

Analysis Problems of Document Accreditation in Department of Mechanical Engineering, XYZ University

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ABSTRACT

Evaluating feasibility and quality of university or department carried out by independent organizations or external agency is accreditation. External quality evaluation is an assessment related to accountability, granting of license by certain agency. Accreditation is an effort to assess and rank Study Programs based on prearranged quality standard. The result of accreditation Study Program ranking is disseminated to public. This research result to analyze problems of preparing accreditation documents in the Mechanical Engineering Department. Accreditation document storage is still not disciplined and integrated, Mechanical Engineering Department lecturers/quality assurance units have not optimized the use of digital archive storage for accreditation purposes. This causes documents that are difficult to find or lost. In addressing this problem, current technological developments can be an alternative solution. File scanning technology that produces digital documents from physical documents which are then uploaded to digital-based storage is expected to be the answer for how to store documents safely and further facilitate the search for these documents. This method can be adopted for optimizing the storage of accreditation documents in Mechanical Engineering Department, Faculty of Engineering, XYZ University. The research result is to simplifying the process of finding accreditation files.

INTRODUCTION

Accreditation is an assessment of the quality and eligibility of a university or study program conducted by an independent institution or organization outside the university (LAM Teknik, 2023). Examples of assessments related to responsibilities, licensing, and licensing from a particular institution (Sirait et al., 2022). The form of accreditation quality assessment is carried out by colleagues who have competence in the field of study as well as the department management as a team or group of assessors (Wahyudi, 2020). The results of accreditation assessments can be used for consideration in credit transfer, proposal for assistance and funding allocation, as well as recognition from specific institutions or agencies (Idrus et al., 2018).

A department is an institution that carries out the Tridharma of Higher Education, namely education, research, and community service, as well as providing knowledge in accordance with the field of study being conducted. To support this commitment and responsibility, the

department must be able to independently improve and ensure sustainable quality, reviewing the quality of input, processes, and outputs of academic programs and services oriented towards multidisciplinary knowledge in society. The quality of higher education is a prerequisite and characteristic of the input of undergraduate education programs, processes, and products or services of undergraduate study programs measured by several standards as assessment indicators to represent the quality of the university (Badan Akreditasi Nasional Perguruan Tinggi, 2008).

This research was conducted to analyze the issues of accreditation document preparation in the Department of Mechanical Engineering using fishbone diagram. The fishbone diagram, referred to as a "cause-and-effect" diagram, is a diagnostic tool that shows the relationship between an effect and the elements or causes that influence it (Coccia, 2018). The tool is a brainstorming template for potential origins of an effect. This aids in precisely and systematically determining the fundamental cause or reasons, as there may be infinite causes (Shinde et al., 2018). Accreditation document storage is still undisciplined and integrated, and the faculty quality assurance personnel of the Mechanical Engineering Department have not yet optimized the use of digital archive storage for accreditation purposes. In response to this issue, current information technology developments are an alternative solution. Document scanning technology that produces digital files from physical files to be uploaded to a digital-based storage system is expected to be a solution for securely storing files and will facilitate future file searches (Widiastuti et al., 2014). This method can be used to optimize the accreditation file storage system in the Department of Mechanical Engineering, Faculty of Engineering, at XYZ University.

RESEARCH METHOD

This research was conducted in the Department of Mechanical Engineering, XYZ University. The object of this research is to analyze the causes of issues in the readiness of accreditation document storage. The main informant to obtain information about this research is the Chair of the Department of Mechanical Engineering, XYZ University. The fishbone diagram method is used to precisely and systematically determining the fundamental cause or reasons, as there may be infinite causes (Kurnia, 2022). The method, also known as the Ishikawa Diagram, is more commonly known as the fishbone diagram in its development (Kasim et al., 2021). This is because the depiction of its analysis results resembles the design of a fishbone. In this method, the main problem is divided into several categories, and an analysis is conducted on the factors that are the main causes of the problem (Kusuma et al., 2016). Based on the results of this method, they are then summarized in the discussion of each issue presented in the diagram (Figure 1).

RESULT AND DISCUSSION

1. Determine the Issue

The Head of the Mechanical Engineering Department was the resource that the research team chose to conduct interview. The resource person was picked because of his highly strategic role and his unquestionable in-depth knowledge of the pertinent Department of Mechanical Engineering challenges and the pressing need to find solutions. According to the interview's findings, one problem stood out as the most important and urgent one: there was no digital method for filing accreditation paperwork; instead, physical documents had to be filed, which made work more inefficient.

2. Fishbone Diagram Result

The issue "There is no digital-based accreditation document filing system" is examined in this section. The goal of the study is to produce suggestions for suitable changes that will address the issue. The Fishbone diagram method was used for the analysis. Man, Material, Method, and Environment are the categories used to categorize the root causes of the issue. The analysis's findings are as follows there is no storage of accreditation documents, therefore the digital storage media to keep accreditation files is essential.

