The E-internal audit iso 9001:2008 based on accreditation form assessment matrix in study program for effectiveness of monitoring accreditation

Marzuki#1, Maria Shusanti F.#2
#informatics engineering study program, computer science faculty, bandar lampung university
Za. Pagar Alam. St. No, 26 Labuhan Ratu Bandar Lampung, Indonesia
1marzukird@yahoo.com
2suzanne_maria1986@yahoo.com

Abstract-Accreditation is one of the form external quality warrant system, it is a process that used in authorized institution in giving formal recognition that an institution has an ability to do certain activity. On the prepare processing there is some things that should be done by study program by using internal audit in periodic time. Internal audit is an independence activity, objectivity, and consultative which is designed to increase the organization’s operation. This scientific Writing will specifically focus on internal process audits in preparation for accreditation of Information Engineering Study Program at Bandar Lampung University with doing monitoring directly that can be accessed by some units in a management system based on guidelines and standards for internal audit issued by one of several organizations ISO, the quality management system ISO 9001: 2008, one of the requirements that must be fulfilled conduct periodic internal audits. This standard is very good when applied in the preparation of the accreditation process, accreditation assessment matrix as a guide in conducting internal audits.

Keywords: Accreditation, ISO 9001:2008, Internal Audit

INTRODUCTION

Accreditation is a form of external quality warrant system, it is the process that used in authorized institution in giving formal recognition that an institution has the ability to perform certain activities.

Thus, accreditation protect the public from fraud by parties who are not responsible. The characteristics of accreditation is the hallmark assessment by experts from outside that relevant institutions (external peer reviewers), and conducted by volunteers, for college organized a course of study. This activity begins by conducting a self-evaluation (self-evaluation) of the various / components of inputs, the process and product from the study program that want to be accredited must submit its report to the accessors institution.

In accreditation preparation process there are some things that are done by one of the study program is periodically conduct audits, audit activity is an independent, objective and consulting designed to add value and improve an organization's operations. This is help the organization to achieve its purpose systematically, disciplined approach to evaluate and improve the effectiveness of risk management, internal control, etc.

But in the audit process in preparation for accreditation find some obstacles such as the company did the audit only as the mandatory, without any the direct monitoring that can be accessed by multiple units within the management system. Other issues of monitoring and updating of data from internal audit,
which has been done with paper base, so that the consumption of paper for every invention and audit results and the report is presented in the form of printed reports. Guidelines and audit standards given by several organizations and one of them is ISO, on the quality management system ISO 9001: 2008 one of the requirements that must be fulfilled periodically internal audits. This standard is very good when applied in the preparation of the accreditation process, accreditation assessment matrix as a guide in audit conducting.

From the arise problems then arise some ideas to make the audit process easier to do, such as with audit implementation into electronic form, where updating the data and reports and the system process that is done by website media, so it can increase effectiveness of audit activity monitoring, updating data faster and more efficient in the preparation of reports that do not need a lot of resources.

PROCEDURE

This observation formulates the problem is how to compose e-Internal Audit ISO 9001:2008 Accreditation Forms-Based Matrix Assessment Study for Effectiveness Monitoring Program Accreditation which aims to: 1. Testing the mapping between the standard ISO 9001:2008 and form accreditation of bachelor degree study program

2. ISO 9001:2008 audit evaluates the matrix-based assessment accreditation forms with monitoring effectiveness assessment study program accreditation forms.

By implementing the ISO 9001:2008 standard accreditation forms study program and it must be done measuring use ISO 19011:2005 and the function of monitoring the effectiveness of accreditation, which is described in the internal model of the integrated audit of ISO 19011:2005 ISO 9001:2008 & BAN PT following: Picture 1 Model integrated

TECHNICAL ANALYSIS

Analysis and observation measuring use the method of comparative / comparisons that can be used to test the suitability of the difference in an experiment of output on a process. If it has an impact on the experimental results (experimental purposes), so it will seen a the significant difference, using the following equation:

\[
vt = \sum_{i=1}^{n} \text{Capai}_i \times \text{Bobot}_i
\]

\[
S = \sum (vt_1 - vt_2)
\]

\[
Peningkatan = \left( \frac{S}{vt_1} \right) \times 100\%
\]

THE RESULT

In this observation developed software that adopt the audit process that used in quality management system. The actor's
involvement with the system shown in picture2.

