

Quality Modeling And Improvement Of University Facilities Services Using Six- Sigma-A Case Study On Wayne State University Fpm Services.

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Quality Modeling And Improvement University Facilities Services Using A Case Study On Wayne State Un Services

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Abstract

Literature survey shows that there is no published information investigation and/or evaluation (by the customer) of the services provided by facility management units, and no previous research and evaluate such services to address, identify, and model the quality.

This research work proposed a service quality model relating to the services provided by facility management units at higher education institutions to customer perception of service quality. It also examined the use of Six-Sigma methodology as an improvement strategy for services provided by facility management units at higher education institutions. Based on the service quality model, using a tool box of Six-Sigma methods, a case study at Wayne State University was performed to examine and improve the facilities services for students. A service quality model was used as an instrument to measure customer satisfaction with facility management services. Customer ratings for services showed that some service categories were not meeting expectations. The initial service quality model was devised by surveying the students and faculty, and conducting in depth interviews with people in the FM field at various levels of the management hierarchy. The model was reviewed, refined, modified, and validated by conducting a Nominal Group Technique session, which led to the development of a service quality model for higher education institutions.

A set of Six-Sigma tools and techniques were utilized throughout the research for service process improvement, and to conduct an improvement project in the service category of General Improvement Request Form (GIR). The Six-Sigma techniques included process map, Pareto charts, cause and effect matrix, and Failure Mode and Effect Analysis (FMEA). A modified process map was used to identify bottlenecks, and eliminate non-value adding activities. Critical process outputs were identified through Cause and

Effect Matrix, and all Key Process Input Variables (KPIVs) were identified with respect to the importance of the output variable. Potential failure modes and causes of failure were identified through FMEA. A risk Priority Number was assigned for each potential failure mode, and recommended control measures for each failure mode were developed in this process.

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