AC 2007-1860: IMPLEMENTING A DATABASE-DRIVEN SOLUTION FOR NOMINATIONS AND ELECTIONS OF FACULTY GOVERNANCE COMMITTEES

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Implementing a Database-Driven Solution for Nominations and Elections of Faculty Governance Committees

Abstract

Institutions of higher education are self-governing bodies of which participating members must serve on various committees from time to time. To this end, nominations and elections of school-wide committees are the vital link to this process of faculty governance. With each new academic year, there are numerous changes in faculty status such as new faculty being hired, tenure status, past positions being held and term limits on various committees. Depending on the complexity of each institution’s governing document (which states the stipulations for each committee’s required representation), making certain nominations and elections are carried out in a fair and equitable manner can prove to be a fairly daunting task.

To streamline this yearly task and ensure continuity between former and current election committees, the authors of this paper developed a technology-based system which automates the nomination/election process. This paper presents an overview of this on-line, database-driven committee nomination and election system. This paper also points out several other institutions that have developed similar automated means of dealing with faculty governance logistics and presents issues that must be addressed when considering developing this type of a system.

Background and Needs Assessment

The authors’ school is one of 22 schools and academic units on the campus of a large, urban university. Though part of the larger campus community and a regional campus to a parent university, the school is still responsible to maintain its own governing system of both permanent and ad-hoc committees. One of the authors of this paper has been the school’s Nominations Committee Chair for the past several years and has attempted to improve and streamline the process of filling elected committee positions. Different types of paper-based nomination and election forms were designed and implemented with varying degrees of success. One of the simplest, yet most innovative of these was to include the picture of each nominated faculty member on the final voting ballot. As many colleges and universities are large and very diverse in their academic units, it oftentimes prohibits faculty (especially new hires) from knowing the names, faces and qualifications of every faculty member. Adding the picture of nominated individuals was very well received and resulted in higher voter participation. Furthermore, the addition of eligibility requirements, committee responsibilities and term limits on the call for nominations clarified the stipulations and importance of each position. However, the addition of these methods increased the amount of paper-based communications in the nomination and voting process. Copying, addressing and distributing the call for nominations and final voting ballots became an issue that had the potential to bog down the entire process.

Going “On-line”

The first iteration of on-line voting tools developed at the _______ School of ______________ was designed to assist in the distribution of nomination information and the explanation of the...
nomination/election process itself. Information could be posted on a web presence that reflected current, accurate data which in turn could be made available to faculty via an email notification. Faculty could then print out a nomination form, add the pertinent information and deliver the hardcopy back to the nominating committee for further action. The University of Arizona currently utilizes this type of system to solicit faculty nominations by means of providing an approved, consistent, pre-designed form in which to submit nominations. This type of on-line nomination form is ideal for institutions that require signatures to be physically added to the nominating petition. A copy of this form can be viewed at: http://fp.arizona.edu/senate/PRIMARY%20PETITION%20Spr%2007.htm. The accompanying nominating instructions can be located at: http://fp.arizona.edu/senate/PRIMARY%20ELECTION%20NOMINATING%20INSTRUCTIONS.htm. It should be noted that both of these links are located on The University of Arizona Faculty Governance web page (http://fp.arizona.edu/senate/).

Paper Reduction

As stated above, the first iteration of on-line voting tools developed was designed to assist in the distribution of information and the explanation of the nomination/election process itself. However, it did not take advantage of the web’s ability to reduce the amount of hardcopy paper required to accomplish various tasks. The nomination form was simply distributed via the web, printed out (numerous times), filled out and hand-delivered back to the Nominations Committee. This was to become the second consideration taken into account when developing the current system. The nomination portion of the election process was placed entirely on-line with a form that could be filled out and submitted electronically back to the committee. Though a vast improvement in paper reduction, security and time savings, this system still required that the names of candidates be hand-entered by nominating individuals and hand-entered again onto the final voting ballot. This point of the evolving system also introduced additional problems unforeseen earlier. Namely, the placing of ineligible candidates on the nomination form by faculty unaware of the ineligible status of the faculty member they were nominating. This led to the potential appearance of ineligible candidates on the final voting ballot should the Nominations Committee not catch the error. What was designed as a streamlining measure led to additional work in the pain-staking task of double-checking the eligibility of candidates.

