Association of Faculty Educators of DLSU Inc Portal with Document and Content Management

Leonardo Jose R. Linga, Christian Nicole Alderite, Samuel Malijan, Anjoh Sarte,
and Marivic S. Tangkeko
*Center for ICT for Development (CITe4D), College of Computer Studies
- De La Salle University,2401 Taft Avenue, 1004 Manila, Philippines*
*Corresponding Author: leonardo_linga@dlsu.edu.ph and marivic.tangkeko@dlsu.edu.ph

Abstract:

AFED Inc. Portal, is a loaning association web portal with document and content management for Association of Faculty and Educators of DLSU, Inc. This aims to ease the difficulty in ensuring the operational continuity of the organization. On the other hand, MySql we will be used to handle the data. The proposed methodology for this project will be Rapid Application Development (RAD).

Key Words: Web Portal; Loans Management; Document Management; Content Management

1. INTRODUCTION

1.1 Background

An association is established by a group of people who share a common interest, goal, or role and exists for the benefit and enrichment of its members. According to Steve Ritch (n.d.) there are several types of association with the common ones being Trade, Charity, NGO, and Professional Associations. There are associations that can be found also in institutions such as the subject of the research, AFED Inc.

Association of Faculty and Educators of DLSU Inc. (AFED Inc) is a Non-Government Organization that caters to its members, primarily the faculty of De La Salle University (DLSU). They offer multipurpose loans, membership benefits, product purchasing assistance, team building activities and representation to the university committee and boards. However, like with most associations, they too encounter problems with their annual and day to day activities.

Common problems in associations persist such as low attendance in meetings, poor communication among members, and inefficiencies in activities, as stated in an excerpt from the publication made by Authenticity Consulting, LLC (n.d.), These problems are also encountered by AFED Inc. The proponents identified through interviews that the members experience: (1) members missing out on important activities for there is (2) difficulty in updating all members about announcements and events, and (3) lack of effective medium to issue and receive updates. Moreover, they have (4) a hard time in managing documents for negotiations since there are (5) difficulties in referencing old comments and (6) executive board and technical panel members do not turn over notes. Furthermore, (7) preparing the documents needed by external organization is difficult because there is a (8) difficulty in generating financial reports. Finally, there is an (9) improper deductions and monitoring of accounts. Fortunately, they are different types of solutions to address these.

Information   Technologies   improve   and

constantly improving to address various of problems. One IT solution is the use of systems. For this research, the proponents looked into Loaning Information Systems, Document Management Systems, Content Management Systems, and Community Portal Systems to come up with a portal for the association, combining key features of each systems.

1.2 Challenges

The AFED has encountered problems that negatively affect their capability to carry over and implement previous policies and decisions; and continue unresolved negotiations, unfinished tasks and activities into the present (operational continuity) especially after changing executive board members. Contributing to this problem are other several problems - members missing out on important activities difficulty in updating all members about announcements and events, lack of effective medium to issue and receive updates, difficulty in managing documents for negotiations, difficulties in referencing old comments, executive board and technical panel members do not turn over notes, preparing the documents needed by external organization is difficult, difficulty in generating financial reports, and improper deductions and monitoring of accounts.

1.3 Significance and Aim

The objective of the study is to help AFED Inc. promote operational continuity and ease of doing business by providing them tools that would help make loans management, document management, and information dissemination easier and centralized under one web portal.

We aim to use the concepts of document management to address the paperless processing of documents (i.e. sharing, sending, approving, rejecting), loans management to provide the members an easy way to avail and keep track of desired AFED services, and content management to disseminate AFED's announcements to its members.

This is kind of integration between three kinds of systems (DMS, CMS, and Loans MS) is relevant not only to AFED Inc., but as well as to other organizations that provide financial services to

its members and are in need of a way to easily process the documents and distribute the information that are vitlal in running the organization.

1.4 Scope

This paper presents the development of AFED Inc. Portal with Document and Content Management (AFED Inc. Portal) for the Association of Faculty and Educators of DLSU Inc. It involves the members, office assistant, executive board, technical panel members, and newsletter team of the AFED Inc. The scope covers the loans, documents involved in application requirements, negotiations, and by-laws. Moreover, the ability to create posts and polls. External offices or departments that are either inside or outside DLSU are not included in the scope.
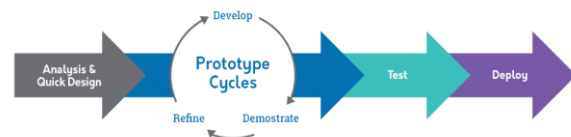
2. METHODOLOGY

Fig. 1. RAD Methodology

The proponents chose the agile methodology, specifically Rapid Application Development (RAD) in order to develop a system given the amount of time and to integrate possible extra features. It is a continuation of their pre-thesis project so they can easily modify the existing system as they are the developers of the system.

