# Information Systems Audit Based on ISO 9001: 2015 in Depaterment Library and Archives Salatiga

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A B S T R A C T

Information system audit was carried out in the Salatiga Regional Library and Archives, using the ISO 9001: 2015 standard method, focusing on environmental control, physical control, logical controls, and IS operation, to obtain results. Libraries already have the distribution of access rights to users, already have policies that regulate it, and already have security in accordance with standards. Based on the results of the audit of the asset management information system that was done late, it was obtained a statement that the library has never conducted an information system audit of the performance of the information system it has to ensure the performance of the existing information system based on ISO 9001: 2015 standards.

Keywords: Archive, Audit, Information Systems, ISO, Library, Salatiga

## 1. Introduction

Public library is an institution that provides information to the public. Public library is an institution which is engaged in gathering, maintaining and utilizing information sources for the benefit of the community. Libraries in this case are tasked to provide services to the community as a center where the availability of appropriate information and provide opportunities and encouragement to people at various age levels to be able to educate themselves on an ongoing basis (Muchyidin, 2008). The library began to develop implementing information systems in providing services to the community. Procurement, management, circulation, management, member card making, reports are required to use information systems. Given the importance of information library management at this time do not know the extent of data security, location security, distribution of rights, availability of policies on the use of information systems they have. The issue of security is one of the important aspects of an information system. The importance of the value of information causes information often to be accessed by certain people illegally. This can cause losses for companies such as losses if the information system does not work for a certain period of time, losses if there are data or information errors and data loss (Rahardjo, 2005). The development of IS has a significant impact on every company. All companies want to increase business profits and compete in meeting all the demands desired by consumers. Information system implementation is carried out to support the business process activities (Fenny: 2017).

The role of the functions of the Information System Audit must be built by a standard that is standardized. Information System Auditors are needed to assist external auditors and internal auditors in conducting an examination of the Information System. Information Systems Auditors will carry out evaluation and testing of controls and procedures that apply and apply and develop computer audit techniques including the development of software audits (Software) (Julisar: 2010). ISO 9001: 2015 is used for information systems auditing on the basis that this standard is very flexible developed depending on the needs of the organization, with the audit of the information system in the library is expected to be able to measure the level of information systems owned by the library in providing its services to the public, in accordance with information needs.

## 2. Literature Review

There are two main subject that be focused on this research

### 2.1. Information System

Information systems are a combination of information technology and activities, which use technology to support performance, management and decision making (Beynon, 2004). It is very important for an organization or government to implement an information system that is reliable and trustworthy in managing the smooth process of data and helping and increasing the speed of work done (Widayanti: 2013).

Information systems (SI) are regular combinations of people, hardware, software, communication networks and data resources that collect, change, and disseminate information within an organization (O'Brien, 2005).

## 2.2. Information Systems Audit

Auditing in general is an integrated process in gathering and evaluating information organizational unit by an expert. Understanding information system audit is the process of gathering and evaluating evidence to determine whether the computer system used has been able to protect the assets of the organization, able to maintain data integrity, can help achieve organizational goals effectively, and use resources owned efficiently (Weber, 1999). Information system audits emphasize more on several important aspects, namely examinations carried out to assess whether the organization's computerized system can support the security of assets, can support the achievement of organizational goals, have used resources efficiently, and whether the consistency and accuracy of the data is guaranteed (Gondodiyoto, 2007).

Audits are generally carried out by auditors to check several tests in accordance with existing information system controls (Hanindito: 2017).

## 2.3. ISO

ISO - the International Standards Organization is an independent institution that issues standard operating procedures (SOPs) for the quality of a service

The 10 control clouses include:
- Security Policy
- System Access Control
- Communication & Operations Management
- System Development and Maintenance
- Physical and Environmental Security
- Compliance
- Personnel Security
- Security Organization (Information Security)
- Asset Classification and Control
- Business Continuity Management (BCM)

# 3. Methods

The steps - the implementation of an information system audit in this library, namely:
1. Planning and preparation of an information system audit
2. Conducting an information system audit
3. Information system audit reporting

# 4. Result

In the first stage is the determination of the scope of information system audits, which consist of environmental controls, physical controls, logical controls and IS Operations, after determining the scope of the preparation of points to be carried out in the information system audit, this information system audit data is obtained from interviews to the library, photo documentation, and taking data from previous research.