Enter the Database-Driven Solution

The __________ School of ________________ has been diligently designing and populating a comprehensive database of faculty, staff and student information for the past nine years or so. As that database has evolved, many unique and useful applications have been created to leverage the information contained within it. As stated above, one of the authors of this paper has had several concurrent terms as the Chair of the school’s Nominations Committee. Realizing the potential application of data already existing within the school’s database, the Chair began discussions with the school’s Database Administrator on the feasibility of integrating this data into an automated nomination and voting system. Thus was born the evolving automated, database-driven system. The first task in creating this system was to define the tasks of the Nominations Committee itself. To do this, the Bylaws of the Faculty of the school were reviewed to discern where automated processes could be applied. Below is the
d. Duties and Responsibilities

i. This committee shall aid the Dean in selecting Faculty to serve on Administrative Committees.

ii. This committee shall nominate faculty members for positions elected by the Faculty of the School of _____________: President of the Faculty, School representatives to the _________ Faculty Council, faculty members of the Student Affairs Committee, the members of the Constitution and Bylaws Committee, and members of the Budgetary Affairs Committee. This committee shall also nominate representatives from Departments without graduate programs to the Graduate Education Committee and other representatives the Faculty is called upon from time to time to select.

iii. This committee shall establish election procedures and certify the results to the Senate and the Faculty.

iv. This committee shall solicit from each Department the names of members elected to the Unit Promotion and Tenure Board, the Grievance Board, the Nominations Committee, the Faculty Affairs Committee, the Resources Policy Committee, and the Undergraduate Education Committee. This committee shall solicit from Departments with graduate programs the names of members elected to the Graduate Education Committee.

v. This committee shall nominate faculty members to serve as chairs of standing committees for election by the Senate, as provided in Section V, C-I of these Bylaws.

vi. This committee shall maintain records of membership of Faculty boards and Senate committees and establish patterns of rotation of terms.

vii. This committee shall ascertain the number of Faculty in each Department as of February 1 of that academic year. This committee shall recommend the composition of academic groups for representation to the Senate on the basis of assignment. At the February meeting of the Senate each year, this committee shall recommend to the Senate for its approval the number of Senators to represent each academic group for the following academic year.

viii. This committee shall annual solicit from the Faculty information concerning Faculty preferences and qualifications for committee assignments.

Once tasks were identified that could be automated, the process of designing the system began. ______ _________, former Database Administrator for the ______ School of ________________ was the original architect of the database-driven system. Her pioneering efforts in the infancy of this project are due credit as the system was deemed feasible at this point. Having the blueprint and a prototype of the initial system, the Nominations Chair discussed the vision of an automated system with the incoming and current Database Administrator, ______ _______. Upon gaining an understanding of the intended capabilities of the envisioned system, the new Database Administrator dissected and explored the structure of the existing database. With a clear understanding of the objectives, functionality and outcomes of the desired system, the existing code was modified and optimized and new features were added to produce the current product.
System Architecture

The heart of the faculty governance system is the four components comprising the Nomination and Election (NE) database as shown at the top of Figure 1. The Human Resource (HR) database at the bottom of Figure 1 contains the faculty listing, tenure status, rank, departmental assignment, administrative role, duration of service and many other descriptors and delineators. The HR database serves as a supporting structure feeding information into the NE database. Figure 1 below illustrates the data pool and information flow of the entire nomination and election system.

Data Pools And Information Flow

The “Committees” component information is drawn from descriptions listed within the Bylaws of the Faculty. The “Committee Members” component contains the names of currently serving faculty, the departments they represent, duration of service (both served and outstanding) and indicators of committee chairs and alternates (if any). The faculty names and departments they serve are drawn from and cross-referenced with the HR database to assure accuracy. Term duration and chair indicators are not drawn from the HR database, but are entered into the database following each annual election. In the “Nominations” module, each committee candidate list is automatically populated with names drawn from the HR database from all faculty members that match the criteria of that particular committee requirement.

Figure 1
There is a streamlined data flow from one module into another. The “membership”, “terms” and “duties and responsibilities” data from the “Committees” module are used by the “Committee Members” module when describing member services and their term durations. These together are used as references when new nominations take place, which is handled in the “Nominations” module. “Voting” is based on the ballots created in the third module.

The data flow clearly defines the different stages of the election process. The next stage can only happen when the previous is complete, thus eliminating any discrepancy caused by data cross-reference or multiple roles played by one faculty member. For example, the Chair of the Nominations Committee is a faculty member, and he also serves on the Nominations Committee. He is able to nominate candidates, create a ballot and finally vote as a faculty member. However, he can only cast his vote (as a faculty member) when all of the ballots have been created.

There is a three-tier access control built into the NE database, based on the role of individual faculty members. The three tiers consist of the Nominations Committee Chair, Nomination Committee Members and all other individual eligible faculty members that do not serve on the Nominations Committee. Staff, adjunct faculty, technicians, teaching assistants and others (though contained in the HR database) are not considered eligible voting members of the faculty.

**Tier 1 – Nominations Committee Chair**

The Chair of the Nominations Committee has access to view and modify the content of the Committees and Committee Member data pools in order to maintain the content of these pools (Figure 2). The Chair has access to the “Nominations” module to nominate, view and verify candidates and to create the actual voting ballot as well as the “Voting” module to view results.

![Diagram of data flow](image)

**Nomination Committee Chair’s Role**

*Figure 2*
Tier 2 – Nomination Committee Members

The Nominations Committee members’ role (Figure 3) encompasses viewing the Committees and Committee Members module information. More importantly, they view and modify the Nominations data (nominate candidates) since their main role is played within the Nominations module. Finally, only members of the Nominations Committee (including the Chair) can view the voting results which are in turn reported to the Dean.

