Valid |
| 18 | 0,784 | 0,279 | Valid |
| 19 | 0,684 | 0,279 | Valid |
| 20 | 0,73 | 0,279 | Valid |
| 21 | 0,708 | 0,279 | Valid |
| 22 | 0,709 | 0,279 | Valid |
| 23 | 0,794 | 0,279 | Valid |
| 24 | 0,682 | 0,279 | Valid |
| 25 | 0,784 | 0,279 | Valid |
| 26 | 0,615 | 0,279 | Valid |
| 27 | 0,624 | 0,279 | Valid |
| 28 | 0,574 | 0,279 | Valid |
| 29 | 0,437 | 0,279 | Valid |

Table 6. Results of Analysis Instruments Motivation and Efficiency of Student Learning Item (Variable Y)

The test validity results of data for the variable Y (Motivation and Efficiency of Student Learning) shows all of the items above statement Valid as many as 21 instruments statement, because the value of r count> r table is df = 52-2 = 50, where the value of r table significance level 2 directions 0.05 r value table for 73 df = 0.279.

**2. Reliability**

Criteria for an research instrument is Reliable when the instrument reliability coefficient ($r_{11}$) > 0.6.

**a. Utilization Rinfo (Variabel $X_1$)**

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.775 | 4 |

Table 7. Reliability Statistic Instrument $X_1$ (Utilization Rinfo)

In Y reliability tests output known that Cronbach Alpha of 0.775 > 0.6, then the research instrument is declared Reliable.

b. Utilization iMe (Variabel X2)

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.819 | 5 |

Table 8. Reliability Statistic instrument $X_2$ (Utilization iMe)

In $X_1$ reliability tests output known that Cronbach Alpha of 0.819 > 0.6, then the research instrument is declared Reliable.

**c. Motivation and Efficiency of Student Learning (Variable Y)**

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| 0.949 | 21 |

Table 9. Reliability Statistic Instrument Y (Motivation and Learning Efficiency Student)

In Y Reliability tests output known that Cronbach Alpha of 0,952 > 0,6, then the research instrument is declared Reliable.

**3. Use Case Diagram In student learning using Rinfo and iMe**

Use Case Diagram showing the set of use cases and actors (a kind of a case of the class). This diagram is particularly important for organizing and modeling the behavior of a system that is needed and expected users.

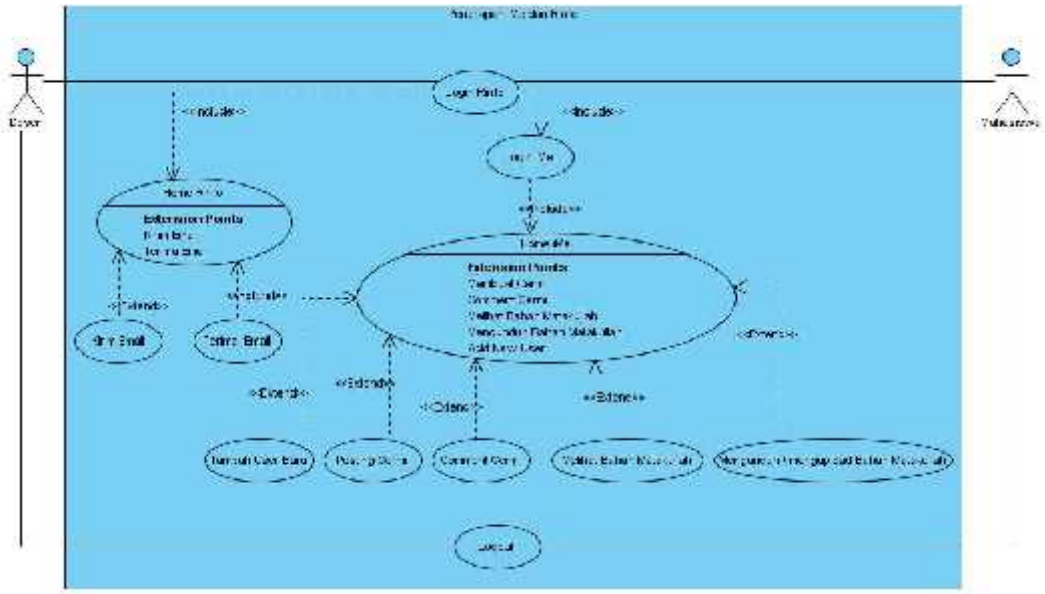


Figure 5. Use Case Diagram Learning Using Rinfo and iMe

Based on figure 5 Use Case Diagram Implementation Process Rinfo and iMe, it can be concluded as follows:

