ABSTRACT

In today’s world, efficient operation through the use of technology has become a must for organizations large and small. The University of Virginia Department of Athletics felt the need for a single comprehensive web-based policies and procedures manual, something they previously lacked, to increase efficiency in their operations. To accomplish this, our team created an information management system that allows authorized members of the department to easily browse and search the department’s policies and procedures, view and print relevant forms, and access links to outside resources. The system also allows users to review and comment on policies and procedures that have yet to receive final approval. This paper describes the design and implementation of the Department of Athletics web-based policies and procedures manual. Results, conclusions, and recommendations are presented.

1 INTRODUCTION

The University of Virginia Department of Athletics previously had no central system in which coaches, faculty, and staff could find all pertinent policies and procedures within the department. Many policies were recorded on papers that were spread throughout the department; other policies were not recorded anywhere. The policies and procedures were first compiled and integrated into a common format. As an intermediate step, an online review system was created to allow senior staff to ensure that the policies and procedures to be posted were indeed correct. An online system was then created that allows members of the department to access all relevant policies and procedures in a central location. The final system allows users to click directly on a certain policy, to print and fill out all relevant forms and to search the system for policies regarding certain topics.

2 OBJECTIVES

Given the shortcomings of the Department’s decentralized information management system noted above, the design process centered upon removing the shortcomings by adhering to certain objectives. These objectives, or design criteria, evolved from meetings with Athletic Department staff regarding general project expectations and are listed below.

1. An intranet service that enables staff access to Athletic Department policies and procedures
2. Quick search capabilities
3. A user-friendly interface
4. Easy site maintenance.

An additional concern outside these specific design criteria was the aesthetic organization and standardization of the Department’s policies and procedures. This issue was addressed through each of the four specific objectives.

2.1 Staff Access to Policies and Procedures

With the current policy and procedures manuals and files, staff members do not have immediate access to operational information. If manuals or files cannot be located or if there is no manual for the employee to access, the desired information can only be acquired by locating another employee with expertise in the appropriate areas.

A comprehensive information management system would serve as a reference tool for the employee in such situations. He or she would not only have rapid computer access to the appropriate policies, but he would also be able to reference any related information easily through inpage links. By organizing all policies in a uniform location.
and standard format, the new system would provide the entire department staff with continual, efficient access to policies and procedures information.

2.2 Search Function

Looking up topics in book indices and card catalogs is inefficient when compared to the rapid informational access available with modern Internet search engines. Searchers no longer have to search for information in a catalog, record a reference number, and locate a book; they may enter a topic, click a button, and receive rapid access to the queried topic. Given this advancement, any modern information management system must also incorporate such a function.

For the Department of Athletics, a search function would enable users to query topical or other information and immediately access the results of the query. Related topics should also appear in the search results in case the user has searched the wrong information or desires other potentially related subjects. Such a function must be both easy to use and accurate in its findings. The variety of searchable topics mandates that the function work quickly to scan the system for matching results and return them to the user.

2.3 User-Friendly

Athletics Department employees are likely to use the site only if it is easy to navigate and understand. If the employees gain no additional utility from the system compared to printed manuals, then the product serves no purpose and is useless.

Employees should be able to execute all functions on the site quickly, from printing forms to researching procedures to approving policy changes. Superfluous material should be minimized, and all site information should remain as up-to-date as possible. With respect to human computer interfacing, the system should reflect the diverse abilities and preferences of users as previously discussed.

2.4 Easy Maintenance

Policies and procedures change constantly in the Department of Athletics, whether through the amending of current polices or the addition of new ones, and it is imperative that all staff, especially those directly affected, be made aware of such changes. Currently, the Department compiles printed copies of policies and procedures and distributes them on a yearly basis to employees. Amendments to these manuals can be made only by reprinting the entire manual or distributing memos to staff. This process of updating employees is costly and inefficient.

A modern information management system will automatically reflect new policies under consideration for approval and will make changes to old policies as soon as the changes are posted to the system. Simple design enables easy maintenance and allows for more inexperienced users to post policy changes and amendments.

In addition to these objectives, the team will also develop a comprehensive user manual for the final system. This manual will serve as a reference for Department staff as they use the system and as a troubleshooting guide for potential problems that may arise. Also, the manual will aid in the instruction of new employees concerning the system’s operation.

