

Analysis of Implementation of POAC Model and Management Information System for Academic Performance

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Abstract--Education aims to build human resources through character education and skills training in Vocational High Schools (VHS). This study contains the results of analysis implementation for management functions (Planning, Organizing, Actuating and Controlling) and management information systems (MIS) to fulfill the achievement National Education Standards (NES). The Education Quality Report of the Central Java Province 2016, achievement of NES in Semarang's VHS is 3 of 5 levels. To fulfillment of MIS quality academic performance have been implemented SIAP-PADAMU NEGERI Application since 2016, but still requires analysis to develop model of management function and MIS to be used for developing academic performance evaluation models. This research was questionnaire to 21 respondents in 7 Semarang's VHS used the Mix Methods with Technology Acceptance Model (TAM) research approach. The results is 80.88% of Semarang's VHS have used POAC management functions for school academic performance but function of information technology itself hasn't implemented optimally.

Keywords: *achievement of education quality, POAC, National Education Standards (NES), management information systems (MIS), vocational high schools (VHS), Technology Acceptance Model (TAM)*

1. INTRODUCTION

Background

Education is the primary need of the society to develop science and to establish their character. Education could increase the quality and the level of life through the skill and knowledge that can be gained through education institutional. Central government has been attempting to make a fundamental law for to guarantee the quality of education, through the regulation number 20/2003 about Indonesia's national education system.

Standardization is needed for education, especially for the phase of implementation and controlling. Central government has written down the standardization regulation for education sector, through the government regulation number 32 / 2013

about national education standardization as the guidance of the implementation for national education system. In government regulation number 32/2013, there are 8 (eight) National Education Standard, namely: 1) Graduation Competency Standard; 2) Content Standard, 3) Process Standard; 4) Education and Education Manpower Standard; 5) Media and Infrastructure Standard; 6) Management Standard; 7) Education Budgeting Standard; and 8) Education Appraisal Standard. Accreditation is also used in Vocational High School (VHS) to unite the management information system. Accreditation appraisal calculation model is used as a standard, indicator and sub indicator of appraisal that have been decided through the guidance of internal and external assessment from the Government, which is represented by Directorate General for High School and Elementary School, under the Ministry of Education and Culture, Republic of Indonesia.

Institute for Educational Quality Assurance as IEQA, is a central Technical Implementation Unit (UPT) in the area within the Ministry of National Education under the Directorate General of Primary and Secondary Education, coordinated by the Directorate of Education Personnel.

Based on the data of IEQA Appraisal Result of Central Java Province, through Map Report for Educational Quality that is done in 2016, the map of achievement for NES of central Java for vocational high school is 4,994 and for vocational high school in Semarang City that consist of 24 school is 4,875. (IEQA Central Java Province , 2016).

Table 1. Score for the ap of achievement for NES on VHS educational level of in Semarang City (2016)

Regency/City	Average Score	Description
Semarang City	4,875	To NES 3
Central Java	4,994	To NES 3

Source: IEQA of Central Java Province (2016)

The data in Table 1 shows that national education standard quality achievement for VHS in

Semarang City is categorized in the level of 3 from 5. Because of that, internal quality achievement of NES in VHS in Semarang City in 2016 is not reach the NES yet. The quality achievement for NES in vocational high school education level in central java area is still above the quality achievement for vocational high school in Semarang City.

The Formulation of Problem

Base on the result of discussion in the background sub title can be concluded whereas the internal quality achievement for NES in vocational high school education level in Semarang City in 2016 **do not reached NES yet**. Meanwhile for process of accreditation and internal also external quality guaranty for school that have united SIM base have been applied by Directorate of general of high and elementary school for the Ministry of Education and Culture Republic of Indonesia have been operate from 2016. Because of that, the formulation of problem in this research is to analyze the quality achievement for education of vocational high school level in Semarang City which do not reach NES after that to evaluate the application of accreditation and School interna; guarantee that have been any. The results of the analysis will be used for based on development of an education management function model for SIM-based academic performance evaluation.