Figure 3

Tier 3 – Individual, Eligible Voting Faculty Members

Faculty members (not on the Nominations Committee) can only access the Voting module when they cast their vote. If an individual faculty member wishes to serve on a particular committee or nominate a colleague who is not a member of the Nominations Committee, they must inform their departmental Nominations Committee representative of their intentions. Individual faculty members do not have access to the Nominations module and CANNOT nominate anyone by themselves. Additionally, the NE database is cross-referenced with the HR database at the point of the “Voting” module. This of course restricts voting to only eligible faculty members and allows only one ballot per faculty member to be submitted.

This three layer access control mechanism ensures the security and accuracy of the system, which is vital to a system that is accessed from the web and is used widely across the school. It bears mentioning at this point though, that the success of this three-tier access control depends entirely on the integrity of the HR database. Should an institution’s HR database be inaccurate, out-dated or incomplete, no amount of security measures would assure an infallible nomination and voting system.
Utilizing the System

Prior to the beginning of the nomination process, the Chair of the Nominations Committee accesses the System (Figure 4) by authenticating his/her identification against the HR database. Upon entering the system, The Nominations Committee Chair has five options: Committee Database Maintenance (Chair only), Faculty Nominations, Ballot Creation (Chair only), Vote and Voting Results.

Selecting “Committee Database Maintenance” opens the “Database Maintenance Home” (Figure 5) and allows access to the heart of the NE database. Here the Chair updates committee and faculty information. To activate term limits, service information must be updated prior to any nominations taking place the following year.

The Database Maintenance Home also allows the Chair to indicate a faculty members’ rejection to serve, thus precluding him/her from appearing on the final voting ballot. Each time any faculty member is nominated for any committee, an email is automatically generated and sent to them from the Chairs’ email account notifying them that they have been nominated and in order to decline, they must reply to the email and inform the Chair that they cannot serve on that particular committee. This very unique feature of the system prevents unwilling candidates from appearing on the ballot and rendering the elections invalid.

Figure 4 - Nominations Information System Interface

Figure 5 – Database Maintenance Home
From the Database Maintenance Home, the Chair can view faculty or committee history (Figure 6). The data that is listed at this level is the name of the committee member, their department affiliation, whether they are the chair of that committee or are an alternate for another of their departments’ colleagues. It also indicates whether someone is on the committee by virtue of the Dean’s appointment and the academic term in which they are serving.

At this level, the Chair can verify, modify or delete committee service for any existing faculty member. Additionally, it is at this point that the Chair inserts new faculty members who were elected during the recent elections (Figure 7). Every level of the system is designed to be able to be modified easily without any specialized training involved. Intuitive, uncluttered and self-explanatory, the system lends itself to be adopted easily by any future Nominations Committee Chairs as well as institutions that may show an interest in utilizing this or another similar system.

The system has proved to be intuitive for the rest of the members of the Nominations Committee as well. When nominations are to be submitted each year during the spring semester, the Nominations Committee members are notified via email and asked to fulfill their responsibilities in nominating eligible colleagues within their academic units. After entering the URL provided in the email and authenticating their identification (Figure 8), the same Nominations Information System interface appears that the Chair of the committee sees (Figure 4). After selecting “Faculty
Nominations”, the members of the committee indicate the committee they wish to view and are directed to that page (such as the Student Affairs Committee shown in Figure 9). That page presents information such as membership, terms, duties and responsibilities, currently serving members, expiring terms and departmental representation. It is on these individual committee pages that the members of the Nominations Committee will nominate those individuals within their department who wish to serve on that particular committee.

Finally, the Chair of the Nominations Committee will verify that all department representatives have completed the nomination process, uninterested nominees have been removed from the ballot and all vacant positions have an adequate candidate pool. At this point the Chair will generate the final voting ballot, send an email containing the voting URL to all voting-eligible faculty and open the poles for voting. Faculty members are of course asked to authenticate their identity before casting their votes. At the end of the automatically-timed voting period, the poles are closed and the results are certified to the Senate and the Faculty.

The Next Step – A Comprehensive Faculty Governance Web Page

Researching this paper brought to light another tool to efficiently aid faculty governance. The dealings of various academic committees are many and the nature of these committees is one of a high turnover rate. Leveraging the web should be considered to keep an account of committee activities that all faculty members are aware of at all times. The University of Arizona® (see Going “On-line” section above) and the Texas Tech University Health Sciences Center School of Pharmacy™ Faculty Governance page http://www.ttuhsc.edu/sop/faculty/selfgov/² are examples.

Conclusion

On-line nominations and voting are a logical use of technology to increase access and voter participation, insure accuracy and adhere to term limits. Utilizing an existing HR database as a support structure to drive an elections database is also a good extension of existing resources. Perhaps the committee tracking capabilities of such a hybrid system could one day be used to substantiate tenure or merit pay progress when service is a consideration of job responsibilities.

Bibliography

1. http://fp.arizona.edu/senate/
2. http://www.ttuhsc.edu/sop/faculty/selfgov/