Herding Cats

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Abstract

At the beginning of the spring semester, 2004, the Quantitative Methods/Computer Science (QMCS) department of the University of St. Thomas was asked by the Vice President of Academic Affairs office to conduct a "program review". This program review was to be completed by the end of spring semester, 2004 (the current semester!). How was a "baker's dozen" number of faculty members in the QMCS department going to accomplish such a large task within what apparently was an unreasonable time frame? This paper will detail what was involved in such an effort and what was done to accomplish the task. In essence, the department needed to formally establish this effort as a project to be completed by all members of the department. The inherent nature of faculty in a technical department such as QMCS indicated that the task of organizing them and managing their efforts was akin to herding cats – something nearly impossible. In spite of that, the task was completed on time and done with a high level of quality. The end result was a 191 page program review document that included a survey of alumni, an industry leaders' feedback meeting, a literature search, a study of other institutions' programs, and a history and current status of the department. Hopefully the experiences of the QMCS department will provide insight into such a process and provide evidence that such an effort can be done effectively.

Background

Like the vast majority of computer related departments the undergraduate department of Quantitative Methods and Computer Science (QMCS) at the University of St. Thomas began feeling the effects of the "dot-com" bust of 2000 along with the trend toward outsourcing of programming by United States organizations – our enrollment was down (from 288 majors in 2000 to 152 in 2003). In addition, there were a couple of events that contributed to our enrollment decline. The first was the decision by the university to add a "surcharge" on the tuition for QMCS and Business courses. This surcharge was intended to cover the costs incurred in these departments. The second factor was the elimination of the requirement that students in the School of Business departments (except for one department out of five) take an introductory computer course in the QMCS department. We learned after the fact that we had been "recruiting" anywhere from 10 to 30 students per year into our major from that course. Therefore, our enrollment declined by more than the national average of approximately 19%.

We also have had a graduate computer related department called Graduate Programs in Software (GPS). They too had been hit with lower enrollment (from 903 in 2001 to 658 in 2003) but, again, greater than the national average. That program had established relationship with many foreign institutions who served as "feeders" to GPS. The events of 9/11 and the subsequent tightening of immigration all but cut off that flow of students. In addition, the GPS program had been a part of a "School of Technology" that included the graduate Engineering department. In 2002 the Engineering department had established its own school leaving GPS an organizational orphan.

Through into this mix a new Executive Vice President – Chief Academic Officer and you end up with a situation ripe for study and possible change in the spring of 2004. Therefore, in February of 2004, both departments were asked to perform a self-study as the first step in a "Program Review" of their departments. This paper will present the QMCS side of the story.

The Task

With suggestions from the Academic Affairs department we were to accomplish the tasks listed below by the end of the Spring semester, 2004 – essentially by May 31, 2004.

1. Self-Study. This included a short history of the department, its mission, a description of the current program, faculty, faculty issues, student engagement, and relationships with other units in the university.
2. Survey of Graduates and Their Employers. We needed to develop, distribute, and analyze the results of a survey of our graduates as well as a survey of their employers.

3. Industry Leader Feedback. We needed to identify local and national "industry leaders", get them together, and obtain their counsel regarding the future directions and needs of the computing industry.
4. Emerging Trends Reflected in Publications. A literature and publication search needed to be done to see what the emerging trends (short term and long term) are.
5. Review of Other Programs. We needed to look at our competing institutions, other similar institutions, and leading institutions to see what they were doing in terms of their programs.

All of this was to be accomplished within four months (February through May) with 13 full time faculty members, all of whom had full loads of teaching, service, and research. There would be no additional support provided in terms of people to work on these tasks, however, there was an offer of additional funds to cover some out-of-pocket expenses not covered by our regular budget.

The Project

After an attempt to get the project underway in early February, it became clear by the end of that month that we were not going to complete the task by the deadline, if at all. When I realized that was the case, I volunteered to be the "Project Manager" for this project. My background included industrial experience managing self-instructional material development projects. In addition, I had been Director of the Computing Center at St. Thomas, during which time we implemented many projects – some relatively small and others as large as replacement of all our administrative systems. Knowing the nature of faculty, knowing how our faculty has operated in the past, and based on my experiences with previous projects, I knew what we needed to do to have any chance at all of completing the task at hand on time. Therefore, I volunteered to "herd the cats".