3 METHODOLOGIES

This project was primarily a computer based exercise. The purpose was to design an online manual, and, except for a few storyboard diagrams, everything was done using a PC.

At the beginning of the project, one of the biggest questions posed was what approach would be taken in the construction of the site. What design would best fit the requirements? The team began by first researching various options.

3.1 Approaches

One of the options the team discovered was a message board scheme that employed vBulletin’s (www.vbulletin.org/) PHP database message board software. This selection would allow easy editing of policies, the ability to email authors, and a commenting system where the comments would be replies to specific threads.

Another alternative was the use of ASP (active server page) based software. ASP software allows for dynamic updating of pages, which would allow administrators to drop new files into the system, whereupon the site would update itself.

After consideration of other ideas, the third major option considered involved using basic HTML in conjunction with Microsoft’s FrontPage software. This option permitted a great deal of customization to make the site fit the needs of the Athletics Department, but not as much as the easy dynamics of the previous two options.

In the end, the team chose the FrontPage HTML option.

3.2 Policy Review System

The first step of the project was to create a way for the department to review all of their policies before implementing them. That is, the majority of the policies planned for inclusion were still in the drafting phase, and administrators wanted a way to review, comment upon, and then edit these drafts before making them official.

The team realized that since this task was not to be the final product, an approach that could be implemented
quickly was preferred to those that would produce a more polished product. Basically, functionality was desired over appearance. The team chose to use a left column in which to load all of the policies in order to allow easy navigation for users.

3.3 Final System – Version 1

For the final version of the system, the team used concepts from the review system, ideas from administrators, and ideas from similar sites. One of the major differences that can be seen is the left column does not include only policies. Requirements for the project included access to all of the forms necessary in the department as well as the ability to search the entire site. Some of the similarities can be seen in the main policies window of Figure 2. To allow for the continuation of the review phase, the team left the feedback sections in the policies. The feedback section was revamped from its original process, which continually caused errors on the page. The feedback section was also created in such a manner so that removal in the future of the feedback sections would be simple.

4 USER TESTING

User testing simulates the manner in which users will use the product and assesses how well the principles of usability were applied to the client requirements. The first step in user testing involved selecting a sample to match the target audience [Brinck, 2003]. In this case, the Department of Athletics provided the actual users for user testing. The users selected for testing spanned a wide range of skills and backgrounds, which emphasizes on including both users skilled in the use of computers and users whose computer skills were weak. The sample also spanned the various types of users including coaches, secretaries and senior staff.

The next phase of user testing involved determining the test to be administered. The test was formatted so that users were given a set of tasks to complete and were then asked follow-up questions. The tasks were targeted, specific and captured the experience of goal-directed users. [Kantner, 1994]

The Department of Athletics provided nine test subjects for the testing. Due to the small sample size, statistically significant results from regression analysis or statistical comparisons would be difficult to obtain. Therefore, the test concentrated more on qualitative questions. Specifically, the test focused upon questions to determine what users liked or disliked about specific parts of the website. Proctors observed the users as they took the test. Users were encouraged to think aloud. [Waes, 2000]

The user testing was broken into two iterations. The first was done at an early stage in the development process. It was done with four members of the senior staff. This iteration of user testing primarily served as a progress assessment. The necessary changes were made to the manual in accordance with the results of the testing. The major alterations were made to the search function and the policy links.

The second iteration of user testing was conducted towards the end of the development process, when the team considered the website to be nearly finished. The results of the second iteration of user testing necessitated only minor aesthetic changes.

After the final iteration of user testing, it was clear that the website was usable and met the client requirements set at the beginning of the project. The testing gave insight in the way the users think and use the manual. It proved a valuable tool in developing the website to meet the client’s needs and expectations.
5 RESULTS

As users enter the site, they may choose to see a list of all the policies on the site, a list of all the forms, the search function that allows them to search all policies and forms, or various relevant links.

Figure 2. Policies and Procedures Homepage

When ‘Policies’ is chosen, all policies are listed in the right frame. Users may then choose from broad areas such as Academic Advising, Business Office, Promotions, and Sports Medicine. Users are then directed to additional links that allow them to go to certain parts of a policy document. Users may either go directly to the top of the document by clicking ‘View All’ or they may pick a certain portion of the document to visit.