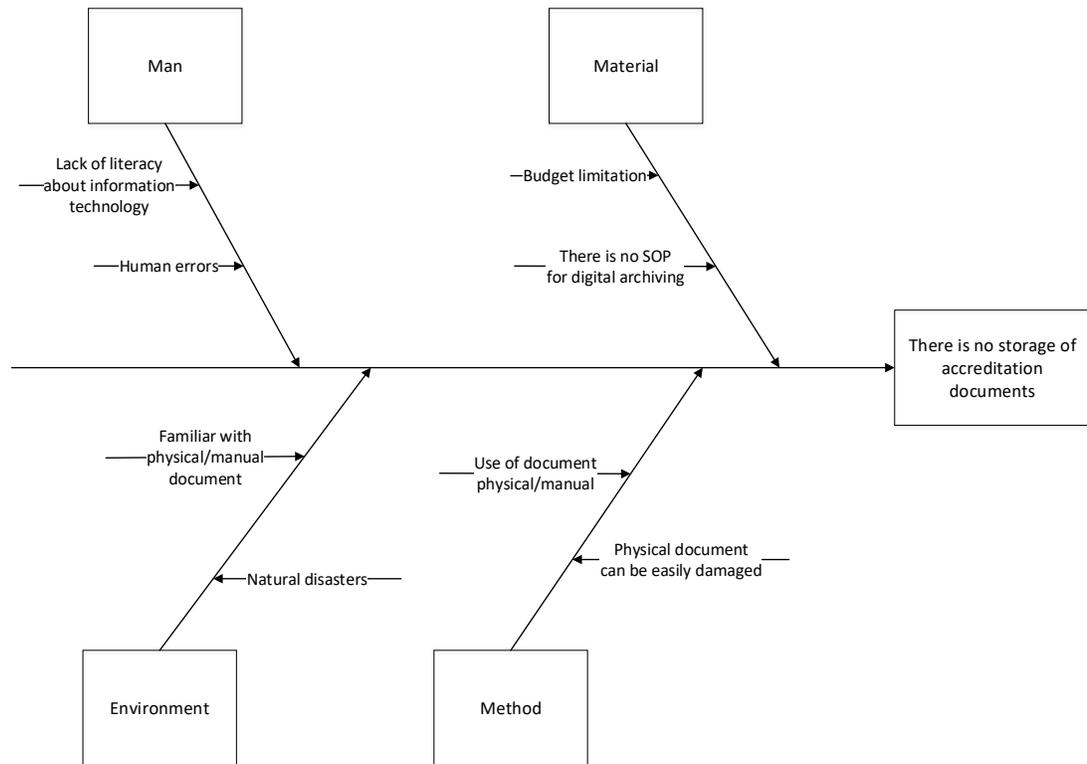


Figure 1. Fishbone Diagram

3. Fishbone Diagram Analysis

As per the fishbone diagram analysis (Figure 1), the problem pertaining to "There is no Digital-Based Accreditation Document Filing System" can be explained as follows:

1. Man

The main factor that brings up this problem in the human resources category is a lack of information technology literacy and human error. The specific reason behind the issue is as follows:

- a. Lecturers are not accustomed to digitally integrated or disciplined archiving; supporting accreditation documents, whether in the form of soft files or physical files, are not kept in a systematic procedure. Although digital storage has been made available by the department, it has not been fully exploited.
- b. Human errors and improperly stored hard copies or soft files containing accreditation supporting documentation. Records will only be examined during the accrediting process.

2. Material

- a. Management is unable to develop an integrated digital information system for document storage due to financial constraints.
- b. There isn't a standard operating procedure or reference for digitally archiving accreditation-related documentation.

3. Method

Preparing accreditation documentation is hampered by the usage of tangible documents that are easily misplaced and hard to locate. In addition, physical papers might sustain damage quickly if they are kept in a cabinet or document storage shelf for an extended period of time.

4. Environment

- a. There hasn't been enough technical assistance or socializing about the usage of digital storage, lecturers still handle their own compilation and storage.
- b. Risks associated with natural catastrophes like fires and earthquakes that can harm tangible documents.

4. Evaluation

Based on the analysis of the issue "There is no Digital-Based Accreditation Document Filing System", using the fishbone diagram in Figure 1, the following recommendations for improvement are obtained:

Development of an electronic document storage system for accrediting.

- a. The implementation of a digital system for storing accreditation documents is expected to enhance the performance of human resources, particularly with regard to digital media literacy and speeding up academic document searches.
- b. Reducing the amounts of physical papers that are used, as they can become lost or damaged over time, is an institutional endeavor to protect the earth's sustainability.

CONCLUSION

The purpose of this study was to examine the issues related to the preparation of accreditation documentation. Case studies were used in the study process at XYZ University's Department of Mechanical Engineering. This research conducted fishbone diagram as method. Enhancements to the Department of Mechanical Engineering's lecturer accreditation document storage are suggested as a solution to the issues raised by this study. It is intended that the suggested digital file system will improve and organize file storage, provide easier file retrieval, and improve the previously disorganized accrediting document file system. Aside from that, department accreditation documents can be created more quickly and easily with the help of a digital file storage system.

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