There are a number of characteristics of higher education faculty that indicate the project manager job was akin to trying to herd cats. Faculties are typically highly independent. To get where they were, faculty needed to run the gauntlet of obtaining the PhD. What this meant was that they had to independently do research in their area, independently write a thesis, and independently defend that thesis. They were not encouraged to work on these tasks as a "team". The PhD was theirs, individually, not something that was obtained through group effort. Faculties are generally more interested in the process of how we get things done as opposed to actually getting things done. Much of academia is run by faculty committees, committees that can take months and years to accomplish what could have been accomplished in half the time if done by others. Finally, faculties are tenured and promoted based on individual accomplishments. Very few institutions and departments therein reward faculty based on their ability to work with others as part of a team. While this has been slowly changing – e.g., the trend toward more team-taught courses and collaborative research – when it comes right down to it, each faculty member is judged on their accomplishments. Tenure is typically not awarded to a team of faculty, but rather to individual faculty members.

Please, don't read into the above a dislike for faculty – after all I "are one". My purpose here is to help identify the context in which the project needed to be accomplished. There are plenty of good things to say about faculty (especially St. Thomas faculty and, in particular, the 13 QMCS faculty) – unfortunately it's not my purpose here to delve into that.

So, in late February, I was appointed Project Manager (cat herder) of our Program Review. The kickoff meeting was scheduled for March 3, 2004, leaving us with only three months to get the work done.

Herding the Cats

Okay, so how does one go about herding cats?

Initial Efforts

Well, there are any number of general project management techniques that can help. Key among them is the following:

- Detailed schedules. We needed specific dates for completing the major tasks and the related subtasks.
- Distribution of work. The work needed to be parceled out to small groups of individuals who would concentrate on their portions.
- Regular status reports. Responsibilities needed to be identified with individuals and teams and status reports provided regularly regarding accomplishment of tasks.
- Facilitation of project team efforts. Someone needed to help find whatever resources were needed to get the job done.
- Project management. We needed someone who would oversee the project, monitor progress, and generally take care of business – that was me.
- Detailed meeting notes and action items. I would need to make sure that all decisions and action items were recorded and widely distributed.

Therefore, the first meeting was devoted to getting organized. I sent out an agenda before the meeting with the following items and times noted:

- Expression of concerns – 10 minutes.
- Determine overall schedule – 20 minutes
- Volunteers for each of the major tasks above – 10 minutes
- Future meetings – 5 minutes
- Small group initial discussions and organization – 15 minutes

By sending out a detailed agenda prior to the meeting and specifying times for each item (both of which were not customary for our department) I hoped to set the tone for not only this meeting but for all subsequent meetings. That tone was one of "task orientation".

In addition to applying sound project management principles, I needed to recognize the unique aspects of the project and address those issues. These unique aspects included project management of faculty, project management of the QMCS faculty, and project management within the context of the University of St. Thomas. To address these issues, I wanted to make sure that I did the following:

- Encourage participation by all. Everyone in the department had to feel that they were somehow contributing to the success of the project. Everyone must be involved, without exception.
- Avoid directing and dictating. These were all highly intelligent, highly competent people who could figure out the details of how to get the job done. I needed to be careful and encourage them to have ownership of their tasks and not tell them how to do the task. In essence, they could rise to the challenge and my telling them how to do that would not be a successful approach.
- Not embarrass anyone. If schedules slipped or someone was not pulling their weight, I needed to make sure that was dealt with privately. These are all proud people (deservedly so) who shouldn't be publicly embarrassed.
- Problem solve continuously. Not all the problem solving and planning could go on during our weekly meetings. I needed to be in contact with faculty regularly. I would use chance encounters in the hallways or pop my head into their office to see how things were going and if they needed anything. Not only were we able to identify problems early on, but it also demonstrated my concern and willingness to help.
- Don't be deadly serious. The QMCS faculty, as a whole, has a great sense of humor and can appreciate levity. While I needed to be highly task oriented, interjecting humor would help lighten the load. (As an example, in the kickoff meeting, while talking about my role as project manager, I took a bull whip out of my briefcase and mentioned how gentle I would be – the humor worked.)
- Keep the "customer" fully informed. In this case the customer was the Academic Affairs office. In particular the Associate Vice President for Academic Affairs was the one with whom we would be working closely. In addition, the department reported to the Dean of the College of Arts and Sciences. I made sure that these two individuals were copied on all meeting summaries, status reports, and other relevant information. I set up a regular weekly meeting with the Associate Vice President for Academic Affairs and made sure any of her concerns or questions were answered. Establishing this working relationship also provided me with a conduit for requesting additional resources if needed.