1. 1 (one) system is proposed iMe application process and Rinfo.
2. 2 (two) actors that lecturers and students.
3. 2 (two) use case that is login and logout.
4. 2 (two) that include home iMe and Home Rinfo.
5. 6 (Six) extend that send e-mail, receive mail, add a new user, posting Cermi, comment.

Scenario Use Case Diagram

1. Name Use case : Login
   Actor : Lecturers and Students
   Description : Lecturers and Students logged on the system by entering the username and password.
2. Name Use case : Logout
   Actor : Lecturers and Students
   Description : Lecturers and Students logout of the system

## 4. Listing Query and Viewboard

Query process conducted to be able to generate the needed information from the data source so it can be displayed on a dashboard to see the liveliness of the students.

1. Total 5 highest posts in the entire class


Figure 6. Most Design Data Query Poting

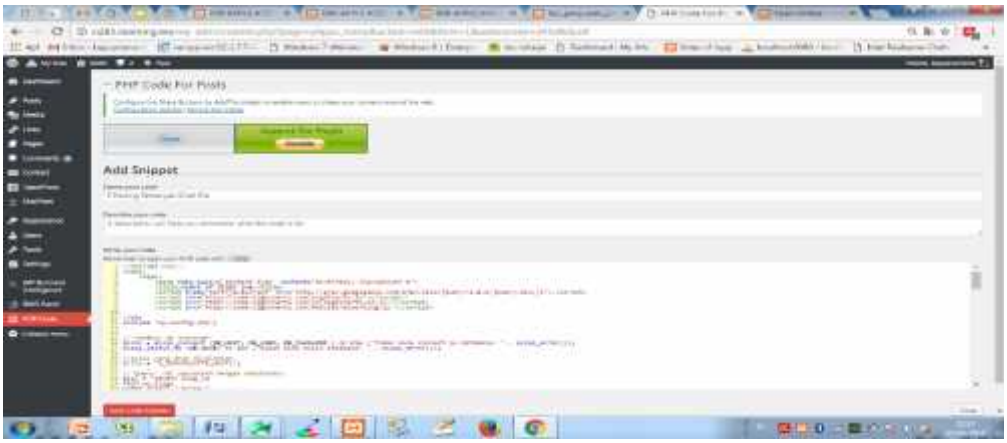


Figure 7. Display of Code Top 5 Posts

In figure 6. Line 4 is the result of a query that produces many a posting on student.