A period was allotted in debugging and blackbox testing the loan web portal of the system while the rest of the team was gathering data from the technical panel members and the editor of the association's newsletter for the development of two new modules to be integrated in the existing system. The researchers inferred that there is a need to include the two modules after identifying the following possible causalities: (1) members missing out on important activities for there is (2) difficulty in updating all members about announcements and events and (3) lack of effective medium to issue and receive updates. Moreover, they have (4) a hard time in managing documents for negotiations since there are (5) difficulties in referencing old comments and (6) executive board and technical panel members do not turn over notes. Furthermore, (7) preparing the

documents needed by external organization is difficult because there is a (8) difficulty in generating financial reports. Finally, there is an (9) improper deductions and monitoring of accounts.

2.2 Framework

The proposed system for AFED Inc. can be divided into three major components: Loans Management, Content Management,, and Document Management. These components can work on their own, but also complement each other.

According to Deane Barker (n.d.), content management deals with the publication of content to an audience. He added that content does not simply refer to information but rather "information produced through editorial process and ultimately intended for human consumption via publication." This is what we refer to as "posts" in our system. Posts in our system undergoes an editorial process of evaluation, editing, and approval before it is published in the system's News Feed (homepage). These posts will be an avenue for AFED Inc. to distribute important announcements to its members. Documents approved for organization-wide viewing can also be referenced in the posts.

Besides simply showing published posts it also provides information on the available loan services and currently availed loan services which the user can interact with to take them to loans management features. It also has an additional events module which allows the editor to create 'events' in Google Calendar that will be delivered through the News Feed as well as through email and mobile app notifications.

According to DocuVantage (n.d.), document management is "the capture, storage, and retrieval of documents." He adds that for organizations, document is essential but is "amazingly time consuming" hence the need for a system that will manage electronic documents. Our system addresses this need with our document management module which handles file-based documents and possesses the key features of a document management system according to AIIM.org (n.d.): Check-in/Check-out which we call "Lock for Editing", Version Control, Annotation which we call "Remarks" and "Comments", and Stamps which refers to the digital

signing, and approval or rejection of documents.

Besides simply handling file-based electronic documents in general, our document management system is also customized to handle AFED Inc.'s special document: The Faculty Manual. The faculty manual consists of several sections and each one are treated as an editable text-based document which is also version controlled, can be commented/remarked, and approved or rejected. Each approved revision of the sections get compiled into one Faculty Manual edition.

The Loans Management module comprises of submodules that represent and act out the business processes of the AFED Inc. such as the Faculty Assistance Loan Program(FALP) wherein the system gives the users a loan plan that the users can customize depending on their employment status, and can set the amount of time that the loan will run through, which will be tracked by the system which will help the Administrator in facilitating the loans through Salary Deduction. The same process goes for the health aid, but it is a slight variation of the FALP Process, wherein the user can ask for assistance with regards to their bills in the hospital for their disease or operation, and their request will be filed, and will be reviewed by a committee, in which the user can receive the amount agreed upon by the committee, or a lesser amount, depending on how much the AFED Inc. can spare. These are some of the main services that are offered by the AFED Inc., and the system does credit to make sure to have a platform where the users can apply for these services at the comfort of their homes without having the need for a physical application.

The Administrative side of this module allows the administrators to regulate the applications that are submitted by the various users of the systems, such as Membership, FALP and Health Aid, and allows for the tracking of said applications and their appropriate deductions. Loans management also have some sub-modules that needs to interact with the functionalities of Document Management to complete processing of FALP Loans and Health Aid Assistance which require document processing capabilities.
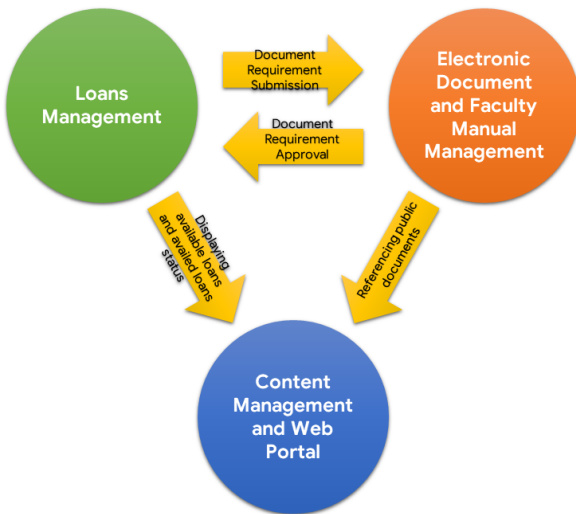
Fig. 2. Interaction Between Components

