

Vision and Mission Educational Foundation (YPVM) Web-Based Project Management System

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ABSTRACT

Vision and Mission Educational Foundation (YPVM) is an educational foundation providing trainings and workshop programs as well as seminars for christian teachers. This foundation was facing problems in integrating and monitoring all activities anytime and from anywhere to be able to produce useful information needed by the foundation to manage and develop further programs.

A project management system application is developed to aid the foundation in executing their programs in its best performance. This application covers access privileges, jobs arrangement, budgeting arrangement of each activity. The data processing are integratedly arranged. This applicatrion is developed as a web-based application using the PHP and Javascript programming language and MySQL database system.

Resulted from the implementation experimentation, it is concluded that the application has been successful in managing and monitoring every activity conducted. The tasks and budgeting activities can also be presented in Gantt chart form . Thus the progress of each activity can be monitored clearly.

Keywords

Educational Foundation, Project management, activity

1. INTRODUCTION

Vision and Mission Educational Foundation (YPVM) is an educational foundation trying to prepare Christian young generation to be responsible and productive servant leaders in various fields through its efforts in empowering Christian schools. The efforts are reflected in providing teacher training programs in the form of trainings, workshops and seminars, especially on Educational Leadership and Management based on Christian values. In the implementation process of their activities, there have been some parties involved in planning, organizing, monitoring and evaluating. Good coordination in setting the date, place, job description of each party involved including the budget planning and monitoring the progress of each activity is needed.

Some parties involved are sponsors, the members of the foundation, activity committe, YPVM staffs etc. Some parties such as the sponsors and the members of the foundation are not full-timers. They have their own jobs else where. They also have their own schedules. Problems came up as they have to meet, discuss and make decision in planning and implementing the activities.

Therefore YPVM needs a web-based project management application to help planning and managing each activity without any limitation on space and time. By then all activities can be managed and monitored by all parties involved anytime and from anywhere.

2. BASIC CONCEPTS

2.1 Project Management

According to Schwalbe (2006), Project management is an application of knowledge, skills, tools and techniques in a project activity to meet the needs of the project itself. The success of a project is not only to cover time management, coverage, budgeting and qualities but also has to facilitate all process to achieve the goals.

According to Marion E. Haynes (1993, p.3), "Project Management unify and optimize the resources needed to complete the project successfully". These resources include skills, talent and teamwork effort; facilities, tools and equipment; information, systems and techniques; and money.

Project management has a bond with stakeholders. Stakeholder consists of those involved in or influenced by a project activity. They are sponsors, project teams, supporting staff, customers, users, vendors and those who are related to a project. Every stakeholder has different needs and expectations.

2.2 Project Management Knowledge Area

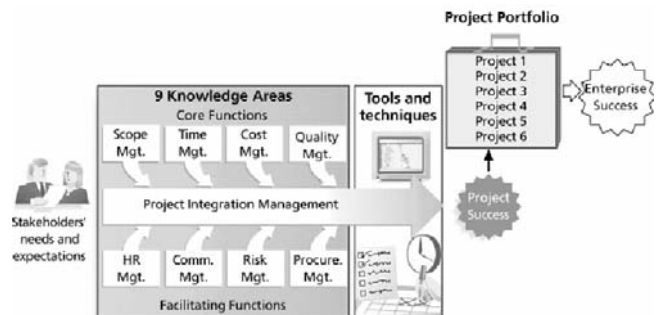


Figure 1. Project Management Knowledge Area (Schwalbe, 2006)

According to Schwalbe (2006), Project management knowledge area describes the key competencies that have to be developed. Figure 1 shows 9 key knowledge areas from a project

management. Four key knowledge areas: scope, time, cost and quality management are considered keys as they play important roles to meet the goal of a project.

Besides those four knowledge areas, there are also other four knowledge areas facilitating project management. They are human resources, communication, risk and procurement management. Those knowledge areas are the process necessary to go through to meet the goal of the project.

The Project integration management is the ninth knowledge area. It is a function to influence and be influenced by the other knowledge areas.

2.3 Schedule Development

Schedule development uses the results of all project time management pre-process to determine the beginning and last stage of the project. There are always several iteration of all project time management process, before a project schedule be completed. The final goal of a schedule development is to set a realistic project scheduling to provide a basis on monitoring the implementation of a project in the time dimension of a project. The main product of this process is a project scheduling, scheduling data model, a baseline scheduling, the intended change and the change for resources needed, activity attributes, project calendar and project management plan.

One of the tools to help the scheduling development process is Gant chart. Gant chart is a tool for providing a standardized format to present information on project scheduling with a list of project activities from the starting up to the end date of a project in the format of a calendar.