2. Total 5 Highest comment on the entire class


Figure 8. Query design of the most comment

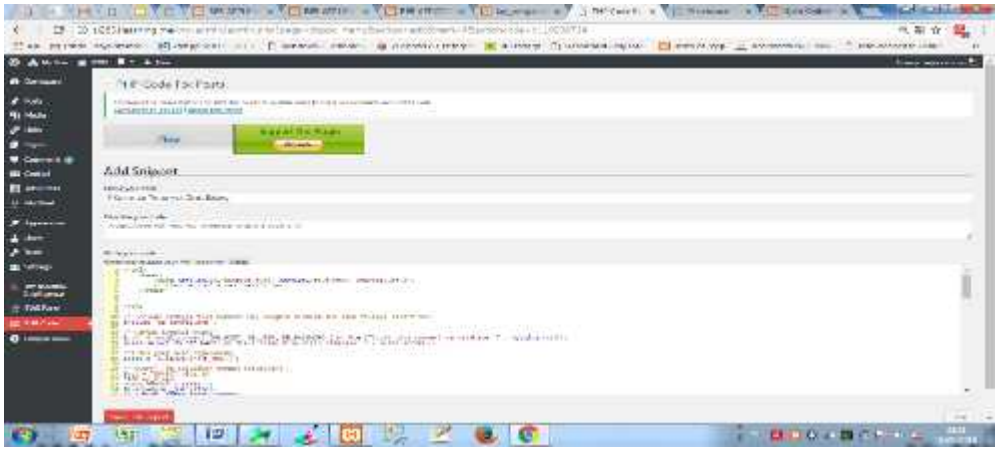


Figure 9. Display of Code Top 5 Comment

In figure 8, line 3 is the result of a query that produces many a comment on the student.

3. Total 5 post that has the most comment on the entire class

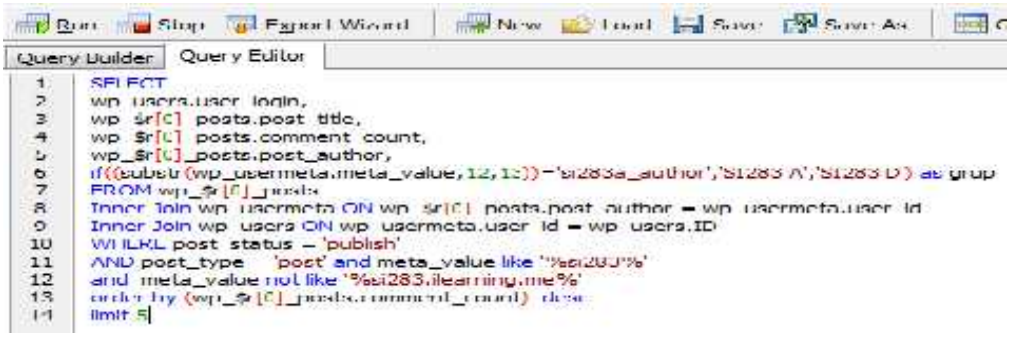



Figure 10. Query design of post that has the most comment data


Figure 11. Display of the most *Code Comment* in the post

In figure 11, lines 3 and 4 is the result of a query that produces many comment on an article.

**Implementation**

a. Display 300 e-mails in class mailing list

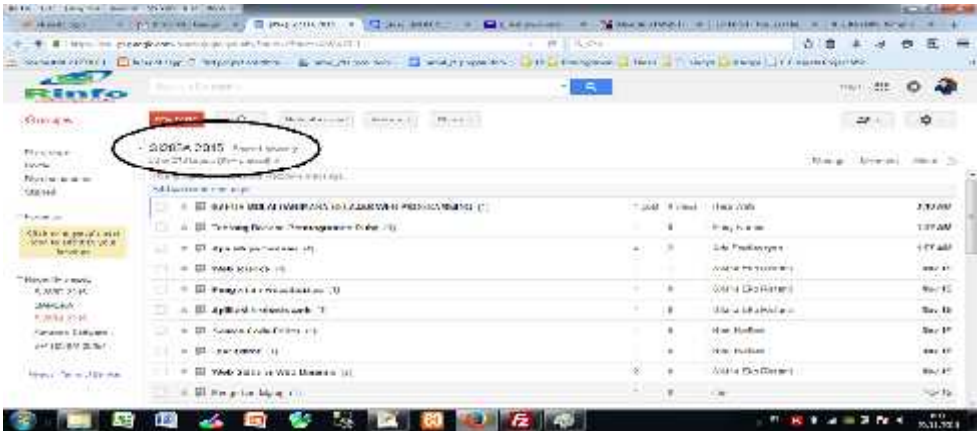


Figure 12. Total topics email in learning using Rinfo

Figure 12 is a students learning activity using Rinfo who have more than 300 topic of the email that generate in learning activities.

