

# Web-Based Evaluation of Self-Appraisal System to Accredited Program of Study in College

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**Abstract**— the accreditation of study programs by BAN PT is one of the parameters in determining the quality of colleges' study programs in Indonesia. To obtain value of the desired accreditation then study programs had to adjust its internal conditions with standards given by BAN PT. As consideration to achieve the standards of BAN PT, then self-evaluation is important to do that the study programs already meet the standards set of BAN PT. Self-evaluation was conducted an internal assessment of the parties i.e. with analysis between components by utilizing SWOT description of each component; formulating problem-solving strategies; as well as the development and improvement quality of study programs/college sustainably. Furthermore, this self-evaluation results done by the external evaluation i.e. the assessor was appointed by BAN PT. The problem here is how to do a meta-evaluation study program with the help of expert system so that study programs can be better to prepare before assessed by assessor. So, hopefully with the development of web-based assessment of self-evaluation information systems in accreditation of the college's study program these help study programs accreditation process be effective and efficient.

**Keywords**— information systems, expert system, web, study programs, colleges, BAN-PT, self evaluation.

## I. INTRODUCTION

Study programs' accreditation is the process of evaluation and assessments in a comprehensive manner over commitment of study programs for quality and capacity of the College's tridarma programs, to determine the feasibility of its academic programs. Evaluation and assessment within the framework of accreditation of study programs conducted by a team of assessors composed of expert colleagues and/or experts who understand the performance of the study programs' academic. Decisions about quality based on evaluation and assessment of the various evidence related to the standards established and based on reason and consideration of the associate experts. The required evidence, including written reports prepared by study programs that are accredited, verified and validated through visits or field assessment team of assessors to study programs [1].

Improvement and construction of study programs' quality is the responsibility of the study programs should be done regularly basis through a process of self-evaluation. In this process of self-evaluation, study programs and college do

assessment of the shortcomings and advantages of organizing study programs, assessing how the quality, productivity and relevance of the resulting graduates have been appropriate and related to the purpose, whether informing the vision mission and goal of the study programs was quite clear, and whether input (raw input, input instrument and input process) as well as the management and the process of organizing study programs have appropriate and sufficient to support the efforts of the effort vision, carry out the mission and achieve the goals of study programs [1]

Towards the XXI century, the world is undergoing many changes. Face the change, all parties are trying to reach the expected changes and avoid unexpected changes. The scene changes to an increasingly vibrant community-based communication and information technology, today, a new generation emerged, called the n-generation (net generation). This generation has a culture of information not shared by previous generations, that is the attitude of the present, the instinct to want to know and obtain current information, looking for fast paced solutions, precise, meticulous, and increasingly dependent on the use of the tools of information and communication technologies [1].

A lot of research that addresses information systems, such as self evaluation Web based Vocational high school as a means of Developing the potential of local-based Flag ship Programme [2], decision support system for the determination of Priority improvements to the Standard Undergraduate Study Program Accreditation using the method of Analytic Hierarchy Process (AHP) [3], designing information systems Quality Assurance higher education human resources Field [4] and Document information systems Autoreport Self-evaluation study Program On higher education [5], but still need the existence of development related to the assessment of self-evaluation that can to help preparation for external accreditation of programs of study. This paper is about the development of web-based assessment of self-evaluation information systems in accreditation of the college's study program with expert system that can solve existing problems.

## II. THE IMPORTANCE OF SELF-EVALUATION

BAN-PT put it self-evaluation as one of the aspects in the overall cycle of accreditation, and placed it in a very important position, i.e. as a move that preceded the giving of information

and data on the accreditation of a study programs or college to BAN-PT, so that self-evaluation results can be material to fill in the accreditation form or compiled a portfolio of accreditation, and can be used as material provided at the time of field assessment done by BAN-PT in place of study programs/College [6]

Self-evaluation is an attempt/college study programs to learn an overview of the performance and the State it self through assessment and analysis conducted by the study programs/College itself with regard to the strengths, weaknesses, opportunities, challenges, constraints, even a threat. Assessment and analysis that can be done by making use of the associate experts from outside/college study programs, so self-evaluation can be carried out objectively. Self evaluation – intended for the following things: 1) the preparation of a comprehensive institution with profile data enhanced; 2) planning and self-improvement on an on going basis; 3) internal Quality Assurance of study programs/higher education institutions 4) Granting the information about study programs/higher education to society and certain parties that need it (stakeholders); 5) external evaluation preparation (accreditation) [6]. Then for the technical assessment is described in book V Instrument Assessment Guidelines of accreditation the Accreditation Program of undergraduate study [7].

Self-evaluation results can be used by programs of study/College for the following things: 1) assists in the identification of problems, program assessment and achievement of objectives; 2) Strengthen institutional evaluation culture(institutional evaluation) and self-analysis; 3) introduced a new staff to the overall study programs/College; 4) Strengthens the soul korsa in institutions, narrowing the gap between personal goals and objectives of the institution and encourages openness; 5) Find new cadres for the institution; 6) push the study programs/College to revisit policies that have been deprecated; 7) provide information about the status of study programs/higher education compared to study programs/other College [6].

**III. PROBLEMS OF IMPLEMENTATION OF THE SELF-EVALUATION**

The accreditation process is currently still using a manual system where the entire assessment is based on the supporting data in the form of documents. The problem that arises is how to organize the overall program of study data are scattered and not well organised to make it more easily evaluated before a period of assessment by national accrediting agencies or national accreditation board of higher education [4]. Next how to conduct a meta-evaluation study program with the help of expert system so that study programs can better prepare before an assessment of assessor. So hopefully with the development of information systems assessment of self-evaluation in the accreditation of the college’s study programs these help web-based accreditation process be effective and efficient.

