

ERP System for School Governance in Indonesia

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Abstract—This article has the purpose of showing an ERP system that carries out an integrated school governance process in exchanging data quickly and based on Indonesian national education standards (SNP - Standar Nasional Pendidikan). The method used in this research is the method of literature review. The results obtained are School ERP Information System Design based on SNP. Currently the ERP (Enterprise Resource Planning) system has been widely used by various universities in Indonesia as information technology to facilitate integrated business management in each campus. The ERP system was originally used to support all ongoing operational activities of a company (starting from Human Resources, Inventory, Financials, Sales, Purchasing, and so on). Over time, the modules in the ERP system can be integrated into business processes in the Educational Sector. An ERP system that has various integrated and centralized modules and provides real-time information can be considered as one of the systems that can be used in school governance in Indonesia.

Keywords – enterprise resource planning, integrated system information, school governance in indonesia

INTRODUCTION

School governance plays an important role so that schools can run effectively and efficiently – in terms of transparency, accountability, responsibility, independence, fairness [1], so that the goals of the school are achieved.

In order to realize the goals of national education, school governance in terms of providing education must use the Standar Nasional Pendidikan (National Education Standards). The Indonesian national education standards (SNP) [2] include graduate competency standards, content standards, process standards, education

assessment standards, education staff standards, facilities and infrastructure standards, management standards, and financing standards. [2] School governance based on the 8 standards must be planned, directed and sustainable to improve the quality of education in accordance with the changing demands of local, national and global life.

At this time, which has entered the era of society 5.0, Indonesia is trying to develop its school management from manual to digital, in which humans are the main component in the use of technology. Information systems in school governance must be structured and integrated, so that the performance of each individual layer can run effectively and efficiently. To create such a school information system, schools can apply the ERP (Enterprise Resource Planning) concept.

ERP according to O'Brien & Marakas [3] is a company system that includes all functions contained within a company that are driven by several integrated modules to support the company's internal business processes. The essence of ERP according to Haag [4] is 'enterprise', which is to unite all departments and functions in an institution into a computer system that can accommodate all the specific needs of different departments. This system can meet all the needs of the department of an institution and reduce the existing manual work.

Many studies on leadership strategies have been conducted in the current situation. Research conducted by Maita & Iguna [5] resulted in an ERP integration system design that could link the design of the academic system and the school's financial system. This ERP system design analysis uses SSAD (Structured Analysis and Design) . This system can improve the main performance in the academic field to assist

services for students, teachers, employees, treasurers, and principals in exchanging data quickly.

Research conducted by Ainiyah, Romihim, Khairani, and Yaqin [6], produced a detailed arrangement or list of School ERP needs. This ERP creates a more structured and integrated school information system, which can help streamline business processes & facilitate decision-making by school management.

Research conducted by Tiara, Kusuma, Hasanah, and Yuliani [7] resulted in a proposed ERP-based system design that assists the academic, financial, staffing, facilities and infrastructure sections in exchanging data quickly. An integrative information system that can connect all parts, which produces the information needed by students, teachers, administration and finance at SDIT Gandul quickly, completely and in real-time.

Meanwhile, research conducted by Josi [8] suggests that using ERP can improve the performance of employees at pre-Bumulih educational foundations to be better, optimal, and professional. Also information processing time becomes relatively faster.

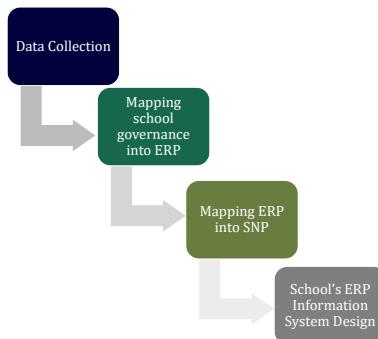
Research conducted by Santi, planning an ERP implementation strategy in educational institutions, must be adapted to a work culture that has been running for a long time. As well as being evaluated in stages for subsequent ERP implementations, this is very important to minimize noise due to mutations from the old system to the new system. Implementation of this ERP should be done in stages through communication and evaluation.

From the several studies above, this research has a novelty related to the design of SNP-based school ERP school information systems. Mapping designs that will be produced include ERP modules, authorization from individual school organizational structures, school activity programs, and Indonesian national education standards. Currently the ERP (Enterprise Resource Planning) system has been widely used by various universities in Indonesia as information technology to facilitate integrated business management on each campus. Not only at the tertiary level of education, but at the secondary level of education such as Senior High Schools (SMA), some already use the ERP system in their school management system. The ERP system was originally used to support all ongoing operational activities of a company (starting from Human Resources, Inventory, Financials, Sales, Purchasing, and so on). Over time, the modules in the ERP system can be integrated into business

processes in the education sector. An ERP system that has various integrated and centralized modules and provides *real-time information* can be considered as one of the systems that can be used in school governance in Indonesia.

RESEARCH METHODOLOGY

The method used is a literature review which is divided into several stages, the stages can be seen from Figure 1. The following are the stages of the research method.



From Figure 1, the steps of the research method are explained as follows:

- The research begins by *collecting data* regarding theories relevant to the discussion from journals, theses, and previous studies. These data are in the form of business processes in schools, ERP modules that can be implemented, as well as criteria from the eight SNPs.
- *Mapping the process of school governance into the ERP system*, an analysis was carried out regarding the implementation of ERP in school governance activities. From this stage a school governance process is produced that is in accordance with the six ERP modules used, namely sales and distribution, production planning, manufacturing, material management, finance, and human resource management.
- *Mapping ERP into SNP*, mapping the six modules into eight national education standards, this mapping uses governance activities that occur in each ERP module as a reference. The result of this stage is the output of school ERP needs based on each national education standard (SNP).
- *School's ERP Information System Design*, resulted in a school ERP information system design based on SNP. The design of this information system will be mapped which

includes the ERP module, authorization from individual school organizational structures, school activity programs, and Indonesian national education standards

DISCUSSION

The discussion consists of three result points from the research method stages, namely Mapping the process of school governance into an ERP system, Mapping ERP into SNP, and School's ERP Information System Design.