The Purpose and functional of research

The technical purpose of as follows is to know and inform the constraints on the achievement of NES levels for Vocational Schools in Semarang and the concept of accreditation and internal quality assurance Factual integrated SIM-based schools for Vocational accreditation based on NES as well as Application of the concept of accreditation and internal quality assurance

Meanwhile for practical functional that be gotten from the result of this research namely as the incoming material and basic for making the decision for the decision maker of wducation policy in deciding the strategy and the directon of policy for the good distribution in reaching the quality of NES of NES for accreditation of vocational high school in the next.

II. METHOD OF RESEARCH

Design of Research

The design of this research use the mix methods, which are methods that combine quantitative methods and qualitative methods. According to Sugiyono (2013) this research method to obtain more comprehensive, valid, reliable, and objective data.

In this study using the Technology Acceptance Model (TAM) method developed by Davis et al (1993) with a descriptive qualitative research approach. Where this TAM model is based on the Theory of Reasoned Action (TRA) which is a well-

researched intention as a special model that has been proven to be successful in predicting and explaining a person's behavior in utilizing a variety of fields.

TAM has been used to predict behavior in many ways. TAM can also be explained as a model that studies extensively social psychology related to a person's behavior that is done consciously or how accepted Information Technology is in a management by linking between Perception of Use and Perception of Ease of Use.

Instrument and Technique of Data Collection

For research instruments that will be used in this study using a questionnaire with a total of 45 questions and divided into 3 parts, namely part of the POAC management function and from the implementation of the SIM. Where the POAC function will be divided into 4 sub-sections, namely the sub-section of Planning, Organizing, Implementation and Evaluation. Whereas from the SIM implementation section there are 5 sub-sections, namely the Perfomance Expetancy sub-section, Expetancy Effort, Social Influence, Facilitating Condition and Behaviroal Intention.

Questionnaires will be given to 21 Respondents and 7 Vocational Schools where each Vocational School will be given to Teachers, Deputy Principals for Academic Affairs and Internal Quality Achievement Administrators. The 7 Vocational Schools located in Semarang City are Vocational High School 2, Vocational High School 5, Vocational School Vocational High School 7, Vocational School 8, Vocational High School 9, Vocational High School 10 and Vocational High School 11.

While for data collection techniques in this study can be done with the following steps:

- 1) Data Collection. At this stage the reference data in identifying problems were obtained from the Central Java Province IEQA in the form of the latest Education Quality Map Report. Data collection is needed to test the existing hypothesis.
 - a. Primary data in the study using data on the application of National Education Standards that have been assembled by all VHS in Semarang City who have certain qualifications as a measuring tool. Secondary data in this study was obtained from the Provincial Accreditation Board of Schools or Madrasahs of Central Java Province during the last 3 years as a reference comparison of accreditation achievements before and after applied Management Information System for National Education Standards;
 - b. Secondary data in this study were obtained from the National Accreditation Board for the last 3 years as a reference for comparison of accreditation achievements before and after the application of

Management Information System for National Education Standards.

- 2) Observation and observation in each process when carrying out an assessment of accreditation of a School or Madrasah.
- 3) Interviews with stakeholders who carry out NES quality achievements such as Teachers, Deputy Principals for Vocational Academic Affairs and Administrators of internal quality achievement systems related to data that has been obtained..

3. Result and Discussion

The research of Hidajat (2013) describe whereas the implementation of education management information system in vocational VHS in Mojokerto in the administration of Vocational Administration has not all utilized the information technology-based management information system optimally. Whereas from the research data, it is explained that the role of information technology-based education management systems in the management of vocational administration is very important. This can be evidenced from the average value (mean) perception of the role of information technology-based education management information systems in the administration of vocational high schools which is equal to 161.76 or 80.88% and falls into the category of Very Important [5].

