

WHAT I LEARNED IN QUALITY MANAGEMENT SPRING 2008**General impact from taking the course**

Today watching a program on Animal Planet on television where a group of engineering students were conducting an experiment were trying to create a man-made 60-by-40 foot spider-web that would catch a catapulted “fly” the same way nature’s spider-web would catch a fly, and seeing the way they were trying to better the aim of the catapult which had three factors of pin, weight of “fly” and weight of counter-weight, it struck me how I was thinking “they really should have done a full factorial experiment design, or at least a fractional factorial design if they want to be more accurate in their catapulting.”

As well, now when I discuss with my boyfriend the research he or one of the guys in his research laboratory are doing for their master’s in material science, and I wonder if they have planned the experiments by use of factorial design; or we are discussing some of the lectures he attends regarding perhaps a company that must produce a product where their customers requires less than 1/1,000,000 and I think about how I can at least begin to understand how they must have done the process design and control process in order to ensure that they meet these requirements. Not that I understand the actual process of producing the products or conducting the experiments, but I believe that with the help of experts within the processes, I would be able to now help in pinpointing areas where there could be improvements, or helping design experiments in a structured manner.

The above are some simple examples of how what I have learned in this course has infiltrated my day-to-day life, in a manner I actually quite enjoy because it makes me feel like I have a better and clearer understanding of many general and specific issues

in diverse aspects of my life and in life in general.

Most helpful subjects to my future study and career

Though I do not have plans of becoming a professional quality manager in the sense that it will be my title and primary purpose and position in a company, I do believe what I have learned throughout this semester in the Quality Management class can be applied, and will be applied I hope, in any position I do take on in my future career.

I am a certified management accountant by trade, but accounting it is not my future, is a *tool* I wish to *use* in my continued future career. As a certified management accountant my focus is on improving systems as well as strategic management, and so quality management is yet another tool I am looking forward to tuck into my belt. In this regard, I believe each and every one of the topics I studied this term will be of use to me, because I believe that by understanding the basics of quality management I will better be able to support and promote not only both accurate and useful quality control and continuous improvements, whether it be in operations or in service aspects of a business if processes are already operating, as well as process development and even process re-engineering if processes are already in operations. As such, knowing when to use a variable control chart, when to use an attribute control chart, how to create them as a phase one, and in phase two how to read them, which trends to watch for, and how to analyze process capability are all important.

A topic I found particularly interesting was the gauge repeatability and reproducibility analysis. Being able to determine how much of measurement variability is due to the operator, both as an individual and as a comparison between operators, due to the measuring device, and due to the difference in the items being measured themselves is extremely useful in any process, as it would be necessary to ensure that the

variances that appeared on control charts were not compromised by gauge variance, or rather that the gauge was capable for the purposes it was being used for. I found it interesting because determining gauge capability is such a fundamental and basic necessity that must first be concluded if one is to conduct process control or process analysis with any confidence.

Most difficult topic to grasp

Many of the topics covered in this course had the potential to be very complicated. However, with the expert knowledge and deep understanding of Professor Pan, and his clear explanations along with the way he would review the past week's material at the beginning of the class, and preview next week's material at the end of the class, it became relatively easy to grasp the concepts we covered. However, there was one area I thought I had a good comprehension of during class, but when I went home to complete the assignment I realized there were missing gaps in my understanding of the topic. It is the factorial experiments I am referring to. The importance of the topic is undeniable, same as all the other topics covered, and it makes perfect sense in theory. However, what escaped me was how to conduct a proper residual analysis. I realized while doing the homework for that chapter that when I was asked to interpret scattergraphs of residuals, I was unclear of which were acceptable and which showed traces of uneven variance, because the graphs in my view were acceptable, but the answer in the book said they were not. Having more examples of residual analysis, and going over scattergraphs together in class if there had been enough time would have been helpful I believe.

Overall though, I feel it is fair to say that all topics covered were interesting, important, and have a high likelihood of being used by myself in my future career, and so though the class was quite intense at times, it was most definitely beneficial to me that I took the class, and that the professor has the passion and knowledge he does in the area of quality management.