At our initial meeting on March 3, 2004 we did, in fact, accomplish nearly all agenda items. Concerns were expressed and recognized. We did determine an overall schedule, working back from the due date of May 31, 2004, we identified five teams which would be responsible for the five major tasks, and we did talk about future meetings and how they would be structured. We were off to a great start that exceeded my expectations!

Ongoing efforts

Our weekly meeting generally followed the same format:

1. Report on my latest meeting with the Associate Vice President for Academic Affairs.
2. Update from each team.
3. Changes to the schedule.
4. Other items or concerns

During the course of the project some teams were highly active while others were not so active. It turned out that important aspects of the project tended to change from week to week. This gave us the opportunity to quickly deal with teams whose tasks were completed or somewhat inactive and concentrate our efforts on those tasks of more immediate concern. For example, early in the project we needed to draft a survey to be sent out to our graduates and their employers. We could spend time reviewing those drafts because other tasks were in the preliminary planning stages. It turns out that there was a natural ebb and flow to the project. This had the unanticipated advantage of allowing every person to feel an ownership for the entire project and not just their little piece of the pie.

As project manager, I made sure that the following meeting management tasks got done:

- Capture meeting results. I needed to take notes during the meetings so I could accurately write complete meeting minutes. I wanted to make sure that I captured the conclusions and not all the gory details of how we got there. This meant that I had to pay close attention and record what was concluded. I would also try to get the meeting summaries out to the department, the Dean, and the Associate Vice President for Academic Affairs the afternoon of the meeting. In this way, if I failed to capture what was important it would be easily identified.
- Encourage meeting participation. I wanted to make sure that everyone felt they were a contributing member of the project. I had to politely cut off discussion when it was being dominated by one or two individuals. I would even call on people by name asking for their thoughts.
- Stay within the agenda. It's not unique to the QMCS department for people to go off on tangents. There are often some very worthwhile discussions that can result form these off-agenda discussions. However, we could not afford that luxury. We needed to stay on agenda if we were to succeed.

These efforts left me literally drained after each meeting. I could not let my attention wander. I needed to pay close attention to what was being said and evaluate it in terms of staying on agenda, is it important to record, etc. As it turned out, the meeting management was the most taxing task I had to do. I thought I might have to micro-manage some elements of the project, but it turned out that wasn't necessary. Meeting management required the most effort.

The weekly meetings I had with the Associate Vice President proved to be very valuable. I was able to establish a working relationship with her that allowed us to honestly discuss many issues related to the project. I was also able to easily obtain additional funding needed to complete the survey of alumni and employers. During our meetings we would discuss the prior week's meeting of the QMCS faculty, the notes of which she got prior to our meeting. I was also able to bring any messages or questions back to the faculty for quick response.

Of course, not everything went smoothly. There were the inevitable slippages of schedule and the resulting scurrying around to get back on track. There were also some personnel changes on the teams, requiring some retrenching. We needed to identify appropriate in-house resources and make sure they got there end of the job done on time. In other words, it was a typical project.

The Home Stretch and Completion

Near the end of the project each team needed to draft their section of the report and have it reviewed. Like most faculty, if you ask them to review something, they will probably review it in excruciating detail. I puzzled about how we were going to get all these reviews done meeting once a week. I decided that we couldn't, so we scheduled special review meetings in addition to our regular weekly meeting. Each team would send out their draft and let everyone know when and where the review meeting would be held. Each individual could then decide if they wanted to attend the meeting and, if so, would do their review prior to the meeting. This approach worked well because it didn't take time away from our regular weekly meetings and each faculty member could choose whether or not to attend the review meetings. If they chose not to attend, then they forfeited their right to later make comments about that section. Once these sections were near final draft stage, there remained one major task yet to accomplish.