I. Mapping School Governance into ERP

The importance of the ERP system is explained by O'Brien [9] that ERP is a cross-functional corporate backbone that integrates and automates many internal processes and information systems in terms of production, logistics, distribution, accounting, finance and human resource functions in the company. ERP has strategic relevance because it is integrated into business processes or strategies that can directly affect company performance. The advantages of ERP [6] are integrated and multifunctional program packages designed to serve various functions within the company so that work is more efficient and generates added value for all parties (stakeholders). There are six ERP modules used in this study, namely Sales and Distribution, Production Planning, Manufacturing, Material Management, Financial, and Human Resource Management. The flow or cycle of the six ERP modules can be observed in Figure 2 below.

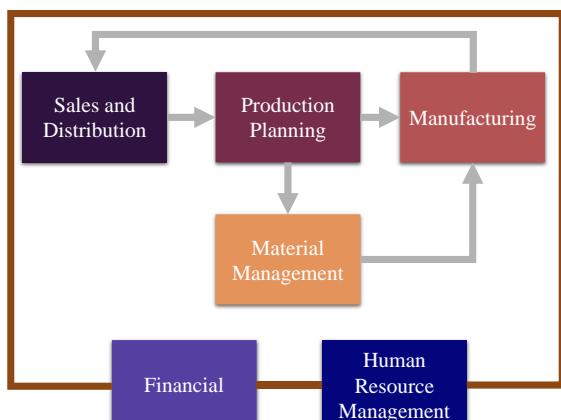


Figure 2. ERP cycle

From the Figure 2 above the four ERP modules, sales and distribution, production planning, manufacturing, and material management, use the functions of the finance & Human Resource management module for the process.

The following Figure 3 charts depicting the mapping of school governance activities into ERP modules and the ERP interface via the application website.

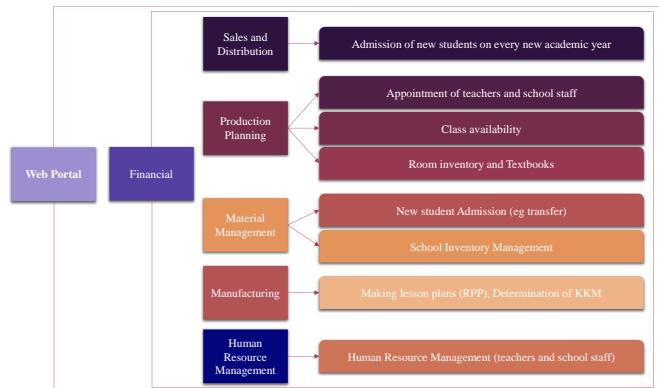


Figure 3. Mapping School Governance into ERP

II. Mapping ERP into SNP

Below Figure 4 depicts Indonesia's 8 SNPs (national education standards) which are mapped to the six ERP modules.

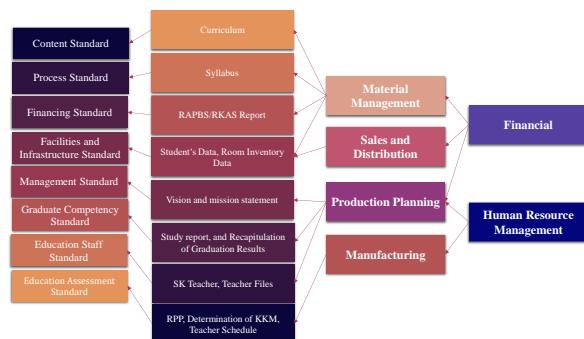


Figure 4. Mapping ERP into SNP

III. School's ERP Information System Design

Below, the figure 5 there is a mapping of the School's ERP Information System to all school members.

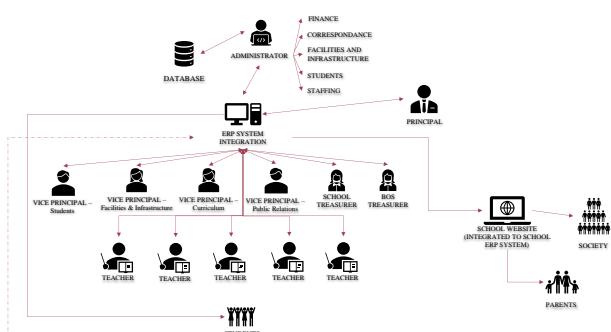


Figure 5. School's ERP Information System Design

For the authorization of every school member of the governance system in the form of Create, Edit, Delete, Approve, View, View without Price, it is determined by the school based on laws,

regulations and school policies. So that an integrated ERP system has integrity, namely transparent, accountable, participatory.

And for parents and the community, they can access the school's information system through a website interface that is integrated with the school's ERP information system. So that parents and the community can see information and developments of children and schools, and make it easier for the audit team to carry out their work to achieve the best quality education.

CONCLUSION

A good system must also be supported by good user skills, so that the applied information system can create good quality ERP system data. An ERP system that has various integrated and centralized modules and provides real-time information can be considered as one of the systems that can be used in school governance in Indonesia.

By implementing an ERP system in school governance, a structured and integrated information system, so that data exchange can be done more quickly, and based on the Indonesian National Education Standards to achieve national education goals. So that an integrated ERP system has integrity, namely transparent, accountable, participatory.

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