The developed system made use of a variety of open source technologies and API in order to develop a system with minimal cost as possible. Users, and the business rules were considered in the development. What were expected inputs and outputs of each rule and how each module and features should solve the identified problems.

Fig. 3. Conceptual Framework

3. RESULTS AND DISCUSSION

AFED Inc Portal with Document and Content Management was specifically developed to meet the needs of the association from loans, documents, and to making announcement. It comprises of three modules: Loaning association

module, Document Management Module, and Content Management Module.

3.1 Modules
3.1.1. Loans Management

The loaning module contains the core processes of the association. Membership, loaning, lifetime applications can be found here along with the approval of these applications. Members can track the status of their loans while the admins or the office assistant (secretary) knows which accounts have fully matured so he can create a notice to stop deductions to those accounts, to be forwarded to the accounting office. Admins can also encode ongoing applications and data that are not yet included in the database of the system. Moreover, admins can generate report based on the salary deductions they garnered.
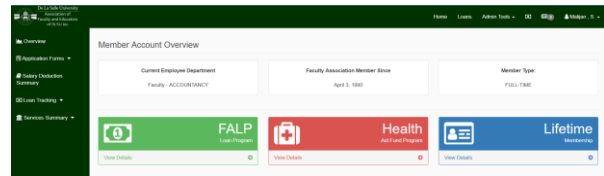

Fig 4. The Loaning Module screenshot.

3.1.1. Document Management

The second module, the Document management module, deals with documents. Each document can be viewed by people who has a permission corresponding to their role in the organization. They may also view the documents that are uploaded in other modules such as the requirements from applications in the loaning module. Users can also comment on and reference currently uploaded documents or upload a new one. Assigning/changing the document's status (approve, reject, pending) will also require the user to provide remarks.
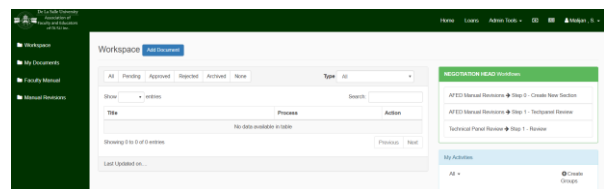
Fig. 5 The Document Management Module screenshot.

The document management module also has the sub-module to manage one of the organization's most important document: The Faculty Manual. The manual consists of sections that undergo a revision process every 5 years which this feature allows them to facilitate. It contains features similar to the file-based document sub-module.
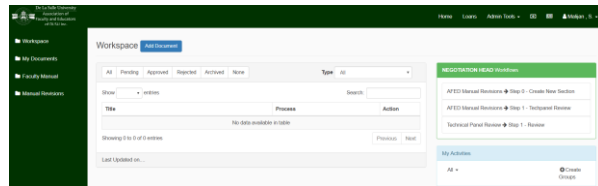

Fig. 6. The Faculty Manual.

3.1.1. Content Management

Finally, the content management allows the users to view, contribute, review, edit, and publish articles for the association. Announcement can be made in this manner aside from publishing newsletters. This also contains google calendar and ability to put up a poll attached to screens.
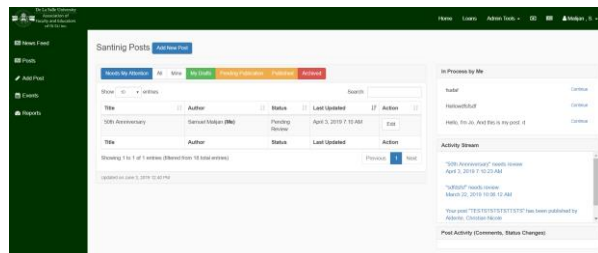

Fig. 7. The Content Management Module

While these modules can ease the processes of the association, future researchers who may want to improve this system may look upon other possible integrations such as other google API that can help improve the productivity of the members.