To strengthen the research gap in advance, the following is the result of preliminary research that the data is used to analyze the real needs at Semarang Vocational High School. The results of the initial research data in the framework of system requirements analysis are needed to produce a system that is expected to be in accordance with the needs of the Vocational High School. The system requirement analysis is one part of the dissertation that is being developed by the researcher. Data collection techniques used in this needs analysis process are questionnaires and interviews. Respondents from the needs analysis of this system are: principals, deputy principals in the academic field, teachers, and IT staff. The interview was conducted at VHSN 7 Semarang.

The result of the system requirement analysis shows that the school does not have a system that integrates all management functions. The existing SIM has not been able to accommodate the needs of the system related to the evaluation and monitoring process undertaken by the Supervisory Board of the Department of Education and Culture of Central

Java Province. Therefore, it is urgently needed to increase the capacity of SIM applications for school accreditation in BAP-SM based on management information system so that the quality and quality of education through achievement of national standard of vocational education in vocational high school can be further leveled to the fulfillment of national standard of education level.

From the result of requirement analysis also shows that not yet has for integrated management information system for all functions of management, like: function of planning, organizing function, function of execution as well as function of supervision and evaluation of VHS accreditation for NES implementation. In other words, VHSN 7 Semarang desperately needs a SIM that integrates all management functions. For the achievement of education quality level of VHS education in Semarang City can be seen in the following table that has been done by IEQA Central Java Province.

Table 2 Score of Achievement Mapping of NES for Vocational High School (VHS) Level of Semarang City 2016

Standarts	Average Score	Explanation
Standars of Graduate Competence	5,400	Going to NES 4
Standars of Contents	5,523	Going to NES 4
Standars of Process	4,525	Going to NES 3
Standars of Assesment	4,054	Going to NES 3
Standars of Management	4,875	Going to NES 3
National Education Standars (NES)	4,872	Going to NES 3

Source : IEQA Center Java province Provinsi (2016) [6]

The results of the analysis carried out by the Central Java Province IEQA in 2016 through the Semarang City Education Quality Map Report of Central Java Province in 2016, where the results of an analysis of NES achievements in Vocational Schools in Semarang City were adjusted to the weakest indicators where quality achievement was based on each sub indicator of each indicator for each standard. To clarify the results of these analyzes then can be seen in the following table.

The results of the questionnaires it shows that in learning planning all schools academic and non-academic planning for learning that refers to the 8 National Standards of Education. But half of the respondents have not used online academic and non-academic planning. Of 19 respondents have used learning media online or using electronic media using online learning media or using electronic media. All schools have involved stakeholders (Education Office, School Committee and Education, Entrepreneurial and Industrial Specialists) related to conducting academic and non-academic planning. As well as in academic and non-academic planning referring to the needs of the Business World and the Industrial World have been carried out in all schools. However, as many as two

respondents answered that the Business World and Industrial World had not been involved in the learning planning process.

Table 3 Analysis of Strength and Weakness NES for VHS Level of Semarang City in 2016

Standard	Indicator	Strength	Weakness
Graduation Competency Standard	The Graduate has Competency in Knowledge dimension	-	Less in having factual procedural conceptual, mega cognitive knowledge
Standard of Content	KTSP is Suitable to National Curriculum	<ol style="list-style-type: none"> Having the media in developing KTSP Involve the decision maker of organizing of KTSP 	Less in doing socialization of media to the decision maker
Standard of Process	Learning process planning is suitable to SNP	<ol style="list-style-type: none"> RPP is evaluates by the headmaster RPP document quality is suitable to national curriculum The content of RPP is suitable to national curriculum as 	<ol style="list-style-type: none"> Teacher do not make yet learning planning autonomy The organizing of RPP do not involve the decision maker
Standard of Assessment	Transparently for assessment	-	Document can not be accessed by related parties

Source: IEQA Provinsi Jawa Tengah (2016)

In the Organizing, shows that in making the schedule of academic subjects (subject schedule and improvement / enrichment) which refers to the 8 National Standards of Education have been done entirely, already referring to the 8 National Standards of Education, adapted to functions, tasks, authorities, responsibilities and teacher competence and the division of teaching assignments are evenly distributed according to the field of expertise and interest of the teacher. But in other assignments there is one respondent who answers that he has not done evenly in accordance with the field of expertise and interest of the teacher and regarding the distribution of authority in the use of the system.