3. SYSTEM ANALYSIS

YPVM is setting up activities such as seminars, trainings, and school grants. So far the implementation of those activities were conducted manually. The preparation, the implementation and evaluation process were not integratedly managed. The board used Microsoft Word and Microsoft Excell to document the activities and budget reports. The non-integrated system created problems for the foundation to manage and retrieve any information on the activities conducted. As the foundation has been progressing, a project management application is needed to manage the needed information for all activities conducted.

4. SYSTEM DESIGN

The system designed for YPVM involves several parties in its implementation such as members of the boards, sponsors, implementation committee, resource persons, and YPVM staff.

Figure 2 shows an example of a flowchart on conducting a seminar activity. This process determines when and where a seminar is set up and who are involved in the implementation of this type of activity. After this process is completed, an implementation committee will take over the responsibility to arrange all requirements needed to implement this activity from the preparation, implementation up to evaluation stage.

At the preparation stage, the implementation committee is responsible for listing the tasks that have to be conducted by each appointed member of the committee. The system includes the creation of a proposal online. This proposal can be directly

viewed by the members of the board. Through this system, they can also write comments on the proposal or give approvals electronically. The approvals will take the activity into implementation stage.

The implementation stage is a process to fulfill the tasks defined before. The completed task can be reported automatically by each related member of the implementation committee. This process ends as all tasks have been completed.

The evaluation stage is a stage where the evaluation process is conducted. At this stage, the system will check on the gap between planned activities and its realization. The result of the evaluation is presented in reporting formats. The reports will be submitted to the members of the board as proofs on the realization of the activities.

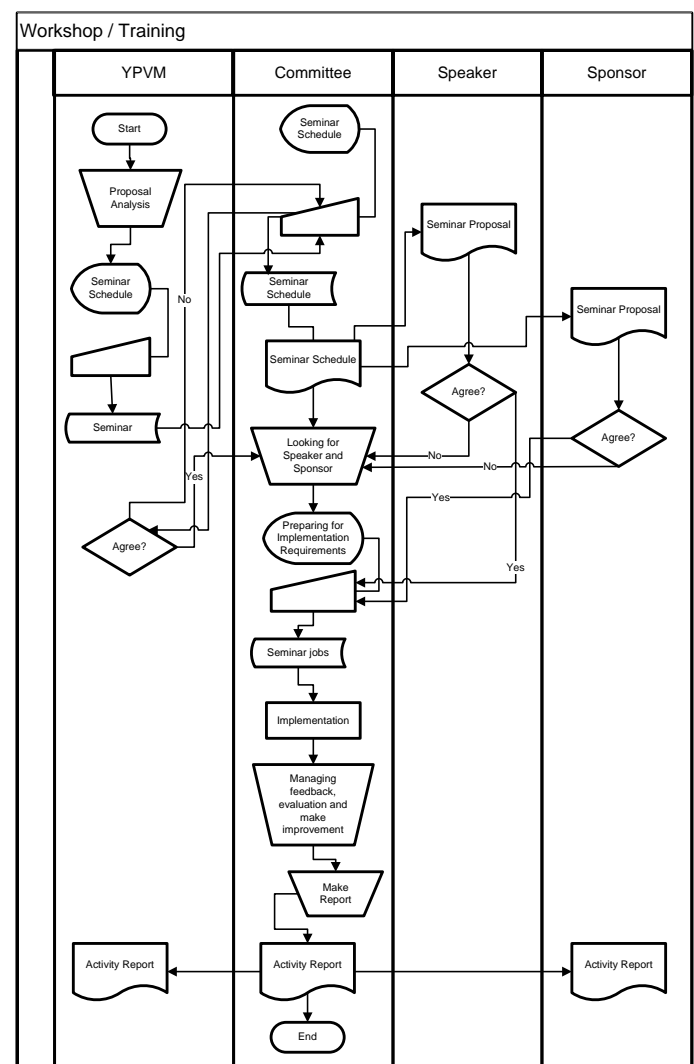


Figure 2. Flow Chart on Seminar Activity

5. SYSTEM EXPERIMENTATION AND RESULTS

Experimentation on conducting a seminar activity is shown on Figure 3 below. It is started by inputting a new event. It is an event on a training program for junior high school teachers.

Figure 3. Add New Event

First, an implementation committee is formed. Members are appointed. Each member of the committee will be assigned job descriptions or tasks to be carried out. Each task is divided into three stages: planning, realization and evaluation stages. During this planning stage, a list of tasks, names of committee members and other task predecessors are inputted into the system as seen at Figure 3. Predecessors are determined by inputting the names of the tasks and the detailed information of the tasks.