3.2 User Acceptance Test Scores

The UAT was performed with the target audience, the Office Assistant (Secretary) of the AFED Inc. and the Current President of the AFED Inc. The users were shown all of the modules, the first being the Loaning Module, then the Content Management module and finally the Document Management module. They were instructed to give comments all throughout the demo of the system, as well as writing remarks and their scores for the certain parts of the system.

The UAT was created in a way that will not only grade the system's modules as a whole, but to see if the users are willing to adapt to this kind of system, whether the user experience and system functionality work well for them, and if there are some parts that are lacking in areas of the business process, they can mark it down as an improvement to look forward to. The categories were split into three, with different subcategories, with the categories being the module as a whole, while the subcategories are the different parts that make up the module. The scoring system would be from 1, being the lowest to 5, being the highest.

Table 1 User Acceptance Test Results
From a scale of 1(Lowest) to 5(Highest)

Category	Respondent #1	Respondent #2	Average Rating
1. Loans Module			
1.1 Application Management	4	3	3.5
1.2 Member Management	4	3	3.5
1.3 Loans Management	4	4	4
1.4 Reports	4	3	3.5
2. Content Management Module			
2.1 Posts Management	4	3	3.5
2.2 Events Management	4	3	3.5
2.3 Newsfeed	4	3	3.5
3. Document Management Module			
3.1 Documents Management	4	3	3.5
3.2 Faculty Manual Module	3	3	3
3.3 Sections Management	3	3	3
3.4 Manual Revisions Module	3	3	3
Total Average			3.41

Fig. 8. User Acceptance Test Results. Note: Remarks were not included.

The post UAT results scored a total average of 3.41 out of 5 all across the board. With these results, we can deduce that the users find the system satisfactory enough for the business processes that prevail in the AFED Inc., provided that there are changes to be made. The comments usually stem on some missed steps in the business process, some additional steps that they required and some unexpected issues that came out from users that test the system. As to improve the next UAT scores, the researchers made user experience improvements to the system, added the necessary steps, and patched the errors that appeared during the scenarios that were tested by the respondents.

4. CONCLUSION

AFED Inc. portal with Document and Content management is a system specifically catered for AFED Inc. The current challenge the association is facing is the difficulty in ensuring the operational continuity of the association with the ever-changing executive board members. Documents and notes tend to get lost or do not carry over making negotiations hard for they have no notes or document to reference their decision or overhaul of a previous policy change. Similarly, complying with the external offices, and departments requirements are problematic. On another matter, disseminating information was also hard as there are no reliable medium to ensure members get the info.

To tackle these problems, this system was recommended with its three modules being: Loan Association module, Document management, and content management. Developing it via RAD methodology. While these are already sufficient in aiding the association, it is recommended for future proponents to look into newer or better API integrations to further improve the system.

5. ACKNOWLEDGMENTS

The research group would like to express their sincere gratitude to everyone who made this research possible and contributing to success of the system titled AFED Inc Portal with Document and Content Management.

To the members and staff of AFED Inc who have been patient and generous in providing us information we needed in order to build the system. Specifically, Mr. Melton Jo, Mr. Dante Leoncini, Dr. Laurene Chua-Garcia, Mr. Jose Tristan Reyes, and Mr. Rommel Billena.

To the group's former member, Patrick Mijares, who contributed a lot in the development of the loaning web portal.

To the group's project advisor, Ms. Marivic S. Tangkeko for patience, guidance, and ensuring the success of the project with the imparted knowledge.

6. REFERENCES

AIIM. (n.d.). What is Document Management (DMS)?.
Retrieved May 25, 2019, from https://www.aiim.org/What-Is-Document-Imaging

Authenticity Consulting, LLC (n.d.). Retrieved at May 20,
2019 from https://managementhelp.org/misc/FP-orgl-issu
s.pdf

Barker, D. (n.d.). Web Content Management. Retrieved
May 25, 2019, from https://www.oreilly.com/library/view/web-content-management/9781491908112/ch01.html

DocuVantage. (n.d.). What is Document Management?.
Retrieved May 25, 2019, from http://www.docuvantage.com/what-is-document-management

Memberclicks(n.d). Retrieved at May 20 from https://www.memberclicks.net/

Ritch, S. (n.d). Retrieved at October 15, 2016 from
https://www.asha.org/associates/why-do-associations-exist/