From this vast quantity of information that the teams uncovered, we needed to determine the most important action items and include them in the Executive Summary of the report. Here we were, at the last minute (the last week in May), faced with the problem of determining what the top 10 to 20 items were and doing so with some semblance of consensus. I quickly decided that striving for consensus would be futile, so I issued the following as our agenda for that meeting:

- "There are a great many items that could be included in the Executive Summary. The sentiment last time was not to include everything suggested in the various sections, but to identify the "important" items. Therefore, I am suggesting that we come up with a list of 10-15 items for inclusion. In order to identify the major issues/problems/action items to include in the Executive Summary, I'd like to follow a modified multi-voting procedure as follows:
    o Everyone will have an opportunity to suggest three items for inclusion. Prior to the meeting, please decide on maybe five items you'd like to see included – the top three if you're one of the first to suggest items, five items if you're near the end and some of yours are already taken. If you wish to abstain from suggesting items (maybe all yours are already there) that will be fine. However, no one person will have more than three suggestions.
    o These Items will be listed on the board without discussion of their appropriateness. Discussion at this point will be limited to explanation of the item, if needed, but no critique of it.
    o We will all then get three votes to cast for those items we wish to see on the list. After this vote, we will be able to eliminate some items and get the list down to a manageable size. If the list appears to be too large (more than 10-15 items), we can have some discussion and vote again, with everyone having one vote only. We can repeat this procedure until the list gets down to the desires size.
    o After we have the final list, we can discuss the items to determine what salient points need to be included."

With this procedure in place we were able to identify the most important items within a couple of hours. More importantly, everyone had a chance to voice their opinion, make a case for their choices, and help determine the final list. Everyone seemed to be satisfied with the list when we were done.

In spite of Herculean efforts of everyone in the department, I'm sorry to say we didn't make our May 31, 2004 deadline – we were exactly one week late and submitted the report on June 7, 2004. Given the short time frame, the enormity of the effort, and the nature of the environment, I consider the project to be highly successful! Everyone (the QMCS faculty and the Vice President for Academic Affairs office) were impressed with the amount of work done, the finished product (a 191 page report), and the fact that it was done "on time"!

Lessons Learned and Conclusion

Yes, cats *can be* herded and faculty *can be* organized into a successful, task-oriented project team!

In addition to standard project management techniques, there are unique aspects of managing a project team composed of faculty. The following are some of the more important considerations to keep in mind:

- Faculty members are relatively independent folks. This is a two edged sword. Faculty can find it difficult to work closely with others in a team environment. A clear delineation of who will do what specific tasks helps avoid problems. Each individual can then take their task and treat it as their own and not have to work very closely with others. The other side of this sword is the fact that faculty don't need to be micro-managed. They are professionals, accustomed to organizing their work and meeting deadlines. You don't need to check with them day-to-day.
- Faculty members are proud folks. They are proud of their accomplishments in the academic world. As I mentioned, public embarrassment of faculty is to be religiously avoided. They do, however, respond very positively to public praise, especially when given by those they consider their peers.
- Faculty members enjoy learning. Projects like this one are inherently appealing to faculty because it provides them with the opportunity to research an area and learn more about it. Try to find ways to share and celebrate that learning.
- Groups of faculty require a great deal of organization and discipline. It is critical that the project be well organized, schedules detailed, and meetings run like clockwork. Faculty members need this formal structure in order to work within a project team. Without it the project can quickly bog down or get off course. However, once that structure is in place, a team of faculty members becomes a highly productive unit.

Would I do this again? Yes, in a heartbeat. Not only was it rewarding to accomplish the task, but it was even more rewarding to see my department's faculty come together in a way that they had never done before. The sharing of ideas, the willingness to help others, the joy in accomplishment (and the sharing of that joy), and the increased respect and trust of one another has made the department substantially stronger and a much better place to work. I am extremely proud of the QMCS faculty and what they've been able to accomplish.