Figure 4. Task Distribution

After the job description has been defined, the next stage is creating a proposal for that activity as seen at Figure 5. Income and expenditure estimation of that event is then inputted.

No	Description	Description Detail	Estimate Amount	Rp	USD	Update	Delete
1	Kas YPVM	Anggaran tahunan	5,000,000	556		Update	Delete
2	Dana sponsor	Sponsorship	15,000,000	1,667		Update	Delete
3	Pendaftaran peserta	Peserta pelatihan 50 org x 50000	2,500,000	278		Update	Delete
Total			22,500,000	2,500			
Untapped Amount			2,500,000	278			

Figure 5. Proposal Inputting

The second stage is the realization stage. At this stage, the implementation of the activities and budgeting is conducted. Figure 6. shows an example of a form on income realization of

the event

Figure 6. Budget Realization

The third stage is evaluation. There are two types of reports created: reports on tasks carried out and financial reports. Those reports give general and detailed information. Figure 7 is an example of a Gantt chart report on tasks carried out. This Gantt chart presents a report in a graphical form. At this Gantt chart, the progress of each stage and the status of each task can be viewed. The blue bar shows the completed tasks. The red bar shows late tasks. The non color one shows that the task has not been conducted yet. There are also milestones of tasks to be conducted.

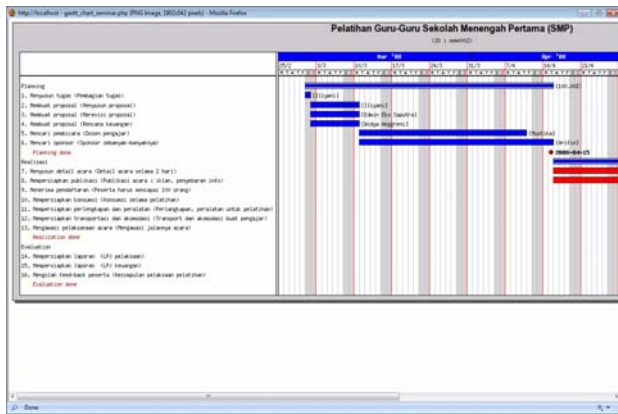


Figure 7. Activity Gantt Chart

The financial report is an overall report on the estimation and realization of income and expenditure. Figure 8 shows an example of an over-budget report in the amount of Rp. 250.000,- from an implementation of an event on a training program for junior high school teachers. The over budget report resulted from the fact that the realization of the expenditure was greater than the realization of the total income.

Budget Report

Event ID : sem0002

Event Name : Pelatihan Guru-Guru Sekolah Menengah Pertama (SMP)

Budget Allocation : Rp. 25,000,000 (\$2,778)

Details

Income

No	Description	Description Detail	Estimate Amount		Realization Amount	
			Rp	USD	Rp	USD
1	Kas YPVM	Anggaran tahunan	5,000,000	556	5,000,000	556
2	Dana sponsor	Sponsorship	15,000,000	1,667	15,000,000	1,667
3	Pendaftaran peserta	Peserta pelatihan 100 org x 50000	5,000,000	556	6,000,000	667
Total			25,000,000	1,113	26,000,000	1,224
Gain					1,000,000	111

Expenditure

No	Description	Description Detail	Estimate Amount		Realization Amount	
			Rp	USD	Rp	USD
1	Publikasi	Pembuatan iklan, penyebaran infor	3,000,000	333	3,000,000	333

Figure 8. Financial Report

This system has been experimented on 10 users. The results can be viewed at Table 1, using values from 1 (bad) – 5 (exceptional)

Tabel 1. User Experimentation

No	Questions	No of Respondent				
		1	2	3	4	5
1	Does this appliation match the system of the institution?	0	0	3	5	2
2	How good are the features provided by this application?	0	0	1	9	0
3	Do the reports procuced by the system match the needs of the institution?	0	0	2	7	1
4	How good is the overall user interface of this application?	0	0	1	7	2
5	How good is the overall performance of this application.	0	0	6	3	1

Based on the results of user experimentation as viewed at Table.1, 70% of the users stated that this application had matched the business process of the institution. 90% of the users said that the features provided had been good. 80% of the users acknowledged that the reports produced had matched the needs of the institution. 90% of the users said that the user interface had been good, though the overall performance of the application is only average.

6. CONCLUSION

The budgeting estimation and realization system for each activity can help the foundation in monitoring the utilization of budgets.

The availability of a clear time-scheduling on every job description helps the implementation process of each activity carried out as planned. This scheduling system is supported by an information system on the tasks that have to be completed.

Based on the results of the questionnaires distributed to the staff and non staff of YPVM, it is concluded that overall the developed application has quite met the requirements.

7. REFERENCES

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