Implementing Six-Sigma Methodology to Improve the Quality of Blended Education in Jordanian Higher Education Facilities

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Abstract

This study aims at implementing six-sigma methodology in the Jordanian higher education institutes, in order to find the opportunities in the improvements of student satisfaction about the blended educational process, by developing a conceptual model to evaluate the variables effects on the teaching process, DMAIC methodology was introduced in the study where the Critical-To-Quality (CTQ) specified which is the student satisfaction in define phase. Data were collected with 127 respondents in the Hospitality Faculty in the higher educational facility in the measurement phase. Hypothetical analysis was carried out using IBM SPSS software. The testing for the entire hypothesis shows that all the dimensions; Teaching Method Evaluation (TME), Teaching Method Performance (TMP), Teaching Method Requirement (TMR),and Teaching Management System (TMS) have an effect on students satisfaction in the analysis phase, through the capability analysis of the data, the blended education process was not capable in terms of student evaluation, technical difficulties during online lectures, social isolation and lack of communication, in addition to other factors. A set of root causes were identified and a set of action plans were proposed to eliminate these causes and improve the sigma level of student satisfaction. As some of the proposed solutions were suggested, the same data were collected from the same set of students in order to verify the proposed solutions before and after. Capability analysis implied a significant reduction in the process defects. As a result, the student satisfaction was increased while there was a reduction in the Defect per Million Opportunities (DPMO).

Keywords

Six sigma, DMAIC, Capability analysis.