Improving Student Employee Tracking Through Performance Dashboards

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Abstract

This research project applies software prototyping and case study methodologies to identify key performance indicators relevant to the target user groups and their analytical needs through the use of performance monitoring dashboard approach. A performance dashboard is an application that translates department goals and performance indicators into a visual format. Phase 1 of the project involved electronic and in person interviews with the Student Development Office to identify key indicators of success for students in the office. Phase 2 involved academic research into dashboards and visual analytics. Next an initial dashboard design was developed and refined into the final dashboard that was sent to the Student Development office for evaluation. After the evaluation it was found that a performance dashboard is useful in visualizing some aspects of University Advancement's statistics. More research is required to ascertain the usefulness of Business intelligence or visual analytics for use with the case organization, University Advancement and the Student Development Office.

Reflections

1. Describe your foundational understanding of how research is conducted in your discipline.

Research in the Business and Information Technology department is very regimented. It is planned out step by step using best practices learned through countless trials of students before me. Upon close inspection you can see the process is broken up into several phases that follow very closely to the traditional scientific method.

The first phase consists of problem identification. Interviews are performed and business documents are examined to get to the heart of the business problem so we can better research solutions that are applicable in the real world.

In the next phase careful research is done by combing through countless peer reviewed articles and text books to find more information about our proposed solution and to find evidence to support the eventual plan.

Next, an initial solution to the problem defined in the first phase is drafted and pursued. The majority of new hands on experience is learned in this stage. New skills are developed and new technologies are explored all to make yourself better equipped to solve this problem and problems that may be encountered later in life.

Finally a final solution is developed and tested. The original audience is resurveyed and final observations are made. In this phase all information learned is re-evaluated so that future research paths can be noted and limitations can be looked at and understood.

2. How have you expanded your understanding of the informational resources available and how to best use these resources?

During my semester long research assignment the library's database and e-resources were used extensively. These peer reviewed journals turned up more quality information more than any other source I tried to use. Prior to this research the internet and my course textbooks were sufficient to learn all the required information. In a student driven research environment this isn't the case. I learned which resources could be used to find peer review articles, where to find specialized textbooks, and where to find industry information.

3. Describe the knowledge you have gained regarding the fundamentals of experimental design.

I learned that it is important not to rush through the initial design phase. So much of a project can be easier with careful planning. I learned the value of relying and actively participating with other more experienced parties though my weekly meetings with Dr. Lea. I also learned that, while research is about solving problems, the bulk of your time will be spent making sure you aren't reinventing the wheel and documenting your progress.

4. Describe how you have learned to interpret the results of your research project.

I learned to interpret data from a user perspective. My research topic is very close to me having worked with university advancement in some capacity for most of my time here it was difficult to put myself into a normal person's shoes. Looking at a problem and possible solutions from many angles is something that is crucial to technological research.

I also learned how to better interpret feedback and apply that feedback into my own work. I became more aware than ever that information technology is a team effort that requires careful study and determination from all parties. You must also be flexible to change because technology changes, information changes, and the direction of research might change causing your previous interpretations to change.