Picture 2. Use Case

In picture Use case the actors that involved in the system is the Management Representative (MR) is an actor who plays a role regulating the audit process and controlling those activities in order to run as a standard procedure in force. MR in the quality management system is the chairman of quality waranty. While Dean is as the responsible management member and also as the peak/main management at faculty level. While the auditor is an actor who performed an audit or as actors who carry out the whole process level courses in study program level.

Pseudo-code : Audit

Narrative: Componen e-audit bentukin matrik pelaksanaan
Input: Jabel auditor, loket, standar termaan, dan Jadwal
Output: Temanan Rinai

1. START
2. Input User, Password
3. Verification
4. If User equal "MR"
   Load MRPage
   Set Sather
   Set Auditor
   Set Jadwal
   Else
   If User equal "Deakon"
   Load DekianPage
   If Jadwal equal approve
   Jadwal equal true
   Else
   Jadwal equal false
   End if
   GetAudit Report
   Else
   If User Equal "Auditor"
   Load AuditorPage
   Select Unit Number
   Input niatanCapet
   Sort=Sort+Nilaiapsap*bobot
   Input Temanan, Korutel
   Save Temanan Rinai
   End if
   Else
   End if
5. END

Programming algorithm on e-audit process flow depicting the big outline on the application audit that listed on the pseudocode that is refered to others. Globally pseudocode application in this observation is illustrated in picture 3.

THE IMPLEMENTATION

This observation uses a the implementation of software e-audit:

1. GUI Login

Gui login is interface that is used for validation of the parties has the right to be
able to go in and be able to use all the facilities that exist in the system.

picture.3: GUI Login

2. GUI Satker

GUI Satker is interface that used to provide input ideas to system-related parties, on this page, just fill the system on administrator membership such as number, name and unit of work, where do members workers.

picture.4. GUI Satker

3. Standard GUI

Standard GUI is the interface to give inform to the system about every standard that available on the standard accreditation forms and also the weight of scorring on every standard that has been taken from the accreditation assessment matrix.

picture.5 GUI Standards

4. GUI Auditor

Is the interface to form auditor groups of that is involved with each corresponding positions are determined by the representative management.

picture.6 GUI Auditor

5. GUI Schedule

GUI schedule is used to provide audit schedule that is done based on agreement between the lead of author and other parties that will be audited.
6. GUI Findings

GUI Findings is interface that gives suggestions to the system because of inventions available on audit process.

Fig. 8 GUI Findings

7. Detailed Findings GUI

Is the interface that details the findings of the audit process on the level of each item audited standards. By performing calculations based on the existing achievements, calculated based on the weight of each item in accordance with standard valuation metrics.

Fig. 9. Detailed Findings

8. GUI Print Report

Interface is displayed to print the audit report.

Fig. 10. Print Reports

with two implementations. By doing measuring the difference between the implementations I and Implementation II, and the result is in table 1 and table II.

Table 1. Implementation I

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Table Implementation II

Analysis and research using the method of comparative / comparisons that can be used to test the suitability of the difference in an experiment on the output of a process. If it has an impact on the experimental results (experimental purposes), so it will seen a significant difference as shown in table 4.
X = Implementasi II - Implementasi I 

\( Peningkatan = \frac{X}{\text{Implementasi I}} \times 100 \)

Maka hasil komparasi adalah sebagai berikut:

\[ X = 251.3 - 184.7 = 66.6 \]

\[ Peningkatan = \frac{66.6}{184.7} \times 100 = 36.058\% \]

So it can be seen improvement using the graph in picture 11.

CONCLUSION

After analyzing the results of the implementation I and implementation II, this observation find some important invention that can be formulated on the conclusion, such as:

1. Improved assessment (final grade) in this observe showed an increase in the value of the accreditation is 36.058%.

2. The application of e-assessment matrix accreditation forms can increase the effectiveness of monitoring accreditation S1.

REFERENCES