**IV. SUPPORTING INFORMATION SYSTEM**

Supporting elements in study programs or institutions, particularly Chairman prodi/institutions, professors, as well as the internal accreditation team need to do a self evaluation phase. Internal party prodi/institution it is necessary to adjust the present circumstances and the case is expected on a standard BAN PT measurements. In that can be known how big the quality score prodi/institution based on supporting documents which are [9].

On the process of self-evaluation, the necessary management application that is able to integrate the whole content of the supporting data in the form of Information System, so that when the evaluation, obtained information on any parts of the less and already meet the standards. The information entered into the application of more integrated, so as to give a description of the strengths, weaknesses, which is the external factors of a college’s study programs. Next to the opportunities and challenges that the external factors can be obtained from the supporting data from either the document or the opinion of the Government, the public, industry, labor market, SLTA graduates, internal and external stakeholders, as well as competitors..

The support of Information System that would be developed needs to pay attention for few things, namely the web as the base to be generated, the database as a repository of related information, and expert system that would be integrated into the IS. Web quality is important too, the web-based IS that will be developed so as to facilitate and provide more value, needed a good web quality. Database are noteworthy because of the related information is stored in it and will be used as a source of information for the user. Expert system is need to be considered, because the IS main thing that highlighted on this is the expert system as a replacement for the function in the process of accreditation assessors.

**V. THE DEVELOPMENT OF INFORMATION SYSTEMS**

Self-evaluation component resulting from the analysis of systemically and the break down of national education standards, which are as follows:

<b>KOMPONEN-KOMPONEN EVALUASI-DIRI</b>	
Rincian Standar Nasional Pendidikan [PP 19/2005]	
<i>Standar Nasional Pendidikan</i>	<i>Analisis Sistemik Komponen Pendidikan</i>
STANDAR ISI	KURIKULUM
STANDAR PROSES	TATA PAMONG ( <i>Governance</i> )
	SISTEM PEMBELAJARAN
	SUASANA AKADEMIK
STANDAR KOMPETENSI LULUSAN	MAHASISWA DAN LULUSAN
STANDAR PENDIDIK DAN TENAGA KEPENDIDIKAN	SUMBER DAYA MANUSIA
STANDAR SARANA DAN PRASARANA	SARANA DAN PRASARANA
STANDAR PENGELOLAAN	VISI, MISI, SASARAN, DAN TUJUAN
	SISTEM PENGELOLAAN
	SISTEM INFORMASI
	SISTEM PENJAMINAN MUTU
STANDAR PEMBIAYAAN	PEMBIAYAAN
STANDAR PENILAIAN PENDIDIKAN	PENELITIAN, PELAYANAN/ PENGABDIAN KEPADA MASYARAKAT, DAN KERJASAMA

The data and information obtained in the study programs of self evaluation need to be processed and analyzed, which can be done through a variety of approaches. The approach used in the evaluation of self-accreditation for the college/program of study which was carried out by BAN-PT is the analysis of strengths, weaknesses, opportunities, and threats (SWOT analysis), namely: 1) between components analysis by utilizing SWOT description of each component; 2) formulating problem-solving strategies; 3) development and quality improvement of college's study programs on an ongoing basis [2]. Strengths and weaknesses in a SWOT analysis of the internal factors that need to be in the Organization, the identification of study programs or colleges concerned, whereas opportunities and threats are external factors should be identified in the Organization's external environment, study programs or College concerned. External environment of a study programs can be: the Government, the public, industry, HIGH SCHOOL/VOCATIONAL SCHOOL graduates, the job market, internal and external stakeholders, as well as competitors.

The value that will be used, processed and processed within this system is the value of the internal and external factors. For internal factors it self be divided into three components, namely the first input that consists of student factors, human resources, curriculum, funding, facilities and infrastructure, the mission, vision and goals, the means of the two processes, the teachers' program management, leadership, learning, academic atmosphere, information systems, quality assurance, research and service or devotion to the community, and cooperation, and the third exodus, graduates and other output includes a thesis, model – model results, publication, service or devotion to the community. Then from the value of all components of the self-evaluation will be calculated and divided according to the number of existing components to produce a final value of appraisal self evaluation. Form of final value of self-evaluation assessment this is besides a number or points also produces an assessment descriptive as input for the University.

The software used for this encoding i.e. php Designer is an editor program and Xampp as a local server in combining all elements of self evaluation. Software testing using Black Box Testing methods approach. black-box testing techniques used to test aspects of the functionality of the system being designed. This type of data in the development of using quantitative data.

The proponent will be developed using the Waterfall model of development. The development of this model was chosen because it uses a simple, systematic approach, and sequence. Stages of the development model of the waterfall there is five, namely: (1) requirements definition; (2) system and software design; (3) implementation and unit testing; (4) integration and system testing, and (5) operational and maintenance [9].

## VI. CLOSING

Self-evaluation is a vital step in the accreditation of the college's study programs of study to know the quality and feasibility of a program of study as one of the tridarma College of public service. ICT-based applications can be utilized to help the process of self-evaluation is effective.

Development of information system web-based self-evaluation assessment is supported by a management application is able to integrate the whole content of the supporting data in the form of IS, so that when the evaluation, obtained information on any parts of the less and already meet the standards. As learning outcomes, assessment process of self-evaluation of college's study programs of study to be effective and efficient.

For a more tangible results, it is suggested this idea can be extended to the implementation stage. Thus, the impact of development of information system web-based self-evaluation assessment in helping self evaluation process is increasingly visible and measurable.

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