**b. Display 500 post in iMe Class**


Figure 13. Total posts in learning using Me

Figure 13 is a student learning activities using iMe which has more than 500 post or Cermi produced by students in their learning activities. Cermi contains the tasks and articles which they distribute to classmates.

c. Display 300 comments in iMe Class


Figure 14. Total Comment in iMe Class

Figure 14 is the students learning activities using IME which has more than 300 comments produced by students in learning activities, so that the activity of learning a fellow student and the student with the professor.

d. Display 1000 post Rinfo activity in class mailing list

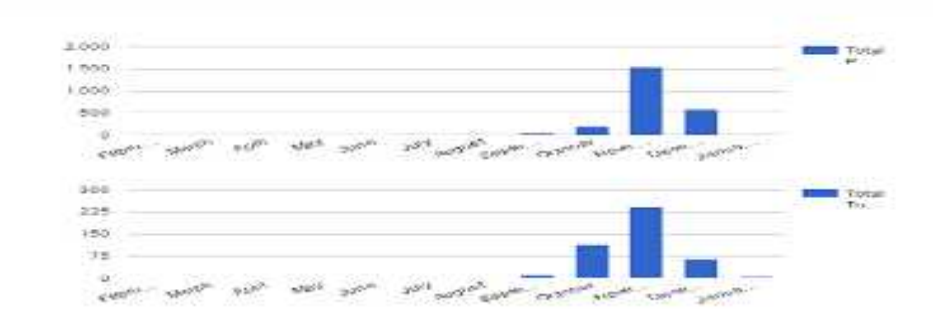


Figure 15. Graph of activities on Rinfo Group

Figure 15 is a view activeness of students that using Rinfo in class mailing list marked by 1000 post or email produced.

e. Display Viewbord in iMe Class

As a media support for decision-making to the lecturer that grade assignments at students, a dashboard is required to facilitate faculty to see activity of his students. Basically iMe Class does not have facilities Dashboard so that is necessary to development at the iMe Class. To be able to display the Dashboard at iMe Class a plugin is required to make the Dashboard, Plugin that used is PHP Code and Library Highchart.

1. Display Dashboard Top 5 Posts

Figure 16. Dashboard Top 5 Posts Display

Figure 16 is a dashboard view of the top 5 posts, to find out information on posting that the most done by the students, faculty can take decisions that students with post the most have a high motivation to learn to share the article to a friend the other and thus can be appreciated by the addition of value assignments to students.

2. Display Dashboard Top 5 Comments


Figure 17. Dashboard Top 5 Comments Display

Figure 17 is a dashboard display top 5 comments, with informed the most comment that committed by students, the faculty can take decisions that students with the most comments have high motivation to learn to be able to talk to friends the other and thus can be appreciated by the addition of value to the student assignment.

3. The Most Comments in a Post

Figure 18. The Most Comments in a Post Display

Figure 18 is a display of the most comment in a post, by knowing the information of the most comment on a post that was done by the students, faculty can make a decision that is beneficial to others posts, so that it can improve knowledge to the student who read that.

**Conclusion**

Conclusions obtained from the formulation of the problem that was created earlier. Based on the formulation of the problem that exists, it could be concluded that:

1. This study has been constructed using the learning system iMe Class and Rinfo Group so that each student can take the teaching materials, create assignments and discussions inside and outside the classroom.
2. According to 50 respondents recapitulation data questionnaire results Total score criterion (if each item gets the highest score) = (the highest score for each item = 5) x (number of items = 30) x (number of respondents = 50) is 7500. Therefore, the number of score data collection = 6180. thus, students who felt an increase motivation and learning efficiency, according to 50 respondents, that: (6180/7500) x 100% = 82.24%. So it can be concluded by 50 respondents increased student motivation and efficiency in pemebelajaran because the criteria in the can> 82.24%.

3. By a dashboard designed in the iMe Class making it easier for teacher to see activity of class happens, so that teacher can give students an appreciation in the form of value to students who have the highest activity of so that it will affect the learning motivation.

**Suggestion**

Based on the results of the study, further research may provide some suggestions of input directed to the object of research and for further research.

1. In the implementation process of learning systems by utilizing Rinfo and iMe on evening classes necessary to appeal to the lecturers night to be able to implement it.
2. Need for development of the iMe so that the use of the iMe in the classroom learning more interesting and innovative.

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