Figure 3. Sample Policy List

If users initially choose to visit ‘Forms’, all forms that apply to the Athletic Department are listed. In the future, this page will also list relevant policies along with the forms. A user may also access forms from within these relevant policy pages.

Figure 4. List of Forms Available through System

Users may also go directly to the search function from the homepage. This search function can also be accessed at any time using the link in the left toolbar. When a keyword is typed into the search function, the results are then displayed including the context in which the keyword was found, the title of the document and a description of the document itself. The user can then click on the results in order to visit these pages.

Figure 5. Search Function

Figure 6. Sample Search Results
The final system also includes a page that shows relevant links that can be easily accessed by clicking ‘Links’ on the left toolbar. These links include the UVA homepage, the UVA Department of Athletics homepage, the NCAA homepage, the ACC homepage and the UVA Policies and Procedures homepage. More can easily be added as it is deemed necessary.

The final system has the capacity to allow members of the Department of Athletics to continue to make comments on the policies and procedures. This commenting process works in the same manner as the initial review system, using pop-up windows to allow users to enter notes.

6 CONCLUSIONS

6.1 Summary

Through collaboration with the UVA Department of Athletics and Jaime Stilson, a UVA law student and intern with the Department, the Capstone team has created a comprehensive Policies and Procedures Manual in a web-based format. This site allows members of the Department to access in an easy-to-use web format all relevant policies and procedures needed on an everyday basis. The policies are listed both by broad subject areas and also within a search function that allows users to search a certain topic based on a specific keyword. All forms that are relevant to the policies listed on the site are included and can be accessed in pop-up format. The users may fill out the forms in these new windows and then print them easily.

The system created by the Capstone team also allows for review of the policies and procedures. Currently, all policy documents are still under review until they are approved by the Department. Users may visit the documents, then leave comments by clicking on ‘Feedback’ links that show a pop-up comment window. The users may also e-mail the original author about any comments that are made on the documents.

6.2 Recommendations

It is the recommendation of the Capstone team that the UVA Department of Athletics use the delivered system as a starting point for a final Policies and Procedures Manual. In order to achieve the most from the work already done, the Department should hire at least one individual with web experience to continue work on the site. The Department should also work to upgrade its server system and the hardware used by faculty, coaches and staff in order to realize the greatest degree of benefit that the system can offer. Once these steps are taken, a comprehensive system can be built and maintained, using the current system as a starting point for an improved system in the future.

6.3 Interpretation of Results

In creating an online Policies and Procedures Manual, the Capstone team has set the foundation for future manuals within the Department of Athletics. The Capstone team realizes that the website created represents a first step in the process of creating a comprehensive manual for the use of all faculty, staff and coaches within the Department. The product created serves as an excellent way for the Department to provide the information to its members until a full-fledged plan is created to maintain a complete system. The final system allows the Department of Athletics to continue to comment on draft policies and procedures until final drafts of these documents are approved by the appropriate senior staff members.

However, it is the opinion of the Capstone team that this system cannot be fully completed until full-time personnel are hired within the Department to manage the system. Many aspects of the current system can be improved with more sophisticated server applications and the appropriate compatible code. The Capstone team chose not to use such methods in the design of its system because currently there are no members of the Athletic Department equipped to maintain such a system. One of the major goals set by the Capstone team was to allow the Department the easiest maintenance of its system. If server applications were used and an important aspect of the system were to become inoperable, no one within the Department is currently qualified to repair such problems.

The Capstone team will submit a finished online Policies and Procedures Manual to the Athletic Department, as well as a user’s manual to accompany the system. This system will be used to approve all current documents as well as access information. Initially, the Capstone team had hoped that all documents included would be final, approved versions. However, based on the time constraints of the project, this is not possible.
ACKNOWLEDGEMENTS

University of Virginia law student Jaime Stilson who oversaw the drafting and compilation process of the policies and procedures and served as the primary liaison throughout the year deserves special mention for her role in this project. Additionally, we would like to thank Professor James W. Lark, III, our capstone advisor, for his help and assistance throughout the year.

REFERENCES


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