Information system audit results An audit of the state of the computer being used as a place for information systems to obtain results:

**Table 1. Audit Result.**

| No | Primary Operating Systems | Department/ Process Owner | Application Description |
|---|---|---|---|
| 1. | Windows 8 | Management | Use for the classification of library materials, which will later be included in the library information system (slims). |
| 2. | Windows 8.1 | Circulation | Usefulness to return books borrowed by users. |
| 3. | Windows 7 | Service | The usefulness to input data from the registration of new members of the library. |
| 4. | Windows 7 | Service | Use to take photos for new member cards / lost member cards. |
| 5. | Linux | Circulation | Usability for borrowing books by users, extending books borrowed by users, email, sms gateways. |
| 6. | Windows 7 | Service | Facilities provided by the library for users can browse information through the computer provided |
| 7. | Windows 7 | Service | Bibliography search |

Information system audit results based on ISO 9001: 2015

Information system audit results based on ISO 9001: 2015 in the Library obtain results:

    A.   Environmental Controls
- Based on an information system audit conducted by the library, it has a clear organizational structure and a clear division of work.
- There is a division of labor in accordance with their fields, both circulation, management.
- Libraries already have policies in the use of information systems, and socialization has been carried out to users so that the information system can run well.

    B.   Physical Controls
- The library already has a maintenance schedule for the tools used for the information system and has been running in accordance with the existing tool maintenance policy.
- The location of the access and use of information systems is in a safe location.
- The information system equipment owned by the latest library and in accordance with the policy on the use of the information system used by the library.

    C.   Logical Controls
- Computer equipment that is owned by the library has an antivirus installed, to avoid attacks that result in the loss of data held by the library.
- Antivirus has been installed by the library and used by the library to get regular updates.
- The existing information system equipment already includes the distribution of access rights in accordance with the field owned by the library.

D. IS Operation
- Library users have to input data in accordance with applicable policies.
- The data input process carried out by the library has been going well and smoothly.

Audit system report

1. The scope of the audit of information systems and objects

    a. Scope

    Information system audit of library service section in the Salatiga City Public Library

    b. Objectives
    - Detect the risk of bibliographic data input errors, library member data
    - Detecting access rights of information systems
    - Detect existing computer devices
    - Detecting the security of the location of information systems can be accessed by the user

2. Methodology

    a. Interview

    Conduct interviews with users of information systems in accordance with the field of service

    b. `Review

    Reviewing regulations and policies regarding the use of information systems

3. Survey

    Conduct a survey to the library to get information about information systems directly

4. Findings and Recommendations

    The findings obtained from the information system audit system in this library are:
    - There is no backup device when the device is damaged.
    - There are no regulations regarding the use of information systems to users from outside institutions (library users).

    Recommendations for library to improve the services it has:
    - Provide backup equipment if the main device is damaged which can interfere with the service process.
    - Provision of regulations in the information system that is about the use of information systems

## 5. Conclution

Information system audit results that have been carried out, then get conclusions in the form of:

- Libraries already have the distribution of access rights to users, already have policies that regulate it, and already have security in accordance with the standards.
- Based on the results of the audit of the asset management information system that was done late, it was obtained a statement that the library has never conducted an information system audit of the performance of the information system it has to ensure the performance of the existing information system based on ISO 9001: 2015 standards.

Various suggestions can be given for further development:

- This information system audit only discusses a few points from existing standards, it is expected that there will be an expansion carried out intansi so that information audits can provide maximum results
- This information system audit found several weaknesses in the information system owned by the library, so the library needs to correct these weaknesses so that the services provided can run better.

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