For the implementation stage, all school activities are related to improving the quality of education and the quality of education and have been adjusted to the planned and DUDI-based learning syllabus. In the evaluation phase improvements in the fulfillment of quality achievements (accreditation) are carried out in each school in this case the official School Self Evaluation policy. But as many as 5 respondents stated that the policy was not formulated in the form of online documents.

The results of the analysis carried out by researchers at seven Vocational High Schools in the City of Semarang, where the results of the analysis of NES constraints and expectations for Vocational High Schools in Semarang are adjusted to the NES

indicators. To clarify the results of the analysis, it can be seen in the following table.

Table 4 Analysis of NES Constraints and Expectations in the Vocational High School of Semarang City

Standard	Obstacles	Expectation
Graduation Competency Standard	The graduates have not absorbed 100% by DUDI	Can school graduates be absorbed by 100%
Standard of Content	Lack of socialization of learning devices	There is socialization of the device to stakeholders
Standard Process	Planning fo the preparation of RPP and teaching materials still refers to the year	There is control from the school regarding renewal of RPP and teaching materials
Assessment Standards	The absence of standard assessment standards	Determination of standardized standard values from schools
Management Standards	The absence of an alumni management system	There is a system to monitor and manage school alumni after graduation
Standards of Educators and Education Personnel	There ate teachers who have not ben standardized, such as graduates as well as policies beyond the competence of teachers	The performance evaluation from the teacher and the development of teacher competencies

Hypothesis testing between constructs namely exogenous constructs towards endogenous constructs (γ) and endogenous constructs towards endogenous constructs (β) is done by bootstrap resampling method developed by Geisser (Ghozali, 2006: 25). The test statistics used are t statistics or t tests. The comparison t value in this study was obtained from table t. The value of t-table with degrees of freedom is 59 and the significance level of 5% is obtained at 2.001. Hypothesis testing is done by looking at the output path coefficient from the results of bootstrap resampling.

The hypothesis is used to test whether there is a positive influence between constructs and Behavior Intention.

- **Ho** (null hypothesis): There is no positive influence between constructs and Behavior Intention.
- **Ha** (alternative hypothesis): There is a positive influence between construct and Behavior Intention.

Table 5 t- test analysis results

Behavior Intention (BI)	Uji -t
Performance Expectancy (PE)	2,103
Effort Expectancy (EE)	2,332
Social Influence (SI)	2,175
Facilitating Condition (FC)	2,524

From the table above shows that in the process of using the Management Information System application in the Performance Expectancy (PE) construct in hypothesis testing of 2,103, so the hypothesis is accepted or there is a positive influence between Performance Expectancy and Behavior Intention. The Effort Expectancy (EE) construct in hypothesis testing is 2,332, so the hypothesis is

accepted or there is a positive influence between Effort Expectancy and Behavior Intention. In the construct of Social Influence (SI) in hypothesis testing of 2.175, so the hypothesis is accepted or there is a positive influence between Social Influence and Behavior Intention. In the construct Facilitating Condition (FC) in hypothesis testing of 2,524, so the hypothesis is accepted or there is a positive influence between Facilitating Condition and Behavior Intention. So all constructs can accept the alternative hypothesis, namely there is positive influence between construct and BI, although different values of each construct.

IV. CONCLUSION

The conclusion that can be drawn from the discussion above is that there are several obstacles and expectations in the NES for VHS at Semarang city. In the study showed that all hypotheses can be accepted, namely the existence of a positive influence between the constructs of Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Condition (FC) with Behavioral Intention (BI). So it can be concluded that the Management Information System can be accepted and used.

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